

# **Northern Agency Tronox Mines**

**FINAL**

**Appendix G**

**Data Quality Assurance Summary Report**

**Response, Assessment, and Evaluation Services  
(RAES)**

**Contract No. EP-S9-17-03**

**Task Order 0001**

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**Submitted by**

**Tetra Tech, Inc.**

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## ATTACHMENTS

Attachment G1. Gamma Survey QC Forms

Attachment G2. Gamma Survey Data Exclusion Logs

Attachment G3. Chain-of-Custody Forms for Soil, Sediment, and Water Samples

Attachment G4. Chain-of-Custody Forms for Radon Samples



## ACRONYMS AND ABBREVIATIONS

μCi	Microcurie
ABA	Acid-Base Accounting
ALS	ALS Environmental Laboratories, Inc
ASTM	ASTM International
AUM	Abandoned uranium mine
Cs-137	Cesium-137
cpm	Counts per minute
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
DER	Duplicate error ratio
DQO	Data quality objective
EE/CA	Engineering evaluation/cost analysis
GFPC	Gas Flow Proportional Counting
GPS	Global positioning system
gsf	Gamma survey file format
HDOP	Horizontal dilution of precision
ICP-AES	Inductively Coupled Plasma Atomic Emission Spectroscopy
ICP-MS	Inductively Coupled Plasma-Mass Spectrometry
ICS	Interference Check Sample
J	Estimated
J-	Estimated biased low
K-40	Potassium-40
LCS	Laboratory Control Sample
LSC	Liquid Scintillation Counting
MDC	Minimum detectable concentration
MDL	Method detection limit
MS/MSD	Matrix Duplicate/Matrix Spike Duplicate
NELAP	National Environmental Accreditation Program
Pb-210	Lead-210
Po-210	Polonium-210



## ACRONYMS AND ABBREVIATIONS (CONTINUED)

QA/QC	Quality assurance/Quality control
QC	Quality control
R	Rejected
Ra-226	Radium-226
Ra-228	Radium-228
RAES	Response, Assessment and Evaluation Services
RAGS	Risk Assessment Guidance for Superfund
Rd-222	Radon-222
ROI	Region of interest
RPD	Relative percent difference
RPP	Radiation Protection Program
RSE	Removal site evaluation
SAP/QAPP	Sampling and Analysis Plan/Quality Assurance Project Plan
SDG	Sample delivery group
SN	Serial number
SOP	Standard Operating Procedure
SPLP	Synthetic precipitation leaching procedure
SW	Solid Waste
TCLP	Toxicity characteristic leaching procedure
TDS	Total dissolved solids
Tetra Tech	Tetra Tech, Inc.
TH-232	Thorium-232
TKN	Total Kjeldahl nitrogen
TO	Task Order
TOC	Total organic carbon
TPU	Total propagated uncertainty
TSS	Total suspended solids
U-238	Uranium-238
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
V	Volts
XRF	X-ray fluorescence

## 1.0 INTRODUCTION

This Data Quality Assurance Summary Report presents procedures and results of the gamma scanning, chemical and radiological laboratory data, and radon data gathered during the removal site evaluations (RSE) at 39 abandoned uranium mine (AUM) sites and 36 Target sites within the Northern Agency AUM Region of the Navajo Nation. The work was assigned under Task Order (TO) 0001 of the Response, Assessment, and Evaluation Services (RAES) contract number EP-S9-17-03. Field activities were conducted between April and October 2018.

The Data Quality Assurance Summary Report is organized as follows:

- [Section 1.0](#) presents introductory information.
- [Section 2.0](#) presents relevant procedures and results of the gamma scanning investigation.
- [Section 3.0](#) presents a summary of the laboratory data collected, a description of the validation conducted, a summary of QC violations, and an assessment of data useability.
- [Section 4.0](#) presents a summary and results of the radon sampling.
- [Section 5.0](#) presents the conclusions.
- [Section 6.0](#) presents the references.

Tables are presented after the text where first referenced. Attachments are organized as follows:

- [Attachment G1](#) presents gamma scanning QC forms.
- [Attachment G2](#) presents gamma scanning data exclusion logs.
- [Attachment G3](#) presents chain-of-custody records for soil, sediment, and water samples submitted to the laboratory.
- [Attachment G4](#) presents chain-of-custody records for radon samples submitted to the laboratory.

## 2.0 GAMMA SCANNING QUALITY ASSURANCE AND QUALITY CONTROL

Gamma scans were conducted during the RSE investigation to investigate AUMs, Target sites, background areas, and drainages. This section discusses the procedures, results, and observations with respect to QA/QC from the RSE investigation gamma radiation surveys.

### 2.1 PROCEDURES FOR GAMMA SCANNING EQUIPMENT

The priority and emphasis on quality assurance/quality control (QA/QC) for gamma scanning is outlined primarily in Section 4.4 of Appendix C of the Work Plan (Tetra Tech, Inc. [Tetra Tech] 2018). The QA/QC procedures for gamma scanning provide a framework to assess the efficacy of measurements and the validity of data that were produced during site characterization. The following sections detail the QA/QC procedure for detectors and meters, and for collecting and tracking gamma scan survey data.

#### 2.1.1 PROCEDURE FOR DETECTORS AND METERS

In accordance with Appendix C, Section 4.4.1.1 of the Work Plan:

- Criterion 1: Prior to any gamma radiation surveys, a QA/QC check was performed on all detector systems that were used in the characterization. This initial QA/QC check was used to determine the control limits for each system and provide a basis to which onsite field tests could be compared.
- Criterion 2: Calibrated instruments were subject to onsite field test criteria. Compliance with field test criteria was demonstrated via functional checks performed twice daily; before and after survey activities. The functional checks, as described in Radiation Protection Program (RPP) Standard Operating Procedure (SOP) 009: – *Operational Checkout of Single Detector with Meter*, were performed using a standard source, standard geometry, count time, and at a consistent location (hotel parking lot).

The initial quality (QC) check for each detector/meter pair consisted of making ten one-minute background counts followed by ten one-minute source (gross) counts. The measurements were recorded on the single-channel function check log form, presented in [Attachment G1](#). Net counts (gross less background counts) for each measurement and the averages of the net counts were then calculated.

The QA/QC criteria per Table C-9 of the work plan requires that net counts must be within  $\pm 20$  percent of the average of the net counts calculated from the first ten initial QA/QC checks.

The initial and daily functional checks were performed in accordance with RPP SOP 009. A function check jig, as seen in the foreground of [Figure G-1](#), was used to maintain a reproducible counting geometry. All measurements were made in the rear of a vehicle while parked at the hotel parking lot to ensure the same location was used for every function check. A cesium-137 (Cs-137) gamma-ray source (Spectrum Technologies, Serial Number 72, 4.30 microcurie [ $\mu\text{Ci}$ ], issued January 22, 2018) was used throughout all initial QA/QC and functional checks. Each detector was inspected for physical damage prior to use. Additionally, the battery and high-voltage levels were checked at the start of any QA/QC or function check. Low-voltage batteries



were replaced, and high-voltage levels adjusted when necessary, to match those on the associated detector calibration sheet, prior to use in the field. Voltages were adjusted to the recommended values on the calibration when displaced consistently by  $\pm 5$ -10 volts (V).



**Figure G-1. General Equipment QA/QC and Representative Setup of Functional Checks**

Daily functional checks consisted of taking one-minute background and one-minute source count measurements for each detector slated for potential use in the field. The functional check was repeated at the end of the day for detectors that were used in the field. If the detector and meter pair were not used, it was noted in the function check form.

Each detector/meter pair had a control chart to track its performance in Microsoft Excel. This control chart was used to track the results of daily functional checks against the control limits established using the initial QA/QC check.

The control chart is an Excel spreadsheet that contains all data input from the log forms including the ten initial QA/QC measurements and all background, gross, and net counts. The spreadsheet has individual figures that plot the daily background, gross, and net counts along with the control limits for the net counts. As an added layer of data quality control, all QA/QC and daily function check forms were reviewed for completeness and accuracy. Data entries into the Excel spreadsheets were also reviewed for consistency and accuracy with the field log forms by personnel not performing the entries.

The control limits for the net counts of each detector were  $\pm 20$  percent of the average of the ten initial QA/QC net counts as required by Appendix C, Section 4.1.1.1, Table C-9.

Any detector having systematic measurements outside the criteria above was flagged for further evaluation and/or replaced. However, throughout the duration of the project, no detectors were removed from failing daily QA/QC checks.

### **2.1.2 PROCEDURE FOR GAMMA RADIATION SURVEY DATA**

Data collected during the gamma survey, using calibrated and functioning equipment, was also subject to verification and validation procedures. It was imperative for this RSE that the integrity of the data files be maintained so that the original field data could be retained and referenced. Thus, changes to the data sets could be tracked against their original versions. All data were verified and validated using the procedure described in RPP SOP 006 – *Validation and Verification of Gamma Survey Data*.

The following methods were used to avoid transcription errors or other changes to the measurements made in the field. ERG RadSync and RadScene software were used to transfer raw data files between data loggers (ERG 105G, RadScout) and a project computer; that is, they were not transferred manually. Additionally, the files were logged in a binary format, which is a more complex storage solution than a plain text format. Finally, the names of raw files were not changed from their point of creation through current retention.

Data collected from function-checked equipment were downloaded daily from each respective RadScout system, to a computer using RadSync software. RadScene software was then used to convert the files from a gamma survey file format (gsf) to shapefile format for verification. This was performed so that all changes to the shapefile data sets were appropriately tracked via documentation, and original raw data were left intact.

Verification of the gamma survey data was performed in ArcMap, a spatial viewer. The verification process consisted of the following general procedures:

- The shapefile attribute table was opened, and the gamma count rate measurements were reviewed by sorting the column in ascending order. Minimum values were checked to ensure they were within an appropriate range for the survey location. Values that were too low were evaluated. Low counts could have been the result of averaging of the ratemeter during startup; and/or disconnection or malfunctioning of the detector, among other possible reasons. Each instance was evaluated on a case-by-case basis.
- The horizontal dilution of precision (HDOP) data was reviewed. Values that exceeded 3.0 were evaluated. Values above this threshold could have had positional uncertainty. Use of these data was accompanied by a justification.
- Symbology was applied to the gamma count rate data. The data were then examined visually for patterns that might indicate problems with a detector or cable. Spikes in values and anomalous values were evaluated based on the guidelines and recommendations in RPP SOP 006 – *Validation and Verification of Gamma Survey Data*.
- The average scanning speed was spot-checked and compared against the criterion for the scanning speed specified in the RSE Work Plan.

ArcMap was used to examine the attribute tables for each file to identify any errors that may have occurred during data collection. The following instrumental and location errors were encountered during data collection:

- Instrumental errors:
  - Damage to a photomultiplier tube in one of the Ludlum Model 44-10 detectors
  - Inoperable cables (from manufacturer)
  - Disconnections of cables
  - Soil interfering with cable to meter connections
  - Meters turned on or off during the survey
  
- Location errors:
  - Positional uncertainty, possibly from connection to low number of satellites and/or global positioning system (GPS) signal reflection
  - Data collection not paused during breaks or periods of not actively scanning
  - Scans of roads, paths, and areas not associated with a survey area
  - Recording while in a moving vehicle (truck or utility vehicle)

Each instance of a location or instrumental error resulted in the removal of specific rows of a shapefile that were considered invalid because they were not in the correct location for that survey, scan speed and geometry were not consistent with data quality objectives (DQO), or because of instrument or cable connection issues. Removal of any datum was only allowed if, after evaluation of any of the above issues, it was deemed invalid. Data were also removed if they were not part of a survey. Individual records removed from any survey file were documented and tracked to maintain traceability. Once individual records were removed, the affected records were exported into a new shapefile named with the suffix ‘\_EXCLUDED’ and removed from the original shapefile. The date, time, source file, number of affected records, and reason(s) for excluding the data were documented on a data exclusion log form, presented in [Attachment G2](#). This process allowed for traceability and retains the original files for reference or reversion.

Tetra Tech retains the raw data files and their associated shapefiles, which will be provided to the U.S. Environmental Protection Agency (USEPA).

## 2.2 RESULTS FOR GAMMA RADIATION SURVEY DATA

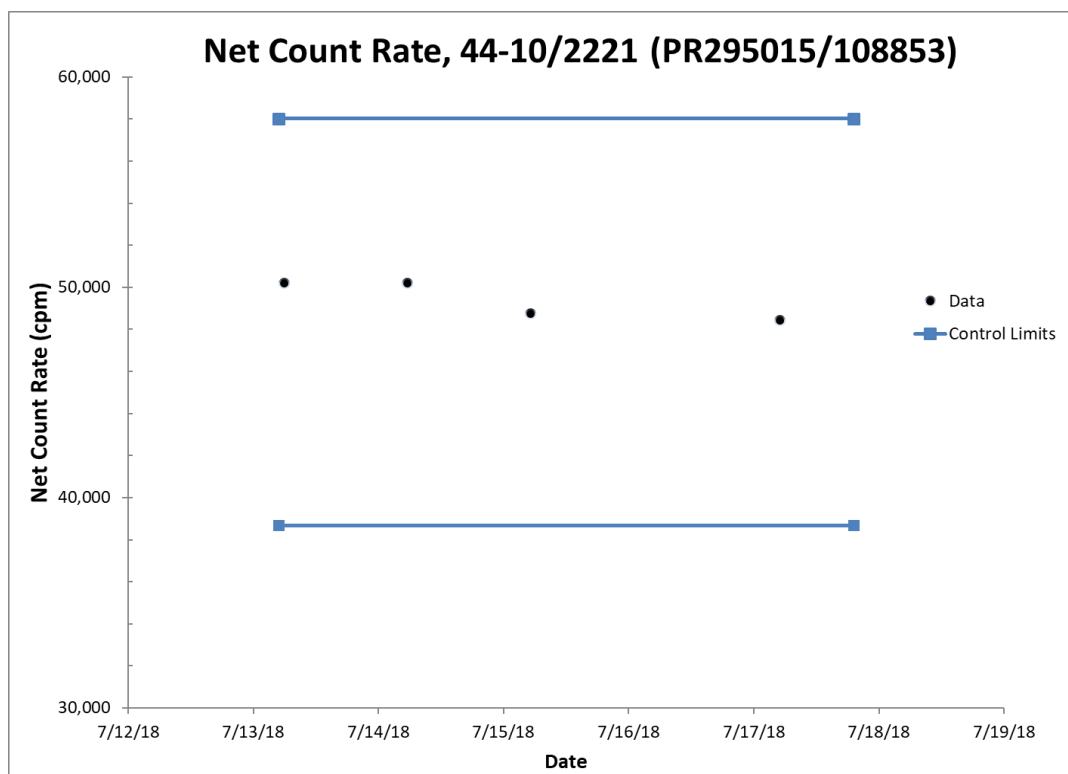
The following sections describe the results and observations for individual detectors.

### 2.2.1 RESULTS AND OBSERVATIONS FOR INDIVIDUAL DETECTORS

#### 2.2.1.1 *Ludlum Model 44-10 (SN: PR295015) with Ludlum Model 2221 (SN: 108853) (Green #3)*

The 10 initial QA/QC measurements were made for this detection system on July 12, 2018. The average net count was 48,353 counts per minute (cpm), with a standard deviation of 681 cpm. The control limits for the function check net count rates were 38,683 and 58,023 cpm.

As shown in [Figure G-2](#), all measurements fell within the control limits of operation. This detector was only active for a portion of Rotation 6 (July 10 to July 17, 2018) as it replaced detector system PR373554/108984 on July 12, 2018. It was removed from service on August 9, 2018, because of an instability in the high voltage that was observed between field trips during routine equipment checks. No field measurements were made using this system during the short time it was active.

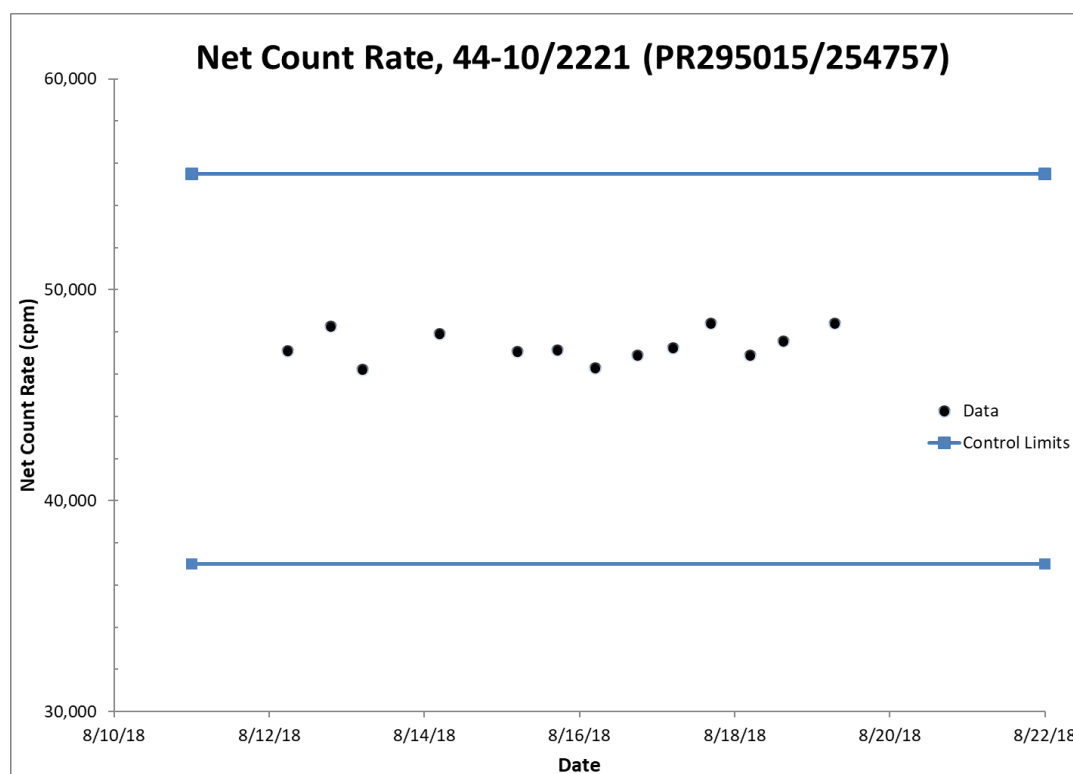


**Figure G-2. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR295015/108853)**

### 2.2.1.2 Ludlum Model 44-10 (SN: PR295015) with Ludlum Model 2221 (SN: 254757)

The 10 initial QA/QC measurements were made for this detection system on August 11, 2018. The average net count rate was 46,249 cpm, with a standard deviation of 603 cpm. The control limits for the function check net count rates were 36,999 and 55,499 cpm.

As shown in Figure G-3, all measurements fell within the control limits of operation. This detector was used from August 8 to August 30, 2018. It was removed from service on August 30, 2018, when the meter's circuit board malfunctioned.

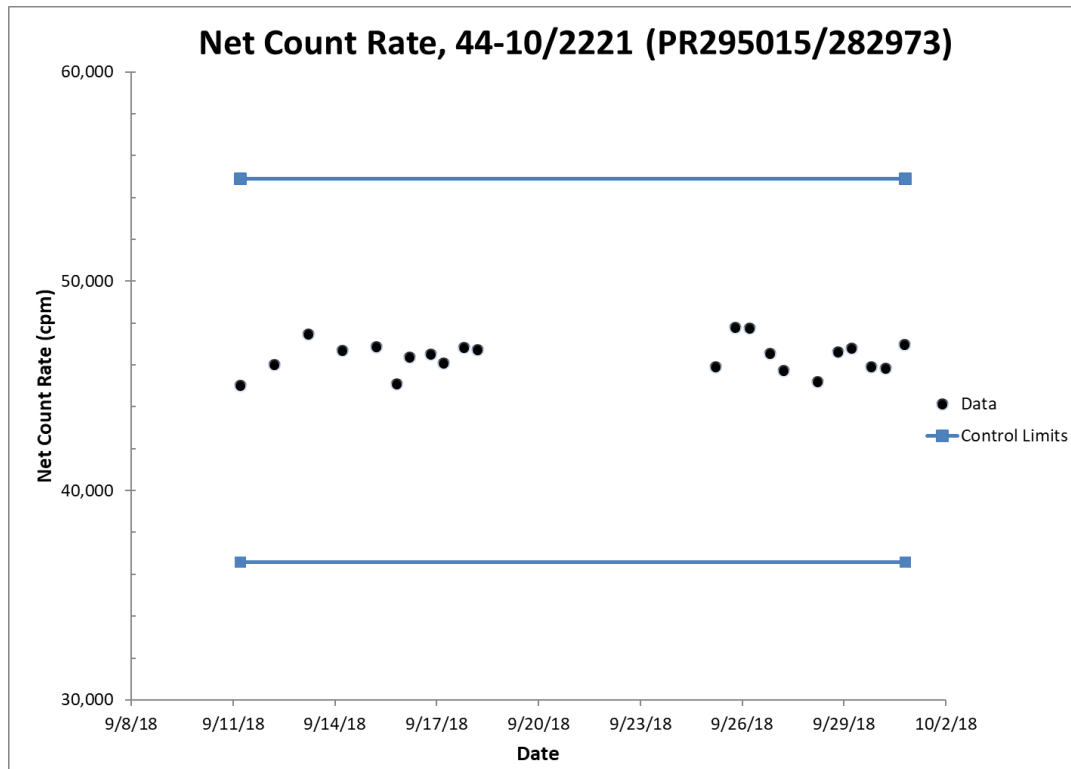


**Figure G-3. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR295015/254757)**

**2.2.1.3 Ludlum Model 44-10 (SN: PR295015) with Ludlum Model 2221 (SN: 282973)**

The 10 initial QA/QC measurements were made for this detection system on September 10, 2018. The average net count rate was 45,747 cpm, with a standard deviation of 324 cpm. The control limits for the function check net count rates were 36,597 and 54,896 cpm.

As shown in Figure G-4, all measurements fell within the control limits of operation. This detector was used from August 10 to September 30, 2018 (the end of field work).



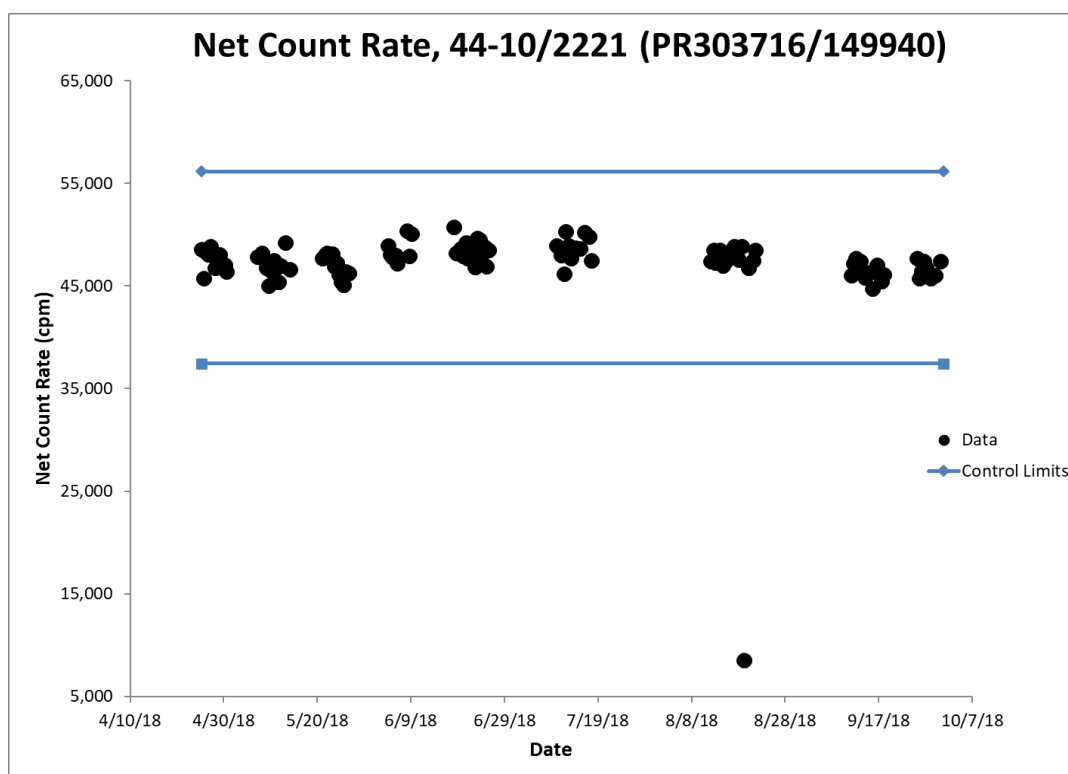
**Figure G-4. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR295015/282973)**

### 2.2.1.4 Ludlum Model 44-10 (SN: PR303716) with Ludlum Model 2221 (SN:149940)

The 10 initial QA/QC measurements were made for this detection system on April 24, 2018. The average net count rate was 46,816 cpm, with a standard deviation of 755 cpm. The control limits for the function check net count rates were 37,453 and 56,179 cpm.

As shown in Figure G-5, all but one net measurement fell within the control limit of operation. On August 19, 2018, the gross count rate was abnormally low, and therefore, the net count was also low. This was determined to be from the meter getting wet on August 18, 2018. Function checks on August 18, 2018, were within limits; however, during a battery change that evening, water was found in the battery compartment. The meter was left to dry overnight but moisture remained on the morning of August 19, 2018. The detector was not used on August 19, 2018. After an additional day of drying, the meter returned to functional responses.

On May 25, 2018, one additional gross count rate (50,647 cpm) fell slightly below the lower level of 50,696 cpm. The difference was 49 cpm, less than 0.1 percent below the lower threshold. Variation of this magnitude could be the result of a natural drift in the response of the detector, fluctuations in temperature, and slight changes because of effects in geometry, among other reasons. It was concluded that this difference was not cause for concern as all other function checks were within control limits. This detector was used for data collection on May 25, 2018, and for the entirety of the field work (April 24 to September 30, 2018).

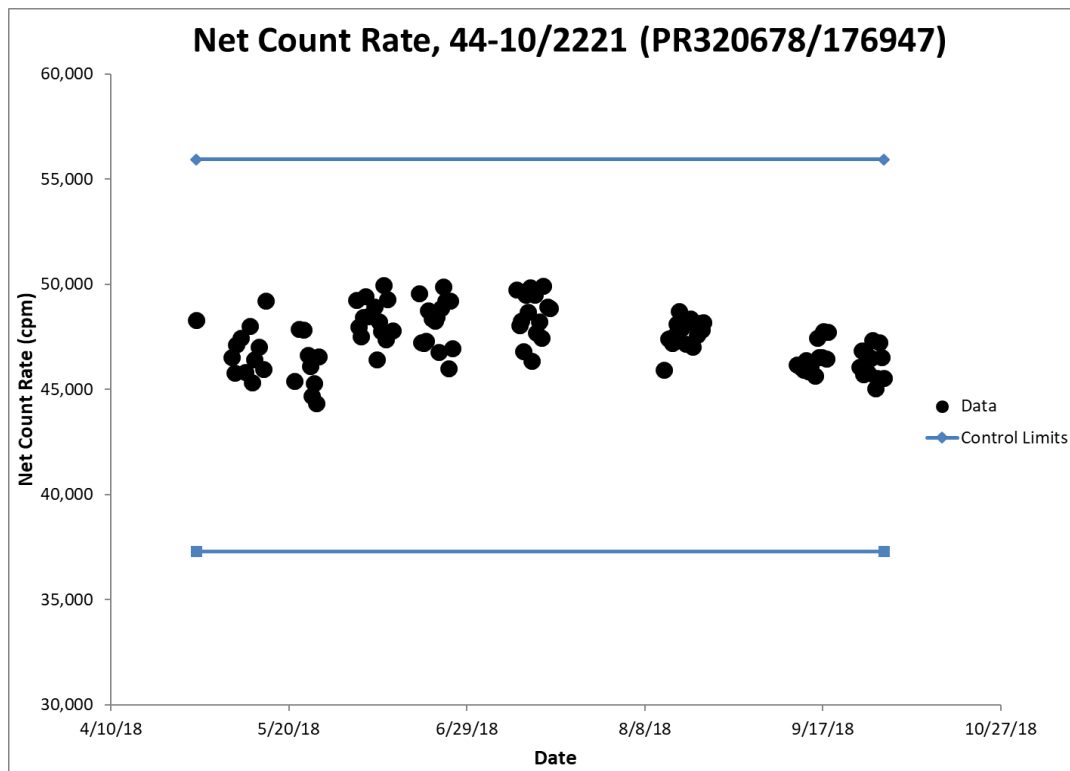


**Figure G-5. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR303716/149940)**

**2.2.1.5 Ludlum Model 44-10 (SN: PR320678) with Ludlum Model 2221 (SN: 176947)**

The 10 initial QA/QC measurements were made for this detection system on April 28, 2018. The average net count rate was 46,608 cpm, with a standard deviation of 496 cpm. The control limits for the function check net count rates were 37,286 and 55,929 cpm.

As shown in Figure G-6, all measurements fell within the control limits of operation. This detector was used from April 28 to September 30, 2018.



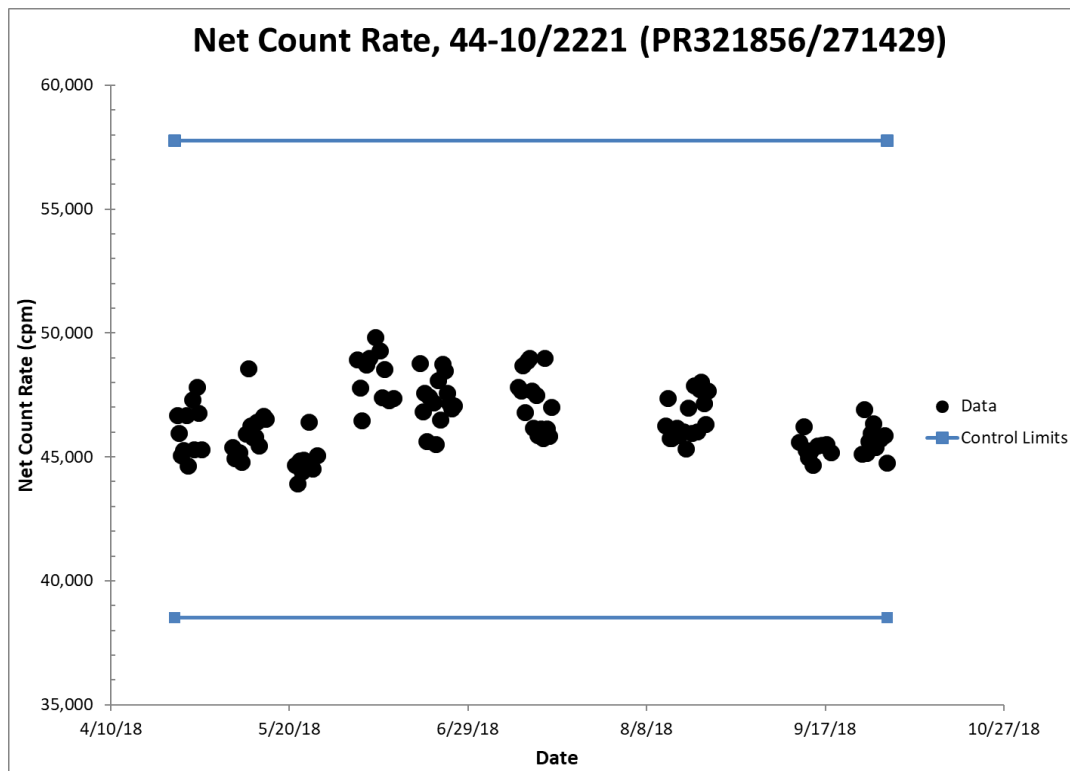
**Figure G-6. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR320678/176947)**



**2.2.1.6 Ludlum Model 44-10 (SN: PR321856) with Ludlum Model 2221 (SN: 271429)**

The 10 initial QA/QC measurements were made for this detection system on April 24, 2018. The average net count rate was 48,147 cpm, with a standard deviation of 632 cpm. The control limits for the function check net count rates were 38,518 and 57,776 cpm.

As shown in Figure G-7, all measurements fell within the control limits of operation. This detector was used for the entirety of the field work (April 24 to September 30, 2018).

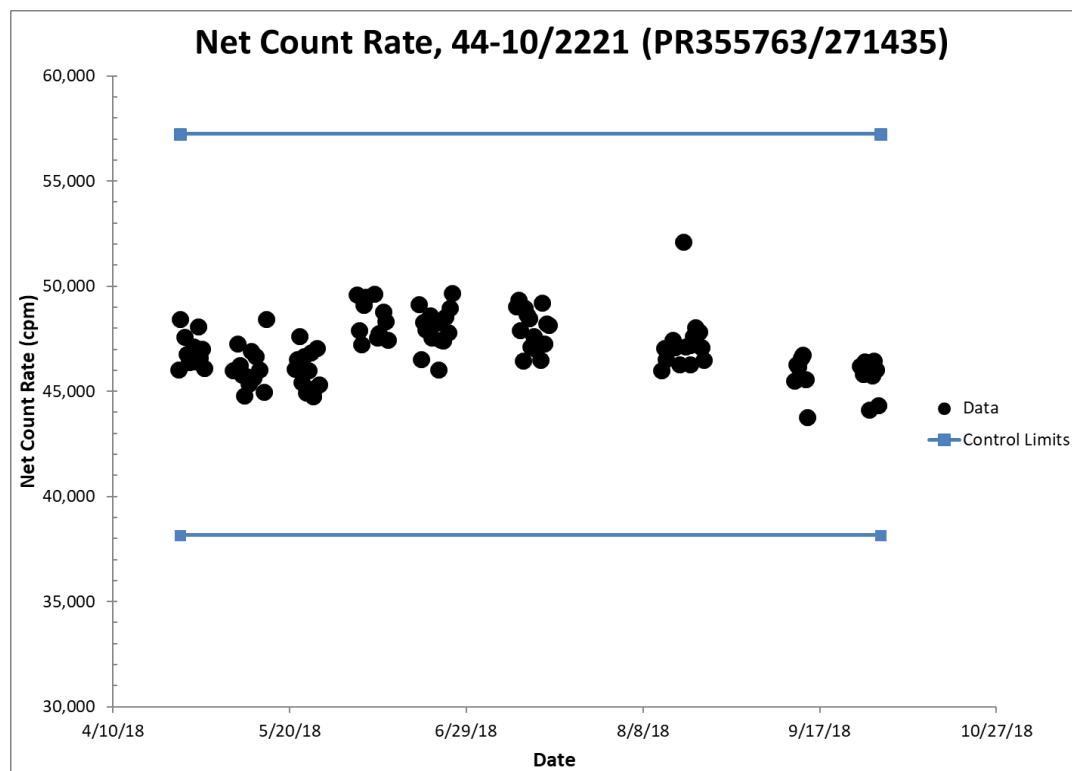


**Figure G-7. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR321856/271429)**

**2.2.1.7 Ludlum Model 44-10 (SN: PR355763) with Ludlum Model 2221 (SN: 271435)**

The 10 initial QA/QC measurements were made for this detection system on April 24, 2018. The average net count rate was 47,704 cpm, with a standard deviation of 1,087 cpm. The control limits for the function check net count rates were 38,163 and 57,244 cpm.

As shown in Figure G-8, all measurements fell within the control limits of operation. This detector was used for the entirety of the field work (April 24 to September 30, 2018).

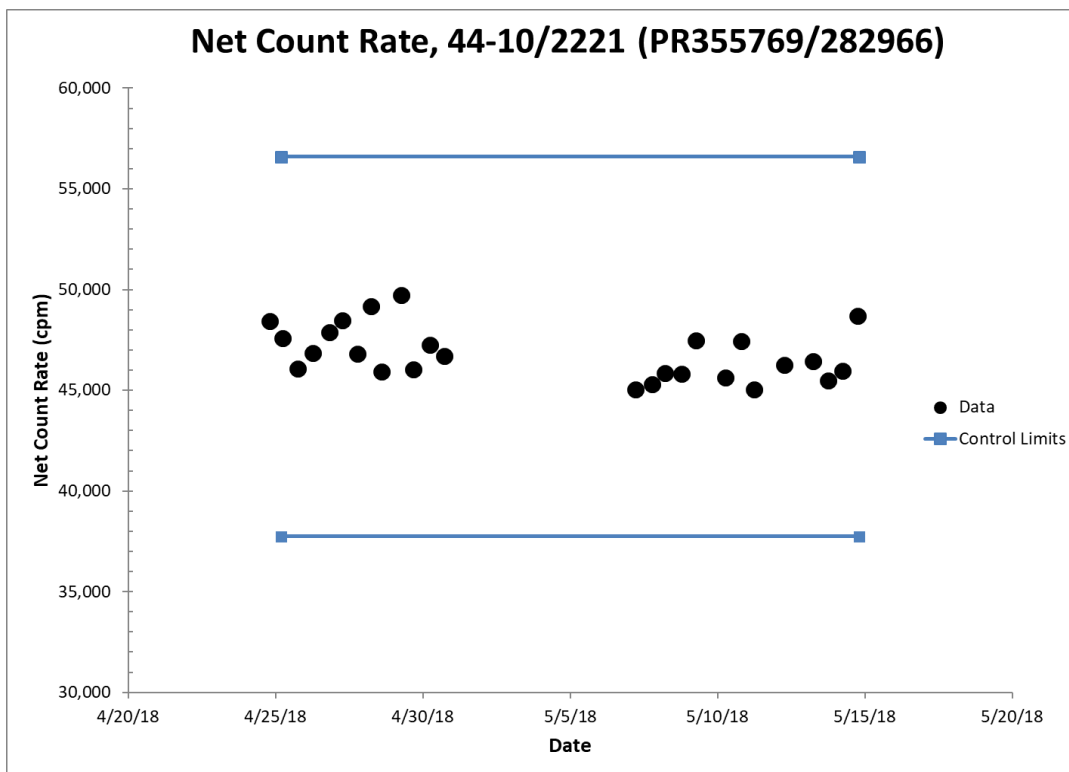


**Figure G-8. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR355763/271435)**

**2.2.1.8 Ludlum Model 44-10 (SN: PR355769) with Ludlum Model 2221 (SN: 282966)**

The 10 initial QA/QC measurements were made for this detection system on April 24, 2018. The average net count rate was 47,170 cpm, with a standard deviation of 872 cpm. The control limits for the function check net count rates were 37,736 and 56,604 cpm.

As shown in Figure G-9, all measurements fell within the control limits of operation. This detector was in service from April 24 to May 18, 2018, when it was removed from service when the control knob for the “Window” meter setting broke.

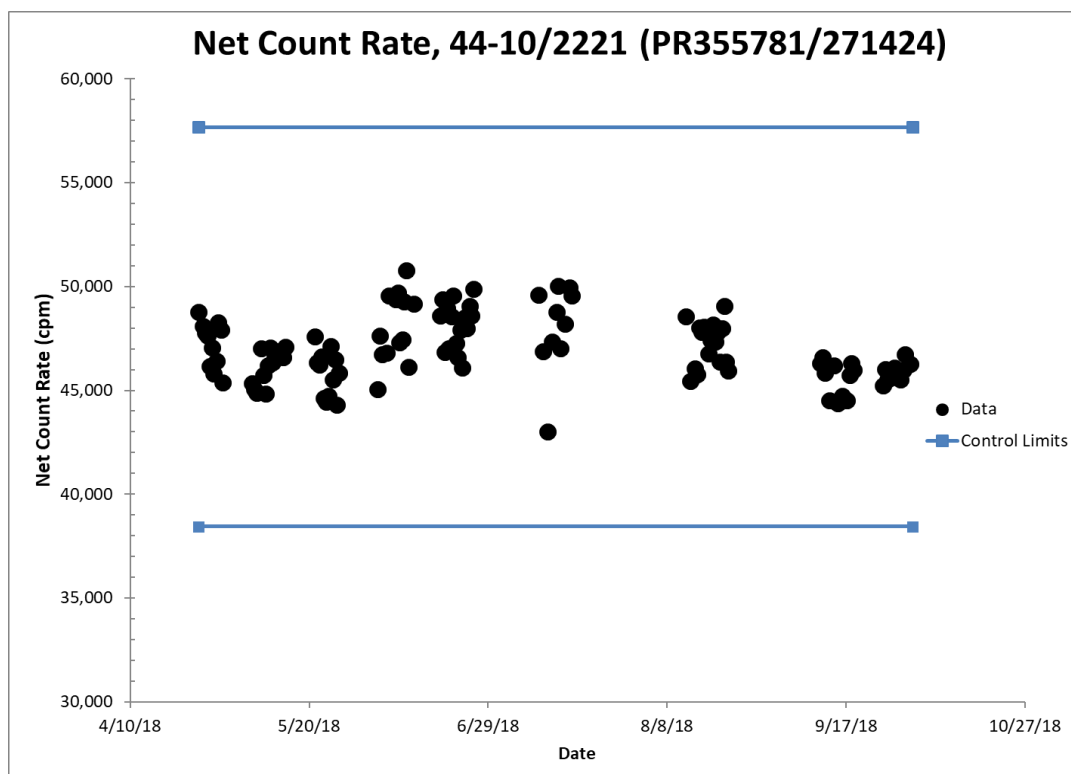


**Figure G-9. Control Chart for Net (Top) Count Rates for Ludlum Models 44-10/2221 (SN: PR355769/282966)**

**2.2.1.9 Ludlum Model 44-10 (SN: PR355781) with Ludlum Model 2221 (SN: 271424)**

The 10 initial QA/QC measurements were made for this detection system on April 24, 2018. The average net count rate was 48,066 cpm, with a standard deviation of 700 cpm. The control limits for the function check net count rates were 38,452 and 57,679 cpm.

As shown in Figure G-10, all net count rate measurements fell within the control limits of operation. This detector was used for the entirety of the field work (April 24 to September 30, 2018).

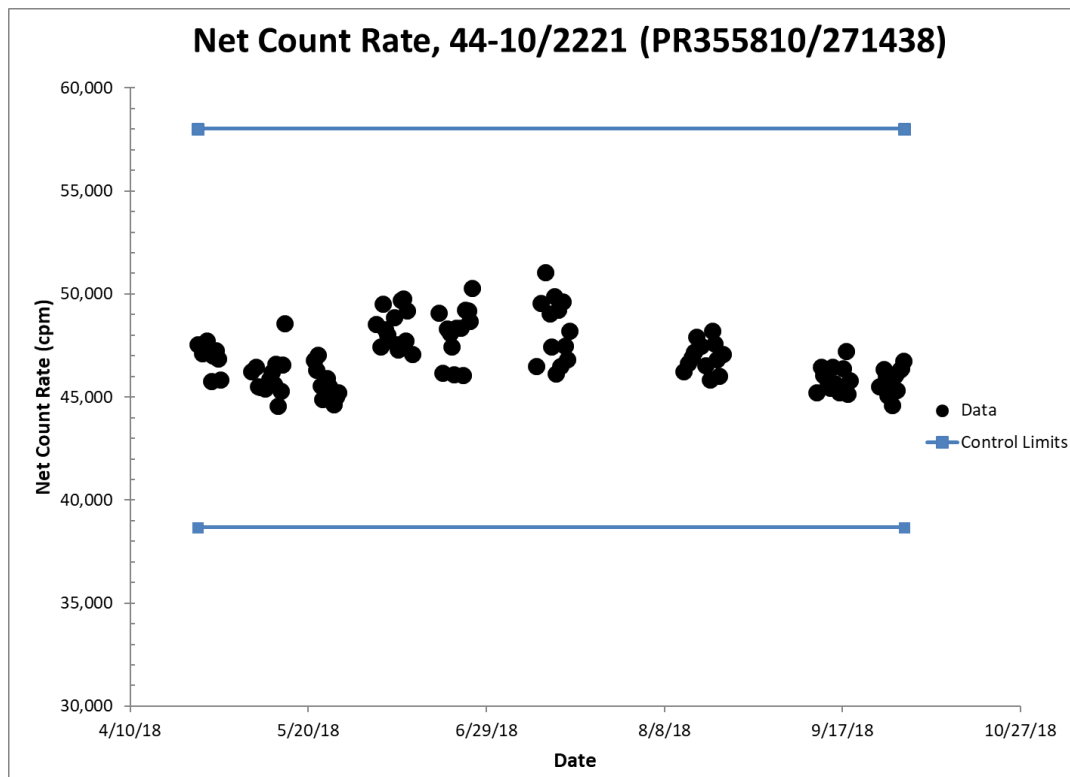


**Figure G-10. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR355781/271424)**

**2.2.1.10 Ludlum Model 44-10 (SN: PR355810) with Ludlum Model 2221 (SN: 271438)**

The 10 initial QA/QC measurements were made for this detection system on April 24, 2018. The average net count rate was 48,346 cpm, with a standard deviation of 414 cpm. The control limits for the net count rates were 38,677 and 58,016 cpm.

As shown in Figure G-11, all measurements fell within the control limits of operation. This detector was used for the entirety of the field work (April 24 to September 30, 2018).

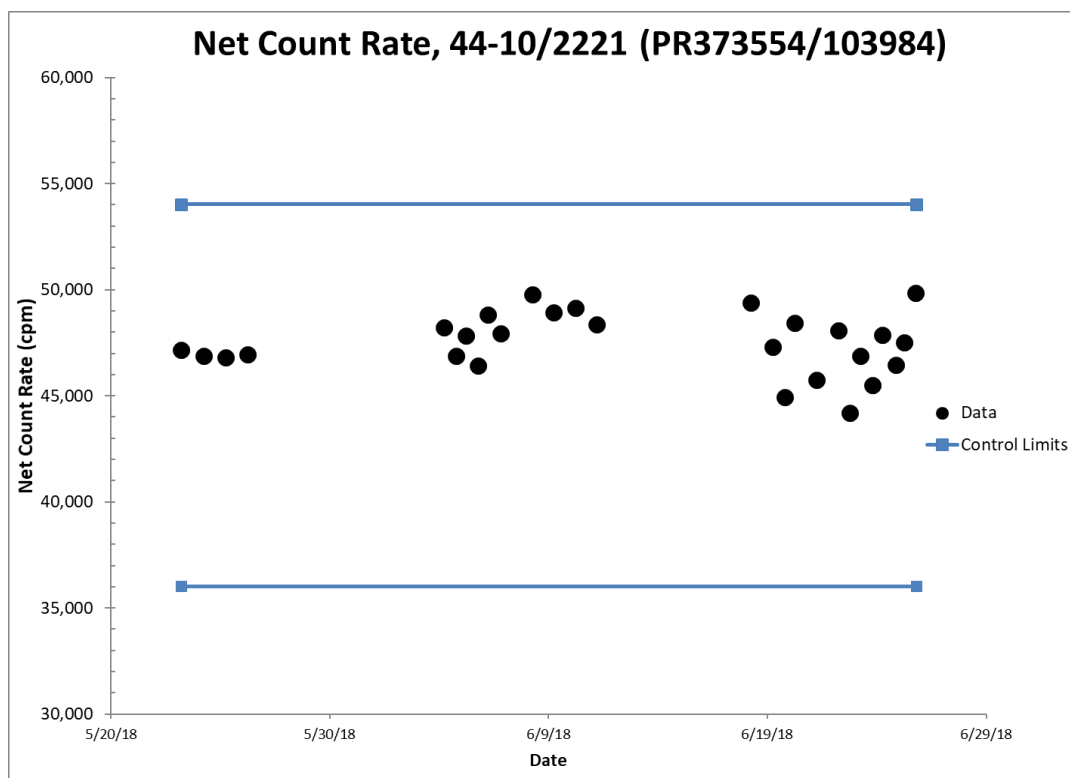


**Figure G-11. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR355810/271438)**

**2.2.1.11 Ludlum Model 44-10 (SN: PR373554) with Ludlum Model 2221 (SN: 103984)**

The 10 initial QA/QC measurements were made for this detection system on May 22, 2018. The average net count rate was 45,017 cpm, with a standard deviation of 479 cpm. The control limits for the net count rates were 36,014 and 54,021 cpm.

As shown in Figure G-12, all measurements fell within the control limits of operation. This detector was used from May 22 to June 25, 2018. It was removed from service on July 10, 2018, because of drift in the high voltage of the meter.



**Figure G-12. Control Chart for Net Count Rates for Ludlum Models 44-10/2221 (SN: PR373554/103984)**

## 2.2.2 GENERAL DETECTOR RESULTS OBSERVATIONS AND DISCUSSION

Observations on the background measurements made over the course of the RSE are illustrative of natural seasonal variation in ambient background gamma radiation levels. A slight inverse relationship between the net count rate and background count rate can be observed; when background counts trend down, the net counts trend slightly up. The gross counts are relatively constant through the same period, so a smaller background count rate results in a slightly higher net count rate. This behavior is normal and expected. Other sources for variation in detector response beyond seasonal variation in background radiation levels include the sensitivity of a meter to environmental conditions such as temperature and atmospheric pressure, radon-220 and radon-222 concentrations in air, or simply the random nature of radioactive decay.

Throughout the entirety of the field work, there were only five instances where functional checks resulted in measurements that required investigation. One cause was known: accumulation of water in a meter resulted in the detector failing to meet its respective control limit during the function check and so was removed from service that day. In two other instances, detectors were pulled from service on the days that suspect functional check measurements occurred. There were only two cases where a detector was used on the day a suspect measurement was observed. These occurred on May 25, 2018 (PR303716/149940), and August 17, 2018 (PR355763/271435). Excluding the water-affected detector, suspect measurements involved either a background or gross measurement, never both. Ultimately, there were no cases where the net count rate control limits were exceeded.

Based on the lack of exceedances from control limits and what can be expected of the behavior of NaI (TI) detectors and meters, it is concluded that none of these instances was indicative of a malfunctioning detector or meter. All measurement systems performed within established data quality control limit requirements.

Finally, it should be noted that while an individual detector behaved consistently through the project, the average response for each individual detector varied. This is expected because of inconsistencies in the photomultiplier tube (PMT) and crystal. [Table G-1](#) lists the averages of the gross, background, and net count rates determined during function checks for the detection systems used in the RSE.

The average response of the detectors over time is consistent. The final row reports the standard deviations of the averages. The gross, background, and net standard deviations are 385, 358, and 407 cpm, respectively. The net count rates, which include the fluctuation of background, vary across the detectors by a coefficient of variation (standard deviation divided by the average count rate:  $407/47046$ ) of only 0.86 percent.



**Table G-1. Averages of the Gross, Background, and Net Count Rates for the Detection Systems Used in the RSE**

Detection System	N	CPM		
		Gross	Background	Net
PR355763/271435	111	53,543	6,458	47,085
PR321856/271429	113	52,683	6,194	46,488
PR355769/282966	26	53,859	7,039	46,820
PR373554/103984	27	53,260	5,769	47,491
PR295015/254757	13	53,658	6,326	47,333
PR295015/282973	22	53,218	6,832	46,387
PR355810/271348	109	53,330	6,402	46,928
PR303716/149940	108	53,691	6,151	47,540
PR355781/271424	116	53,259	6,294	46,964
PR320678/176947	106	54,021	6,593	47,428
<b>Standard Deviation</b>		385	358	407
<b>Average</b>		53,452	6,406	47,046

Notes:

cpm    Counts per minute  
n        Number of samples  
RSE    Removal site evaluation



### 3.0 LABORATORY DATA QUALITY ASSURANCE AND QUALITY CONTROL

Samples were collected for laboratory analysis for multiple analytical groups from soil, sediment, and water. This section discusses the data validation methodology, summarizes the QC violations, and provides a useability assessment of the laboratory data. Field activities were conducted between April and October 2018.

With a few exceptions, the samples were analyzed by ALS Environmental Laboratories, Inc. (ALS), in Fort Collins, Colorado. Exceptions were the acid-base accounting samples, which were analyzed by ALS in Tucson, Arizona, and the methyl mercury and total Kjeldahl nitrogen samples, which were analyzed by ALS in Kelso, Washington. ALS is certified by the National Environmental Accreditation Program (NELAP) and has demonstrated experience implementing the analytical techniques described in Part II, Chapters 10 through 20 of the *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP)* (USEPA 2004).

All results were validated by third-party contractor, Validata Chemical Services, Inc., located in Duluth, Georgia. Data validation results are presented in 127 data validation reports that validate laboratory results from 126 paired inorganic and radiological laboratory reports, as well as one laboratory report that has both inorganic and radiological results (sample delivery group [SDG] 1811450). One additional laboratory report (SDG 1903120), that presents results of re-analyses of five samples for individual analytes, was not validated and the data are not being used for site characterization. Data validation reports are organized by paired SDGs. Laboratory reports are presented in Appendix L of the RSE Report, and the final data validation reports are presented in Appendix M of the RSE Report.

Ninety-one percent of all SDGs and 90 percent of all samples were validated using Stage 2B validation methodology, and approximately nine percent of all SDGs and 10 percent of all samples were validated using Stage 4 validation methodology, which builds on the Stage 2B methodology.

During the RSE investigation, soil, sediment, and water samples were submitted to the laboratory for analysis for three primary purposes:

- Site characterization and risk assessment
- QA/QC (equipment rinsate samples collected to assess whether samples were contaminated in the field)
- Soil cup study (soil samples collected as part of a pilot study to evaluate impacts of particle size and homogenization of soil samples on x-ray fluorescence (XRF) correlation results).

Table G-2 presents a list of the analytical methods and number of samples analyzed within each matrix. Table G-3 and Table G-4 present a list of the analytical methods and number of equipment rinsate and soil cup samples, respectively.

**Table G-2. Summary of Analytical Methods and Counts for Soil, Sediment, and Water Samples**

<b>Matrix</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Analytical Method</b>	<b>Number of Samples <sup>1</sup></b>
Sediment	Acid - Base Accounting	NA	Modified Sobek	1
Sediment	Acid Potential	NA	Modified Sobek	1
Sediment	Moisture, Total (105 C)	NA	Modified Sobek	1
Sediment	Neutralization Potential	NA	Modified Sobek	1
Sediment	Sulfur, Total	NA	Modified Sobek	1
Sediment	Mercury	7439-97-6	USEPA SW-846 7471A	381
Sediment	Arsenic (TCLP)	7440-38-2	USEPA SW-846 6010D	1
Sediment	Barium (TCLP)	7440-39-3	USEPA SW-846 6010D	1
Sediment	Cadmium (TCLP)	7440-43-9	USEPA SW-846 6010D	1
Sediment	Chromium (TCLP)	7440-47-3	USEPA SW-846 6010D	1
Sediment	Lead (TCLP)	7439-92-1	USEPA SW-846 6010D	1
Sediment	Selenium (TCLP)	7782-49-2	USEPA SW-846 6010D	1
Sediment	Silver (TCLP)	7440-22-4	USEPA SW-846 6010D	1
Sediment	Aluminum	7429-90-5	USEPA SW-846 6020B	390
Sediment	Aluminum (SPLP)	7429-90-5	USEPA SW-846 6020B	1
Sediment	Antimony	7440-36-0	USEPA SW-846 6020B	390
Sediment	Antimony (SPLP)	7440-36-0	USEPA SW-846 6020B	1
Sediment	Arsenic	7440-38-2	USEPA SW-846 6020B	390
Sediment	Arsenic (SPLP)	7440-38-2	USEPA SW-846 6020B	1
Sediment	Barium	7440-39-3	USEPA SW-846 6020B	390
Sediment	Barium (SPLP)	7440-39-3	USEPA SW-846 6020B	1
Sediment	Beryllium	7440-41-7	USEPA SW-846 6020B	390
Sediment	Beryllium (SPLP)	7440-41-7	USEPA SW-846 6020B	1
Sediment	Boron	7440-42-8	USEPA SW-846 6020B	390
Sediment	Boron (SPLP)	7440-42-8	USEPA SW-846 6020B	1
Sediment	Cadmium	7440-43-9	USEPA SW-846 6020B	390
Sediment	Cadmium (SPLP)	7440-43-9	USEPA SW-846 6020B	1
Sediment	Calcium	7440-70-2	USEPA SW-846 6020B	390
Sediment	Calcium (SPLP)	7440-70-2	USEPA SW-846 6020B	1
Sediment	Chromium	7440-47-3	USEPA SW-846 6020B	390
Sediment	Chromium (SPLP)	7440-47-3	USEPA SW-846 6020B	1
Sediment	Cobalt	7440-48-4	USEPA SW-846 6020B	390
Sediment	Cobalt (SPLP)	7440-48-4	USEPA SW-846 6020B	1
Sediment	Copper	7440-50-8	USEPA SW-846 6020B	390
Sediment	Copper (SPLP)	7440-50-8	USEPA SW-846 6020B	1
Sediment	Iron	7439-89-6	USEPA SW-846 6020B	390
Sediment	Iron (SPLP)	7439-89-6	USEPA SW-846 6020B	1
Sediment	Lead	7439-92-1	USEPA SW-846 6020B	390

**Table G-2. Summary of Analytical Methods and Counts for Soil, Sediment, and Water Samples (Continued)**

<b>Matrix</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Analytical Method</b>	<b>Number of Samples <sup>1</sup></b>
Sediment	Lead (SPLP)	7439-92-1	USEPA SW-846 6020B	1
Sediment	Lithium	7439-93-2	USEPA SW-846 6020B	390
Sediment	Lithium (SPLP)	7439-93-2	USEPA SW-846 6020B	1
Sediment	Magnesium	7439-95-4	USEPA SW-846 6020B	390
Sediment	Magnesium (SPLP)	7439-95-4	USEPA SW-846 6020B	1
Sediment	Manganese	7439-96-5	USEPA SW-846 6020B	390
Sediment	Manganese (SPLP)	7439-96-5	USEPA SW-846 6020B	1
Sediment	Molybdenum	7439-98-7	USEPA SW-846 6020B	390
Sediment	Molybdenum (SPLP)	7439-98-7	USEPA SW-846 6020B	1
Sediment	Nickel	7440-02-0	USEPA SW-846 6020B	390
Sediment	Nickel (SPLP)	7440-02-0	USEPA SW-846 6020B	1
Sediment	Selenium	7782-49-2	USEPA SW-846 6020B	390
Sediment	Selenium (SPLP)	7782-49-2	USEPA SW-846 6020B	1
Sediment	Silver	7440-22-4	USEPA SW-846 6020B	390
Sediment	Silver (SPLP)	7440-22-4	USEPA SW-846 6020B	1
Sediment	Sodium	7440-23-5	USEPA SW-846 6020B	390
Sediment	Sodium (SPLP)	7440-23-5	USEPA SW-846 6020B	1
Sediment	Strontium	7440-24-6	USEPA SW-846 6020B	390
Sediment	Strontium (SPLP)	7440-24-6	USEPA SW-846 6020B	1
Sediment	Thallium	7440-28-0	USEPA SW-846 6020B	390
Sediment	Thallium (SPLP)	7440-28-0	USEPA SW-846 6020B	1
Sediment	Thorium	7440-29-1	USEPA SW-846 6020B	390
Sediment	Thorium (SPLP)	7440-29-1	USEPA SW-846 6020B	1
Sediment	Uranium	7440-61-1	USEPA SW-846 6020B	390
Sediment	Uranium (SPLP)	7440-61-1	USEPA SW-846 6020B	1
Sediment	Uranium_hf <sup>2</sup>	7440-61-1	USEPA SW-846 6020B	1
Sediment	Vanadium	7440-62-2	USEPA SW-846 6020B	390
Sediment	Vanadium (SPLP)	7440-62-2	USEPA SW-846 6020B	1
Sediment	Zinc	7440-66-6	USEPA SW-846 6020B	390
Sediment	Zinc (SPLP)	7440-66-6	USEPA SW-846 6020B	1
Sediment	Pb-210	14255-04-0	Eichrom Method	37
Sediment	Pb-210 (SPLP)	14255-04-0	Eichrom Method	1
Sediment	Pb-210	14255-04-0	Eichrom Method	2
Sediment	K-40	13966-00-2	USEPA 901.1	390
Sediment	Ra-226	13982-63-3	USEPA 901.1	390
Sediment	Ra-228	15262-20-1	USEPA 901.1	390
Sediment	Th-232g <sup>3</sup>	7440-29-1	USEPA 901.1	39
Sediment	U-238g <sup>3</sup>	7440-61-1	USEPA 901.1	39



**Table G-2. Summary of Analytical Methods and Counts for Soil, Sediment, and Water Samples (Continued)**

<b>Matrix</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Analytical Method</b>	<b>Number of Samples <sup>1</sup></b>
Sediment	Th-228	14274-82-9	ASTM D3972	26
Sediment	Th-230	14269-63-7	ASTM D3972	26
Sediment	Th-232a	7440-29-1	ASTM D3972	26
Sediment	U-234	13966-29-5	ASTM D3972	27
Sediment	U-235	15117-96-1	ASTM D3972	27
Sediment	U-238a	7440-61-1	ASTM D3972	27
Sediment	Po-210 (SPLP)	13981-52-7	ASTM D3972	1
Sediment	Th-228	14274-82-9	ASTM D3972	13
Sediment	Th-228 (SPLP)	14274-82-9	ASTM D3972	1
Sediment	Th-230	14269-63-7	ASTM D3972	13
Sediment	Th-230 (SPLP)	14269-63-7	ASTM D3972	1
Sediment	Th-232a	7440-29-1	ASTM D3972	13
Sediment	Th-232a (SPLP)	7440-29-1	ASTM D3972	1
Sediment	U-234	13966-29-5	ASTM D3972	12
Sediment	U-234 (SPLP)	13966-29-5	ASTM D3972	1
Sediment	U-235	15117-96-1	ASTM D3972	12
Sediment	U-235 (SPLP)	15117-96-1	ASTM D3972	1
Sediment	U-238a	7440-61-1	ASTM D3972	12
Sediment	U-238a (SPLP)	7440-61-1	ASTM D3972	1
Sediment	Ra-228 (SPLP)	15262-20-1	USEPA 900.0 (Gross Alpha)	1
Sediment	Ra-226 (SPLP)	13982-63-3	USEPA 903.1	1
Sediment	Paste pH	NA	USDA60	1
Soil	Acid - Base Accounting	NA	Modified Sobek	99
Soil	Acid Potential	NA	Modified Sobek	99
Soil	Moisture, Total (105 C)	NA	Modified Sobek	99
Soil	Neutralization Potential	NA	Modified Sobek	99
Soil	Sulfur, Total	NA	Modified Sobek	99
Soil	Mercury	7439-97-6	SW7471	1,168
Soil	Arsenic (TCLP)	7440-38-2	USEPA SW-846 6010D	100
Soil	Barium (TCLP)	7440-39-3	USEPA SW-846 6010D	100
Soil	Cadmium (TCLP)	7440-43-9	USEPA SW-846 6010D	100
Soil	Chromium (TCLP)	7440-47-3	USEPA SW-846 6010D	100
Soil	Lead (TCLP)	7439-92-1	USEPA SW-846 6010D	100
Soil	Selenium (TCLP)	7782-49-2	USEPA SW-846 6010D	100
Soil	Silver (TCLP)	7440-22-4	USEPA SW-846 6010D	100
Soil	Aluminum	7429-90-5	USEPA SW-846 6020B	2,520
Soil	Aluminum (SPLP)	7429-90-5	USEPA SW-846 6020B	100
Soil	Antimony	7440-36-0	USEPA SW-846 6020B	2,520

**Table G-2. Summary of Analytical Methods and Counts for Soil, Sediment, and Water Samples (Continued)**

<b>Matrix</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Analytical Method</b>	<b>Number of Samples <sup>1</sup></b>
Soil	Antimony (SPLP)	7440-36-0	USEPA SW-846 6020B	100
Soil	Arsenic	7440-38-2	USEPA SW-846 6020B	2,520
Soil	Arsenic (SPLP)	7440-38-2	USEPA SW-846 6020B	100
Soil	Barium	7440-39-3	USEPA SW-846 6020B	2,520
Soil	Barium (SPLP)	7440-39-3	USEPA SW-846 6020B	100
Soil	Beryllium	7440-41-7	USEPA SW-846 6020B	2,520
Soil	Beryllium (SPLP)	7440-41-7	USEPA SW-846 6020B	100
Soil	Boron	7440-42-8	USEPA SW-846 6020B	2,520
Soil	Boron (SPLP)	7440-42-8	USEPA SW-846 6020B	100
Soil	Cadmium	7440-43-9	USEPA SW-846 6020B	2,520
Soil	Cadmium (SPLP)	7440-43-9	USEPA SW-846 6020B	100
Soil	Calcium	7440-70-2	USEPA SW-846 6020B	2,520
Soil	Calcium (SPLP)	7440-70-2	USEPA SW-846 6020B	100
Soil	Chromium	7440-47-3	USEPA SW-846 6020B	2,520
Soil	Chromium (SPLP)	7440-47-3	USEPA SW-846 6020B	100
Soil	Cobalt	7440-48-4	USEPA SW-846 6020B	2,520
Soil	Cobalt (SPLP)	7440-48-4	USEPA SW-846 6020B	100
Soil	Copper	7440-50-8	USEPA SW-846 6020B	2,520
Soil	Copper (SPLP)	7440-50-8	USEPA SW-846 6020B	100
Soil	Iron	7439-89-6	USEPA SW-846 6020B	2,520
Soil	Iron (SPLP)	7439-89-6	USEPA SW-846 6020B	100
Soil	Lead	7439-92-1	USEPA SW-846 6020B	2,520
Soil	Lead (SPLP)	7439-92-1	USEPA SW-846 6020B	100
Soil	Lithium	7439-93-2	USEPA SW-846 6020B	2,520
Soil	Lithium (SPLP)	7439-93-2	USEPA SW-846 6020B	100
Soil	Magnesium	7439-95-4	USEPA SW-846 6020B	2,520
Soil	Magnesium (SPLP)	7439-95-4	USEPA SW-846 6020B	100
Soil	Manganese	7439-96-5	USEPA SW-846 6020B	2,520
Soil	Manganese (SPLP)	7439-96-5	USEPA SW-846 6020B	100
Soil	Molybdenum	7439-98-7	USEPA SW-846 6020B	2,520
Soil	Molybdenum (SPLP)	7439-98-7	USEPA SW-846 6020B	100
Soil	Nickel	7440-02-0	USEPA SW-846 6020B	2,520
Soil	Nickel (SPLP)	7440-02-0	USEPA SW-846 6020B	100
Soil	Selenium	7782-49-2	USEPA SW-846 6020B	2,520
Soil	Selenium (SPLP)	7782-49-2	USEPA SW-846 6020B	100
Soil	Silver	7440-22-4	USEPA SW-846 6020B	2,520
Soil	Silver (SPLP)	7440-22-4	USEPA SW-846 6020B	100
Soil	Sodium	7440-23-5	USEPA SW-846 6020B	2,520



**Table G-2. Summary of Analytical Methods and Counts for Soil, Sediment, and Water Samples (Continued)**

<b>Matrix</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Analytical Method</b>	<b>Number of Samples <sup>1</sup></b>
Soil	Sodium (SPLP)	7440-23-5	USEPA SW-846 6020B	100
Soil	Strontium	7440-24-6	USEPA SW-846 6020B	2,520
Soil	Strontium (SPLP)	7440-24-6	USEPA SW-846 6020B	100
Soil	Thallium	7440-28-0	USEPA SW-846 6020B	2,520
Soil	Thallium (SPLP)	7440-28-0	USEPA SW-846 6020B	100
Soil	Thorium	7440-29-1	USEPA SW-846 6020B	2,520
Soil	Thorium (SPLP)	7440-29-1	USEPA SW-846 6020B	100
Soil	Uranium	7440-61-1	USEPA SW-846 6020B	2,520
Soil	Uranium (SPLP)	7440-61-1	USEPA SW-846 6020B	100
Soil	Uranium_hf <sup>2</sup>	7440-61-1	USEPA SW-846 6020B	110
Soil	Vanadium	7440-62-2	USEPA SW-846 6020B	2,520
Soil	Vanadium (SPLP)	7440-62-2	USEPA SW-846 6020B	100
Soil	Zinc	7440-66-6	USEPA SW-846 6020B	2,520
Soil	Zinc (SPLP)	7440-66-6	USEPA SW-846 6020B	100
Soil	Pb-210	14255-04-0	Eichrom Method	220
Soil	Pb-210 (SPLP)	14255-04-0	Eichrom Method	100
Soil	Pb-210	14255-04-0	Eichrom Method	35
Soil	Pb-210	14255-04-0	Eichrom Method	15
Soil	Cs-137	10045-97-3	USEPA 901.1	491
Soil	K-40	13966-00-2	USEPA 901.1	2,520
Soil	Ra-226	13982-63-3	USEPA 901.1	2,520
Soil	Ra-228	15262-20-1	USEPA 901.1	2,520
Soil	Th-232g <sup>3</sup>	7440-29-1	USEPA 901.1	336
Soil	U-238g <sup>3</sup>	7440-61-1	USEPA 901.1	336
Soil	Th-228	14274-82-9	ASTM D3972 Modified	120
Soil	Th-230	14269-63-7	ASTM D3972 Modified	120
Soil	Th-232a	7440-29-1	ASTM D3972 Modified	120
Soil	U-234	13966-29-5	ASTM D3972 Modified	111
Soil	U-235	15117-96-1	ASTM D3972 Modified	111
Soil	U-238a	7440-61-1	ASTM D3972 Modified	111
Soil	Po-210 (SPLP)	13981-52-7	ASTM D3972 Modified	100
Soil	Th-228	14274-82-9	ASTM D3972 Modified	150
Soil	Th-228 (SPLP)	14274-82-9	ASTM D3972 Modified	100
Soil	Th-230	14269-63-7	ASTM D3972 Modified	150
Soil	Th-230 (SPLP)	14269-63-7	ASTM D3972 Modified	100
Soil	Th-232a	7440-29-1	ASTM D3972 Modified	150
Soil	Th-232a (SPLP)	7440-29-1	ASTM D3972 Modified	100
Soil	U-234	13966-29-5	ASTM D3972 Modified	159

**Table G-2. Summary of Analytical Methods and Counts for Soil, Sediment, and Water Samples (Continued)**

<b>Matrix</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Analytical Method</b>	<b>Number of Samples <sup>1</sup></b>
Soil	U-234 (SPLP)	13966-29-5	ASTM D3972 Modified	100
Soil	U-235	15117-96-1	ASTM D3972 Modified	159
Soil	U-235 (SPLP)	15117-96-1	ASTM D3972 Modified	100
Soil	U-238a	7440-61-1	ASTM D3972 Modified	159
Soil	U-238a (SPLP)	7440-61-1	ASTM D3972 Modified	100
Soil	Ra-228 (SPLP)	15262-20-1	USEPA 900.0 (Gross Alpha)	100
Soil	Ra-226 (SPLP)	13982-63-3	USEPA 903.1	80
Soil	Ra-226 (SPLP)	13982-63-3	USEPA 903.1	20
Soil	Paste pH	NA	USDA60	100
Water	Methyl Mercury	22967-92-6	USEPA 1630	8
Water	Mercury, Total	7439-97-6	USEPA 1631E	8
Water	Mercury	7439-97-6	USEPA SW-846 7470	8
Water	Mercury (Dissolved)	7439-97-6	USEPA SW-846 7470	8
Water	Aluminum	7429-90-5	USEPA SW-846 6020B	8
Water	Aluminum (Dissolved)	7429-90-5	USEPA SW-846 6020B	8
Water	Antimony	7440-36-0	USEPA SW-846 6020B	8
Water	Antimony (Dissolved)	7440-36-0	USEPA SW-846 6020B	8
Water	Arsenic	7440-38-2	USEPA SW-846 6020B	8
Water	Arsenic (Dissolved)	7440-38-2	USEPA SW-846 6020B	8
Water	Barium	7440-39-3	USEPA SW-846 6020B	8
Water	Barium (Dissolved)	7440-39-3	USEPA SW-846 6020B	8
Water	Beryllium	7440-41-7	USEPA SW-846 6020B	8
Water	Beryllium (Dissolved)	7440-41-7	USEPA SW-846 6020B	8
Water	Boron	7440-42-8	USEPA SW-846 6020B	8
Water	Boron (Dissolved)	7440-42-8	USEPA SW-846 6020B	8
Water	Cadmium	7440-43-9	USEPA SW-846 6020B	8
Water	Cadmium (Dissolved)	7440-43-9	USEPA SW-846 6020B	8
Water	Calcium	7440-70-2	USEPA SW-846 6020B	8
Water	Calcium (Dissolved)	7440-70-2	USEPA SW-846 6020B	8
Water	Chromium	7440-47-3	USEPA SW-846 6020B	8
Water	Chromium (Dissolved)	7440-47-3	USEPA SW-846 6020B	8
Water	Cobalt	7440-48-4	USEPA SW-846 6020B	8
Water	Cobalt (Dissolved)	7440-48-4	USEPA SW-846 6020B	8
Water	Copper	7440-50-8	USEPA SW-846 6020B	8
Water	Copper (Dissolved)	7440-50-8	USEPA SW-846 6020B	8
Water	Hardness (As Caco3)	10-92-4	USEPA SW-846 6020B	8
Water	Iron	7439-89-6	USEPA SW-846 6020B	8
Water	Iron (Dissolved)	7439-89-6	USEPA SW-846 6020B	8

**Table G-2. Summary of Analytical Methods and Counts for Soil, Sediment, and Water Samples (Continued)**

<b>Matrix</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Analytical Method</b>	<b>Number of Samples <sup>1</sup></b>
Water	Lead	7439-92-1	USEPA SW-846 6020B	8
Water	Lead (Dissolved)	7439-92-1	USEPA SW-846 6020B	8
Water	Lithium	7439-93-2	USEPA SW-846 6020B	8
Water	Lithium (Dissolved)	7439-93-2	USEPA SW-846 6020B	8
Water	Magnesium	7439-95-4	USEPA SW-846 6020B	8
Water	Magnesium (Dissolved)	7439-95-4	USEPA SW-846 6020B	8
Water	Manganese	7439-96-5	USEPA SW-846 6020B	8
Water	Manganese (Dissolved)	7439-96-5	USEPA SW-846 6020B	8
Water	Molybdenum	7439-98-7	USEPA SW-846 6020B	8
Water	Molybdenum (Dissolved)	7439-98-7	USEPA SW-846 6020B	8
Water	Nickel	7440-02-0	USEPA SW-846 6020B	8
Water	Nickel (Dissolved)	7440-02-0	USEPA SW-846 6020B	8
Water	Selenium	7782-49-2	USEPA SW-846 6020B	8
Water	Selenium (Dissolved)	7782-49-2	USEPA SW-846 6020B	8
Water	Silver	7440-22-4	USEPA SW-846 6020B	8
Water	Silver (Dissolved)	7440-22-4	USEPA SW-846 6020B	8
Water	Sodium	7440-23-5	USEPA SW-846 6020B	8
Water	Sodium (Dissolved)	7440-23-5	USEPA SW-846 6020B	8
Water	Strontium	7440-24-6	USEPA SW-846 6020B	8
Water	Strontium (Dissolved)	7440-24-6	USEPA SW-846 6020B	8
Water	Thallium	7440-28-0	USEPA SW-846 6020B	8
Water	Thallium (Dissolved)	7440-28-0	USEPA SW-846 6020B	8
Water	Thorium	7440-29-1	USEPA SW-846 6020B	8
Water	Thorium (Dissolved)	7440-29-1	USEPA SW-846 6020B	8
Water	Uranium	7440-61-1	USEPA SW-846 6020B	8
Water	Uranium (Dissolved)	7440-61-1	USEPA SW-846 6020B	8
Water	Vanadium	7440-62-2	USEPA SW-846 6020B	8
Water	Vanadium (Dissolved)	7440-62-2	USEPA SW-846 6020B	8
Water	Zinc	7440-66-6	USEPA SW-846 6020B	8
Water	Zinc (Dissolved)	7440-66-6	USEPA SW-846 6020B	8
Water	Pb-210	14255-04-0	Eichrom Method	8
Water	Rn-222	14859-67-7	Eichrom Method	5
Water	Rn-222	14859-67-7	SM7500-RN B	3
Water	K-40	13966-00-2	USEPA 901.1	8
Water	Th-232g <sup>3</sup>	7440-29-1	USEPA 901.1	8
Water	U-238g <sup>3</sup>	7440-61-1	USEPA 901.1	8
Water	Th-228	14274-82-9	ASTM D3972 Modified	8
Water	Th-230	14269-63-7	ASTM D3972 Modified	8





**Table G-2. Summary of Analytical Methods and Counts for Soil, Sediment, and Water Samples (Continued)**

Matrix	Analyte	CAS Number	Analytical Method	Number of Samples <sup>1</sup>
Water	Th-232a	7440-29-1	ASTM D3972 Modified	8
Water	U-234	13966-29-5	ASTM D3972 Modified	8
Water	U-235	15117-96-1	ASTM D3972 Modified	8
Water	U-238a	7440-61-1	ASTM D3972 Modified	8
Water	Gross Alpha	12587-46-1	USEPA 900.0 (Gross Alpha)	8
Water	Ra-228	15262-20-1	USEPA 900.0 (Gross Alpha)	8
Water	Ra-226	13982-63-3	USEPA 903.1	8
Water	Total Organic Carbon	10-35-5	USEPA 415.1	8
Water	Nitrogen, Total Kjeldahl (TKN)	7727-37-9	USEPA 351.4	8
Water	Chloride	16887-00-6	USEPA 300.0	8
Water	Sulfate	14808-79-8	USEPA 300.0	8
Water	Ammonia as N	7664-41-7	USEPA 350.1	8
Water	Nitrate/Nitrite As N	1-005	USEPA 353.2	8
Water	Orthophosphate As P	14265-44-2	USEPA 365.2	5
Water	Sulfide	18496-25-8	USEPA 376.1	8
Water	Bicarbonate as CaCO <sub>3</sub>	471-34-1	SM2320B	8
Water	Carbonate as CaCO <sub>3</sub>	3812-32-6	SM2320B	8
Water	Total Alkalinity as CaCO <sub>3</sub>	NA	SM2320B	8
Water	Total Dissolved Solids	10-33-3	SM2540C	8
Water	Total Suspended Solids	10-32-2	SM2540D	8

Notes:

- <sup>1</sup> Equipment rinsate and soil cup samples are not included in sample count. Duplicate samples are included.  
<sup>2</sup> Digested using hydrofluoric acid.  
<sup>3</sup> The results for the gamma spectroscopy are not presented in the RSE Report because the results are high. Results for alpha spectroscopy are presented in the RSE Report.

ASTM	ASTM International	Th-228	Thorium-228
CaCO <sub>3</sub>	Calcium carbonate	Th-230	Thorium-230
CAS	Chemical Abstracts Service	Th-232	Thorium-232
Cs-137	Cesium-137	Th-232a	Thorium-232 (alpha spectroscopy)
K-40	Potassium-40	Th-232g	Thorium-232 (gamma spectroscopy)
NA	Not available	U-234	Uranium-234
Pb-210	Lead-210	U-235	Uranium-235
Ra-226	Radium-226	U-238	Uranium-238
Ra-228	Radium-2268	U-238a	Uranium-238 (alpha spectroscopy)
Rn-222	Radon-222	U-238g	Uranium-238 (gamma spectroscopy)
SM	Standard Method	USEPA	U.S. Environmental Protection Agency
SPLP	Synthetic precipitation leaching procedure	USDA	U.S. Department of Agriculture
TCLP	Toxicity characteristic leaching procedure		

**Table G-3. Summary of Analytical Methods and Counts for Equipment Rinsate Samples**

<b>Matrix</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Analytical Method</b>	<b>Number of Samples</b>
Water	Aluminum	7429-90-5	USEPA SW-846 6020B	13
Water	Antimony	7440-36-0	USEPA SW-846 6020B	13
Water	Arsenic	7440-38-2	USEPA SW-846 6020B	13
Water	Barium	7440-39-3	USEPA SW-846 6020B	13
Water	Beryllium	7440-41-7	USEPA SW-846 6020B	13
Water	Boron	7440-42-8	USEPA SW-846 6020B	13
Water	Cadmium	7440-43-9	USEPA SW-846 6020B	13
Water	Calcium	7440-70-2	USEPA SW-846 6020B	13
Water	Chromium	7440-47-3	USEPA SW-846 6020B	13
Water	Cobalt	7440-48-4	USEPA SW-846 6020B	13
Water	Copper	7440-50-8	USEPA SW-846 6020B	13
Water	Iron	7439-89-6	USEPA SW-846 6020B	13
Water	Lead	7439-92-1	USEPA SW-846 6020B	13
Water	Lithium	7439-93-2	USEPA SW-846 6020B	13
Water	Magnesium	7439-95-4	USEPA SW-846 6020B	13
Water	Manganese	7439-96-5	USEPA SW-846 6020B	13
Water	Mercury	7439-97-6	USEPA SW-846 7470	8
Water	Molybdenum	7439-98-7	USEPA SW-846 6020B	13
Water	Nickel	7440-02-0	USEPA SW-846 6020B	13
Water	Selenium	7782-49-2	USEPA SW-846 6020B	13
Water	Silver	7440-22-4	USEPA SW-846 6020B	13
Water	Sodium	7440-23-5	USEPA SW-846 6020B	13
Water	Strontium	7440-24-6	USEPA SW-846 6020B	13
Water	Thallium	7440-28-0	USEPA SW-846 6020B	13
Water	Thorium	7440-29-1	USEPA SW-846 6020B	13
Water	Uranium	7440-61-1	USEPA SW-846 6020B	13
Water	Vanadium	7440-62-2	USEPA SW-846 6020B	13
Water	Zinc	7440-66-6	USEPA SW-846 6020B	13
Water	K-40	13966-00-2	USEPA 901.1	13
Water	Pb-210	14255-04-0	Eichrom method	13
Water	Ra-226	13982-63-3	USEPA 903.1	11
Water	Ra-226	13982-63-3	USEPA 903.1	2
Water	Ra-228	15262-20-1	USEPA 904.0	5
Water	Ra-228	15262-20-1	USEPA 900.0 (Gross Alpha)	8
Water	Th-228	14274-82-9	ASTM D3972	6
Water	Th-228	14274-82-9	ASTM D3972	7
Water	Th-230	14269-63-7	ASTM D3972	6
Water	Th-230	14269-63-7	ASTM D3972	7
Water	Th-232a	7440-29-1	ASTM D3972	6



**Table G-3. Summary of Analytical Methods and Counts for Equipment Rinsate Samples (Continued)**

Matrix	Analyte	CAS Number	Analytical Method	Number of Samples
Water	Th-232a	7440-29-1	ASTM D3972	7
Water	Th-232g <sup>1</sup>	7440-29-1	ASTM D3972	13
Water	U-234	13966-29-5	ASTM D3972	5
Water	U-234	13966-29-5	ASTM D3972	8
Water	U-235	15117-96-1	ASTM D3972	5
Water	U-235	15117-96-1	ASTM D3972	8
Water	U-238a	7440-61-1	ASTM D3972	5
Water	U-238a	7440-61-1	ASTM D3972	8
Water	U-238g <sup>1</sup>	7440-61-1	USEPA 901.1	13

Notes:

<sup>1</sup> The results for the gamma spectroscopy are not presented in the RSE Report because the results are high. Results for alpha spectroscopy are presented in the RSE Report.

ASTM ASTM International  
CAS Chemical Abstracts Service  
K-40 Potassium-40  
Pb-210 Lead-210  
Ra-226 Radium-226  
Ra-228 Radium-2268  
Th-228 Thorium-228  
Th-230 Thorium-230  
Th-232 Thorium-232  
Th-232a Thorium-232 (alpha spectroscopy)  
Th-232g Thorium-232 (gamma spectroscopy)  
U-234 Uranium-234  
U-235 Uranium-235  
U-238 Uranium-238  
U-238a Uranium-238 (alpha spectroscopy)  
U-238g Uranium-238 (gamma spectroscopy)  
USEPA U.S. Environmental Protection Agency

**Table G-4. Summary of Analytical Methods and Counts for Soil Cup Samples**

Matrix	Analyte	CAS Number	Analytical Method	Number of Samples
Soil	Aluminum	7429-90-5	USEPA SW-846 6020B	44
Soil	Antimony	7440-36-0	USEPA SW-846 6020B	44
Soil	Arsenic	7440-38-2	USEPA SW-846 6020B	44
Soil	Barium	7440-39-3	USEPA SW-846 6020B	44
Soil	Beryllium	7440-41-7	USEPA SW-846 6020B	44
Soil	Boron	7440-42-8	USEPA SW-846 6020B	44
Soil	Cadmium	7440-43-9	USEPA SW-846 6020B	44
Soil	Calcium	7440-70-2	USEPA SW-846 6020B	44
Soil	Chromium	7440-47-3	USEPA SW-846 6020B	44
Soil	Cobalt	7440-48-4	USEPA SW-846 6020B	44
Soil	Copper	7440-50-8	USEPA SW-846 6020B	44
Soil	Iron	7439-89-6	USEPA SW-846 6020B	44
Soil	Lead	7439-92-1	USEPA SW-846 6020B	44
Soil	Lithium	7439-93-2	USEPA SW-846 6020B	44
Soil	Magnesium	7439-95-4	USEPA SW-846 6020B	44
Soil	Manganese	7439-96-5	USEPA SW-846 6020B	44
Soil	Molybdenum	7439-98-7	USEPA SW-846 6020B	44
Soil	Nickel	7440-02-0	USEPA SW-846 6020B	44
Soil	Selenium	7782-49-2	USEPA SW-846 6020B	44
Soil	Silver	7440-22-4	USEPA SW-846 6020B	44
Soil	Sodium	7440-23-5	USEPA SW-846 6020B	44
Soil	Strontium	7440-24-6	USEPA SW-846 6020B	44
Soil	Thallium	7440-28-0	USEPA SW-846 6020B	44
Soil	Thorium	7440-29-1	USEPA SW-846 6020B	44
Soil	Uranium	7440-61-1	USEPA SW-846 6020B	44
Soil	Uranium_hf <sup>1</sup>	7440-61-1	USEPA SW-846 6020B	22
Soil	Vanadium	7440-62-2	USEPA SW-846 6020B	44
Soil	Zinc	7440-66-6	USEPA SW-846 6020B	44
Soil	Ra-226	13982-63-3	USEPA 903.1	10

Notes:

- <sup>1</sup> Digested using hydrofluoric acid.
- CAS Chemical Abstracts Service
- Ra-226 Radium-226
- USEPA U.S. Environmental Protection Agency

### 3.1 DATA VALIDATION METHODOLOGY

Data validation is a systematic process for reviewing and qualifying data against a set of criteria, to evaluate whether they are adequate for their intended use. Reviewing and evaluating all analytical data for adherence to precision, accuracy, representativeness, completeness, and comparability objectives verifies the data adequacy. The laboratory analytical data were validated according to procedures outlined in the following documents:

- *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (USEPA 2009)
- *USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2017)
- *Multi-Agency Radiological Laboratory Analytical Protocols Manual (MARLAP)* (USEPA 2004)
- RAES Sampling and Analysis Plan/Quality Assurance Project Plan (SAP/QAPP) (Appendix C of Tetra Tech 2018)

Data validation occurred in two stages: (1) a Stage 2B review of the analytical reports and the QC information was conducted on 90 percent of the laboratory data, and (2) a Stage 4 review of the analytical reports, the QC information, and the associated raw data was conducted on approximately 10 percent of the laboratory data. The Stage 2B review evaluated the effects of the most critical QC information, such as holding times, calibration requirements, and blanks and spikes on the data. The Stage 4 review evaluated additional QC criteria and used the raw data to check calculations and analyte identifications. At each stage of validation, qualifiers were assigned to the results in the electronic database, in accordance with the references bulleted above and associated analytical methods.

The overall objective of data validation was to evaluate whether the quality of the data submitted to the laboratory is precise, accurate, and highly defensible. Standardized procedures for data management, data validation and verification, and data analysis were employed as specified in the SAP/QAPP (Appendix C of Tetra Tech 2018).

Following receipt of data from the laboratory, the following tasks were completed to assess precision, accuracy, representativeness, completeness, and comparability parameters:

- Review precision and accuracy of laboratory QC data
- Review precision and accuracy of field QC data
- Review the overall analytical process, including holding times, calibrations, analytical or matrix performance, and analyte identification and quantitation
- Assign qualifiers to data affected when QC criteria were not achieved
- Review and summarize implications of the frequency and severity of qualifiers in the validated data

This report includes samples collected and analyzed at ALS during the Baseline Survey and Site Characterization investigation that took place between April and October of 2018. Chemical analyses on all matrices were subjected to similar QA/QC requirements and standardized methods. The inorganic chemical analytical program included the following analyses and methods:

- Total metals (including total uranium) by solid waste (SW)-846 Method 6020A (Inductively Coupled Plasma Mass Spectroscopy [ICP-MS])
- Total synthetic precipitation leaching procedure (SPLP) and toxicity characteristic leaching procedure (TCLP) metals (including uranium) by SW-846 Method 6010B (Inductively Coupled Plasma Atomic Emission Spectroscopy [ICP-AES]) and SW-846 Method 6020A (ICP-MS)
- Mercury by SW-846 Method 7470A (Cold Vapor Atomic Absorption Spectrometry)
- Mercury by SW-846 Method 7471A (Cold Vapor Atomic Absorption Spectrometry)
- Methyl Mercury by USEPA Method 1630 (Atomic Fluorescence Detection)
- Low-Level Mercury by USEPA Method 1631E (Cold Vapor Atomic Absorption Spectrometry)
- Acid-Base Accounting (ABA) by Modified Sobek Method
- Alkalinity by ASTM Method 2320B
- Ammonia by USEPA Method 350.1
- Anions Chloride and Sulfate by USEPA Method 300.0
- Nitrate-Nitrite by USEPA Method 353.2
- Orthophosphate by USEPA Method 365.2
- Paste pH by U.S. Department of Agriculture (USDA) Handbook 60 Chapter 6 procedures
- Sulfide by USEPA Method 376.1
- Total Dissolved Solids (TDS) by ASTM Method 2540C
- Total Kjeldahl Nitrogen (TKN) by USEPA Method 351.4
- Total Organic Carbon (TOC) by USEPA Method 415.1
- Total Suspended Solids (TSS) by ASTM Method 2540D
- Hardness by ASTM Method 2340B (including Calcium and Magnesium by SW-846 method 6010B)

The radiological analytical program included the following analyses and methods:

- Potassium-40 (K-40), Radium-226 (Ra-226), Radium-228 (Ra-228), Thorium-232 (Th-232), Uranium-238 (U-238) by USEPA Method 901.1 (Gamma Spectrometry)

- Isotopic Thorium (Thorium-228 [Th-228], Thorium-230 [Th-230], Th-232) and Isotopic Uranium (Uranium-234 ([U-234], Uranium-235 ([U-235], U-238 by ASTM D9372 (Gamma Spectrometry)
- Polonium-210 (Po-210) by ASTM D9372 (Alpha Spectrometry)
- Ra-228 by USEPA Method 904.0 (Gas Flow Proportional Counting [GFPC])
- Lead-210 (Pb-210) and Radon-222 (Rd-222) by Eichrom (Liquid Scintillation Counting [LSC])
- Ra-226 by USEPA Method 903.1 (Lucas Cell)
- Gas Flow Proportional Counting (GFPC) (Ra-228, Gross Alpha)

### **3.1.1 STAGE 2B REVIEW**

Stage 2B validation refers to verification and validation based on completeness and compliance checks of sample receipt conditions and sample-related QC results, as well as both sample-related and instrument-related QC results (USEPA 2009). If data were missing from the laboratory reports, the data reviewer was required to notify Tetra Tech who will request the missing information. Elimination of the data from the review process is not allowed. All data were qualified as necessary, in accordance with established criteria. Level IV data packages were used; the validator selected the data subject to the Stage 2B validation from those packages. The following QC items were reviewed during the Stage 2B review for inorganic data:

- Holding times
- ICP-MS Tune
- Calibration
- Contract Required Detection Limit (CRDL)/ Contract Required Quantitation Limit (CRQL) Standards
- Field and laboratory blanks
- Interference Check Sample (ICS) results
- Spike results
- Laboratory duplicates
- Laboratory control samples
- Serial dilutions
- Field duplicates
- Internal standards
- Compound quantitation

The following QC items were reviewed during the Stage 2B review for radiological data:

- Holding times
- Sample preparation
- Standard traceability
- Instrument performance
- Calibration
- Background level
- Laboratory and field blanks
- Laboratory control samples
- Laboratory duplicates
- Field duplicates
- Matrix spike
- Tracer yield and uncertainty
- Nuclide identification and interferences
- Required detection limits
- Detection decisions
- Negative sample results
- Sample uncertainty

### **3.1.2 STAGE 4 VALIDATION**

Stage 4 validation refers to validation of all the same components as Stage 2B, plus recalculation checks, and the review of actual instrument outputs (USEPA 2009). If data was missing from the laboratory reports, the data reviewer was required to notify Tetra Tech who, in turn, requested the missing information. Elimination of data from the review process was not allowed. All data continued through the validation process and were qualified in accordance with established criteria. Level IV data packages were used; Tetra Tech selected the data subject to the Stage 4 validation from those packages. All the same QC items listed above for Stage 2B review were reviewed as part of the Stage 4 review, as well as the following components:

- Inorganics:
  - Instrument performance
  - Sample calculation verification
- Radiologicals:
  - Spectral interpretation
  - Sample activity calculation verification



## 3.2 DATA QUALIFIERS USED DURING DATA VALIDATION

Qualifiers were assigned to samples or groups of samples as a result of QC item violations. [Table G-5](#) presents the definition of each qualifier used during data validation.

**Table G-5. Definition of Qualifiers Used During Data Validation**

Qualifier	Definition
No qualifier	Confirmed identification. The analyte was positively identified at the reported value. The reported concentration is within the calibrated range of the instrument and the result is not affected by any deficiencies in the associated data package.
J	The analyte was detected at the reported concentration; the quantitation is an estimate and the direction of bias is unknown.
J+	The analyte was detected at the reported concentration; the quantitation is an estimate and may be biased high.
J-	The analyte was detected at the reported concentration; the quantitation is an estimate and may be biased low.
R	The result is rejected because of serious deficiencies in the ability to analyze the sample and meet the quality control criteria.
U	Not considered detected. The associated number is the reported concentration.
UJ	Not considered detected. The associated number is the reported concentration, which may be inaccurate.

## 3.3 INORGANIC DATA REVIEW

[Section 3.3.1](#) through [Section 3.3.7](#) provide information on what aspects were reviewed for each QC item that resulted in qualification of at least one sample result and states the number and percent of SDGs that were affected by each type of QC issue. The approach to discuss validation results by SDG rather than by sample was adopted to simplify presentation of data validation results because of the large volume of results and SDGs available. [Table G-6](#) summarizes which SDGs had sample results that were qualified based on each type of QC issue and analytical method, as documented in each data validation report.

No violations of any QC items were noted for the following analytes, and therefore they are not discussed further in this report:

- Low-level mercury
- ABA
- Paste pH
- Alkalinity
- Ammonia
- Anions (chloride and sulfate)
- Nitrate/Nitrite as N
- TOC
- Sulfide

- TDS
- TSS
- TKN
- Hardness

No violations of the following items were noted for the following QC items, which are not discussed further in this report.

- ICP-MS Tune
- Calibration
- CRDL/CRQL standard
- Laboratory control samples
- Internal standard performance
- Compound quantitation and CRQL
- Instrument performance
- Sample calculation verification

Table G-6. Summary of Data Validation Quality Control Violations for Inorganic Analyses by Sample Delivery Group

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radiological)	Stage	Inorganic Analyses Rejected Samples (Y/N)	Metals									Mercury		
						Holding Time	Calibration Blanks	Preparation Blanks	Equipment Blanks	ICS Results	MS/MSD	Duplicate Sample Analysis	Serial Dilution Analysis	Field Duplicates	Holding Time	Calibration Blanks	Preparation Blanks
1	RAES1-0001	1805032	1805031	2B	N	N	Y	Y	N	Y	Y	N	Y	Y	N	N	Y
2	RAES1-0002	1805034	1805033	2B	N	N	Y	N	N	Y	Y	N	Y	NA	N	N	Y
3	RAES1-0003	1805036	1805035	2B	N	N	Y	N	N	N	Y	Y	Y	NA	N	N	Y
4	RAES1-0004	1805039	1805038 <sup>3</sup>	2B	N	N	N	N	N	N	Y	N	N	Y	N	N	Y
5	RAES1-0005	1805041	1805040	2B	N	N	Y	N	N	N	Y	Y	N	Y	N	N	Y
6	RAES1-0006	1805042	1805043	2B	N	N	Y	N	N	N	Y	Y	Y	NA	N	N	Y
7	RAES1-0007	1805322	1805321	2B	N	N	Y	Y	N	N	Y	Y	N	Y	N	N	Y
8	RAES1-0008	1805320	1805319	2B	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
9	RAES1-0009	1805318	1805317	2B	N	N	Y	N	N	N	Y	N	N	Y	N	N	Y
10	RAES1-0010	1805324	1805323	2B	N	N	Y	N	N	N	Y	Y	Y	N	N	N	Y
11	RAES1-0011	1805334	1805333	2B	N	N	Y	Y	N	N	Y	N	Y	Y	N	N	Y
12	RAES1-0012	1805336	1805335	2B	N	N	Y	N	N	N	Y	N	Y	Y	N	N	Y
13	RAES1-0013	1805326	1805325	2B	N	N	Y	N	N	N	Y	N	Y	N	N	N	Y
14	RAES1-0014	1805332	1805331	2B	N	N	Y	N	N	N	Y	N	N	Y	N	N	Y
15	RAES1-0015	1805328	1805327	4	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
16	RAES1-0016	1805330	1805329	2B	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
17	RAES1-0017	1805338	1805337	2B	N	N	Y	N	N	N	Y	N	N	N	NA	NA	NA
18	RAES1-0018	1805340	1805339	2B	N	N	Y	Y	NA	N	N	N	N	NA	N	N	N
19	RAES1-0019	1805582	1805581	2B	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
20	RAES1-0020	1805584	1805583	2B	N	N	Y	N	N	N	Y	N	Y	N	N	N	Y
21	RAES1-0021	1805587	1805586	2B	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
22	RAES1-0022	1805585	1805588	4	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
23	RAES1-0023	1805591	1805590	4	N	N	Y	N	N	N	Y	N	N	NA	N	N	Y
24	RAES1-0024	1805589	1805592	2B	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
25	RAES1-0025	1805624	1805625	2B	N	N	Y	N	Y	N	Y	Y	N	N	N	N	Y
26	RAES1-0026	1805626	1805627	2B	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
27	RAES1-0027	1805628	1805629	2B	N	N	Y	N	Y	N	Y	N	Y	Y	N	N	Y
28	RAES1-0028	1805630	1805631	2B	N	N	Y	N	Y	N	Y	N	N	N	N	N	Y
29	RAES1-0029	1805632	1805633	2B	N	N	N	N	Y	N	Y	N	Y	Y	NA	NA	NA
30	RAES1-0030/0031	1806158	1806157	2B	N	N	Y	Y	Y	N	Y	N	Y	Y	N	N	Y
31	RAES1-0032/0033	1806160	1806159	2B	N	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Y
32	RAES1-0034/0035	1806162	1806161	4	N	N	Y	Y	Y	N	Y	N	Y	N	N	N	Y
33	RAES1-0036	1806236	1806221	2B	N	N	Y	N	Y	N	Y	Y	N	Y	N	N	Y
34	RAES1-0037	1806235	1806222	2B	N	N	Y	N	Y	N	Y	N	N	Y	N	N	Y
35	RAES1-0038	1806228	1806227	2B	N	N	Y	N	Y	N	Y	N	N	N	NA	NA	NA
36	RAES1-0039	1806231	1806223	2B	N	N	Y	N	Y	N	Y	N	N	N	N	N	Y
37	RAES1-0040	1806234	1806224 <sup>3</sup>	2B	N	N	Y	N	Y	N	Y	N	N	Y	N	N	Y
38	RAES1-0041	1806232	1806225	2B	N	N	Y	N	Y	N	Y	N	Y	N	N	N	Y
39	RAES1-0042	1806233	1806226	2B	N	N	Y	Y	N	N	Y	Y	Y	Y	N	N	Y
40	RAES1-0043	1806229	1806230	2B	N	N	Y	Y	NA	N	Y	N	N	NA	N	N	N
41	RAES1-0044	1806312 <sup>3</sup>	1806311	4	N	N	Y	Y	Y	N	Y	Y	Y	NA	N	N	N

Table G-6. Summary of Data Validation Quality Control Violations for Inorganic Analyses by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radiological)	Stage	Inorganic Analyses Rejected Samples (Y/N)	Metals									Mercury		
						Holding Time	Calibration Blanks	Preparation Blanks	Equipment Blanks	ICS Results	MS/MSD	Duplicate Sample Analysis	Serial Dilution Analysis	Field Duplicates	Holding Time	Calibration Blanks	Preparation Blanks
42	RAES1-0045	1806558	1806561	2B	N	N	Y	N	N	N	Y	Y	Y	Y	N	N	Y
43	RAES1-0046	1806560	1806559	2B	N	N	Y	Y	N	N	Y	Y	N	NA	N	N	Y
44	RAES1-0047	1806695	1806694	2B	N	N	Y	N	N	N	Y	N	N	N	NA	NA	NA
45	RAES1-0048	1806555	1806554	2B	N	N	Y	N	N	N	Y	Y	Y	Y	N	N	Y
46	RAES1-0049	1806567	1806566	2B	N	N	Y	Y	N	N	Y	N	N	Y	N	N	Y
47	RAES1-0050	1806627	1806626	2B	N	N	Y	Y	N	N	Y	Y	Y	Y	N	N	Y
48	RAES1-0051	1806628	1806629	2B	N	N	Y	Y	N	N	Y	Y	Y	Y	N	Y	Y
49	RAES1-0052	1806691	1806690	2B	N	N	Y	N	N	N	Y	Y	N	NA	N	N	Y
50	RAES1-0053	1806699 <sup>3</sup>	1806698	2B	N	N	Y	N	N	N	Y	Y	N	Y	N	N	Y
51	RAES1-0054	1806631	1806630	2B	N	N	Y	N	N	N	Y	Y	Y	Y	N	N	Y
52	RAES1-0055	1806633	1806632	2B	N	N	Y	Y	N	N	Y	Y	N	Y	N	N	Y
53	RAES1-0056	1806693	1806692	2B	N	N	N	N	N	N	Y	N	Y	NA	NA	NA	NA
54	RAES1-0057	1806624	1806625	2B	N	N	Y	N	Y	N	Y	Y	N	N	N	N	Y
55	RAES1-0058	1806637	1806636	2B	N	N	Y	Y	N	N	Y	Y	Y	Y	N	N	Y
56	RAES1-0059	1806639	1806638	2B	N	N	Y	Y	N	N	Y	Y	N	NA	N	N	Y
57	RAES1-0060	1806635	1806634	2B	N	N	Y	N	N	N	Y	Y	N	Y	N	N	Y
58	RAES1-0061	1806701	1806700	2B	N	N	Y	N	N	N	Y	Y	Y	Y	N	N	Y
59	RAES1-0062	1806697	1806696	2B	N	N	Y	Y	N	N	Y	Y	Y	Y	N	N	Y
60	RAES1-0063	1806641	1806640	2B	N	N	Y	Y	NA	N	N	N	N	NA	N	N	N
61	RAES1-0064	1807369, 1809587	1807370	2B	Y	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N
62	RAES1-0065	1807262	1807263	2B	N	N	Y	N	Y	N	Y	N	Y	N	N	N	Y
63	RAES1-0066	1807327	1807328	2B	N	N	Y	Y	Y	N	Y	N	Y	N	N	N	Y
64	RAES1-0067	1807264	1807265	2B	N	N	Y	N	Y	N	Y	Y	N	N	N	N	Y
65	RAES1-0068	1807330	1807331	4	N	N	Y	Y	Y	N	Y	N	N	NA	N	N	Y
66	RAES1-0069	1807325	1807326	2B	N	N	Y	N	Y	N	Y	N	N	N	N	N	Y
67	RAES1-0070	1807350	1807351	2B	N	N	Y	Y	N	N	Y	N	N	NA	N	N	Y
68	RAES1-0071	1807353	1807354	2B	N	N	Y	Y	Y	N	Y	Y	Y	NA	N	N	Y
69	RAES1-0072	1807365	1807366	4	N	N	Y	Y	Y	N	Y	N	Y	NA	N	N	Y
70	RAES1-0073	1807367	1807368	2B	N	N	Y	Y	Y	N	Y	Y	N	NA	N	N	Y
71	RAES1-0074	1807452	1807451	2B	N	N	Y	N	Y	N	Y	Y	N	NA	N	N	Y
72	RAES1-0075	1808303	1808302	2B	N	N	Y	N	N	N	Y	N	Y	Y	N	N	Y
73	RAES1-0076	1808356	1808360	2B	N	N	Y	Y	N	N	Y	N	N	N	N	N	Y
74	RAES1-0077	1808488	1808489	2B	N	N	Y	N	N	N	Y	Y	Y	Y	N	N	Y
75	RAES1-0078	1808476	1808475	2B	N	N	Y	Y	N	N	Y	N	N	Y	NA	NA	NA
76	RAES1-0079	1808483	1808484	2B	N	N	Y	N	N	N	Y	N	Y	NA	N	N	Y
77	RAES1-0080	1808491	1808493	2B	N	N	Y	Y	N	N	Y	Y	N	NA	N	N	Y
78	RAES1-0081	1808478	1808479	2B	N	N	Y	Y	N	N	Y	Y	Y	Y	N	N	Y
79	RAES1-0082	1808498	1808499	2B	N	N	Y	Y	N	N	Y	N	Y	Y	N	N	Y
80	RAES1-0083	1808480	1808481	2B	N	N	Y	N	N	N	Y	N	Y	N	NA	NA	NA
81	RAES1-0084	1808487	1808486	2B	N	N	Y	N	N	N	Y	N	N	N	N	N	Y
82	RAES1-0085	1808434	1808435	2B	N	N	N	N	N	N	Y	Y	Y	NA	N	N	Y
83	RAES1-0086	1808432	1808433	2B	N	N	Y	Y	NA	N	N	N	Y	N	N	N	N

Table G-6. Summary of Data Validation Quality Control Violations for Inorganic Analyses by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radiological)	Stage	Inorganic Analyses Rejected Samples (Y/N)	Metals									Mercury		
						Holding Time	Calibration Blanks	Preparation Blanks	Equipment Blanks	ICS Results	MS/MSD	Duplicate Sample Analysis	Serial Dilution Analysis	Field Duplicates	Holding Time	Calibration Blanks	Preparation Blanks
84	RAES1-0087	1808494	1808495	2B	N	N	Y	N	N	N	Y	N	Y	NA	NA	NA	NA
85	RAES1-0088/0091	1809473	1809474	2B	N	N	N	N	Y	N	Y	N	Y	N	NA	NA	NA
86	RAES1-0089	1809288	1809289	4	N	N	Y	Y	Y	N	Y	N	N	N	NA	NA	NA
87	RAES1-0090	1809283	1809284	2B	N	N	Y	Y	Y	N	Y	N	N	NA	NA	NA	NA
88	RAES1-0092	1809285	1809286	2B	N	N	Y	N	Y	N	Y	N	N	NA	NA	NA	NA
89	RAES1-0093	1809300	1809301	2B	N	N	Y	N	Y	N	Y	N	Y	NA	NA	NA	NA
90	RAES1-0094/0109/0119	1809479	1809480	2B	N	N	Y	Y	Y	N	Y	N	Y	Y	NA	NA	NA
91	RAES1-0095	1809298	1809299	2B	N	N	Y	Y	Y	N	Y	N	N	NA	NA	NA	NA
92	RAES1-0096	1809302	1809303	2B	N	N	Y	N	Y	N	Y	N	N	Y	NA	NA	NA
93	RAES1-0097	1809365	1809366	2B	N	N	Y	Y	Y	N	Y	N	Y	N	NA	NA	NA
94	RAES1-0098	1809349	1809351	2B	N	N	Y	Y	Y	N	Y	N	Y	N	NA	NA	NA
95	RAES1-0099	1809352	1809353	2B	N	N	Y	Y	Y	N	Y	N	N	N	NA	NA	NA
96	RAES1-0100	1809422	1809423	2B	N	N	Y	Y	Y	N	Y	N	Y	N	NA	NA	NA
97	RAES1-0101/0111	1809475	1809476	2B	N	N	Y	N	Y	N	Y	Y	Y	N	NA	NA	NA
98	RAES1-0102	1809414	1809415	2B	N	N	Y	Y	Y	N	Y	N	Y	Y	N	N	Y
99	RAES1-0103	1809355	1809356	2B	N	N	Y	Y	Y	N	Y	N	N	NA	NA	NA	NA
100	RAES1-0104	1809357	1809358	2B	N	N	Y	Y	Y	N	Y	N	N	Y	NA	NA	NA
101	RAES1-0105	1809361	1809363	2B	N	N	Y	Y	Y	N	Y	N	Y	Y	NA	NA	NA
102	RAES1-0106	1809416	1809417	2B	N	N	Y	Y	Y	N	Y	N	Y	Y	NA	NA	NA
103	RAES1-0107	1809410	1809411	4	N	N	Y	Y	Y	N	Y	N	N	Y	NA	NA	NA
104	RAES1-0108	1809428	1809429	2B	N	N	Y	Y	Y	N	Y	N	Y	N	NA	NA	NA
105	RAES1-0110	1809453	1809454	2B	N	N	Y	Y	Y	N	Y	N	N	Y	NA	NA	NA
106	RAES1-0112	1809420	1809421	2B	N	N	Y	Y	Y	N	Y	N	N	N	NA	NA	NA
107	RAES1-0113/0116	1809477	1809478	4	N	N	Y	Y	Y	N	Y	N	N	N	NA	NA	NA
108	RAES1-0114	1809424	1809425	2B	N	N	Y	Y	Y	N	Y	N	Y	N	NA	NA	NA
109	RAES1-0115	1809426	1809427	2B	N	N	Y	Y	Y	N	Y	N	Y	NA	NA	NA	NA
110	RAES1-0117	1809418	1809419	2B	N	N	Y	Y	Y	N	Y	N	N	NA	NA	NA	NA
111	RAES1-0118	1809412	1809413	2B	N	N	Y	Y	Y	N	Y	N	N	Y	NA	NA	NA
112	RAES1-0120	1809408	1809409	2B	N	N	Y	Y	NA	N	N	N	N	NA	NA	N	N
113	RAES1-0121	1810032	1810033	2B	N	N	Y	N	N	N	Y	N	Y	NA	NA	NA	NA
114	RAES1-0122	1810028	1810029	2B	N	N	Y	N	N	N	Y	N	Y	N	NA	NA	NA
115	RAES1-0123	1810001	1810002	2B	N	N	Y	Y	Y	N	Y	Y	Y	Y	NA	NA	NA
116	RAES1-0124	1810003	1810004	2B	N	N	Y	Y	Y	N	Y	N	Y	Y	NA	NA	NA
117	RAES1-0125/0126	1810024	1810025	4	N	N	Y	Y	Y	N	Y	Y	Y	Y	N	N	Y
118	RAES1-0127/0131	1810077	1810076	2B	N	N	Y	Y	N	N	Y	N	Y	Y	NA	NA	NA
119	RAES1-0128/0133	1810026	1810027	2B	N	N	Y	Y	Y	N	Y	N	N	N	NA	NA	NA

Table G-6. Summary of Data Validation Quality Control Violations for Inorganic Analyses by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radiological)	Stage	Inorganic Analyses Rejected Samples (Y/N)	Metals									Mercury		
						Holding Time	Calibration Blanks	Preparation Blanks	Equipment Blanks	ICS Results	MS/MSD	Duplicate Sample Analysis	Serial Dilution Analysis	Field Duplicates	Holding Time	Calibration Blanks	Preparation Blanks
120	RAES1-0129/-0140	1810072	1810073	2B	N	N	N	N	N	N	Y	N	Y	Y	NA	NA	NA
121	RAES1-0130	1810126	1810127	2B	N	N	Y	Y	N	N	Y	N	N	Y	NA	NA	NA
122	RAES1-0132	1810080	1810079	4	N	N	Y	Y	Y	N	Y	N	N	N	NA	NA	NA
123	RAES1-0134	1810030	1810031	2B	N	N	Y	Y	NA	N	N	N	N	NA	NA	NA	NA
124	RAES1-0135/-0136/-0138	1810122 <sup>3</sup>	1810123	2B	N	N	Y	Y	N	N	Y	N	N	N	NA	NA	NA
125	RAES1-0137/-0139	1810124	1810125	2B	N	N	Y	Y	Y	N	Y	Y	Y	N	NA	NA	NA
126	RAES1-0141	1810069	1810068	2B	N	N	Y	Y	NA	N	N	N	Y	Y	N	N	N
127	RAES1-0142	1811450	1811450	2B	N	Y	Y	N	NA	N	Y	N	Y	NA	Y	NA	NA
128	NA	1903120	1903120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total Number of Paired SDGs with Qualification Associated</b>					<b>1</b>	<b>1</b>	<b>121</b>	<b>66</b>	<b>58</b>	<b>2</b>	<b>121</b>	<b>38</b>	<b>63</b>	<b>50</b>	<b>2</b>	<b>1</b>	<b>72</b>
<b>Total Number of Paired SDGs with Analysis</b>					<b>127</b>	<b>127</b>	<b>127</b>	<b>127</b>	<b>119</b>	<b>127</b>	<b>127</b>	<b>127</b>	<b>127</b>	<b>94</b>	<b>80</b>	<b>80</b>	<b>80</b>
<b>Percent Paired SDGs Affected by QC Issue</b>					<b>0.8%</b>	<b>0.8%</b>	<b>95%</b>	<b>52%</b>	<b>49%</b>	<b>1.6%</b>	<b>95%</b>	<b>30%</b>	<b>50%</b>	<b>53%</b>	<b>2.5%</b>	<b>1.3%</b>	<b>90%</b>

Notes:

All results for QC issues not shown were acceptable without qualifications.

Blue shaded cells indicate the lab report contained at least one sample that had a QC violation associated with the QC item, resulting in a change in qualifier.

1 Paired SDG number refers to the number assigned to the paired inorganic and radiological laboratory reports that correspond to the same set of samples.

2 Refers to the validation methodology selected for the laboratory reports. See Section 3.1 for a description of the methodologies.

3 One sample from the SDG was requested to be redigested and reanalyzed to confirm results. See paired SDG number 128 (SDG number 1903120). The laboratory report was not validated. See Table L2 in Appendix L of the RSE Report for sample IDs. A total of five samples were included in SDG 1903120.

ICS Interference check sample

MS/MSD Matrix spike/matrix spike duplicate

N No QC violation occurred associated with the QC item; no qualifiers were added.

NA Not applicable

QC Quality control

SDG Sample delivery group

Y QC violation occurred associated with the QC item, resulting in a change in qualifier.

### 3.3.1 HOLDING TIMES

One objective of data validation was to assess the validity of the chemical data set based on compliance with holding time requirements. Technical holding times are defined as the maximum time allowable between sample collection and, as applicable, sample extraction, preparation, and analysis.

Samples from one laboratory report (less than 1 percent of all paired SDGs) had holding time violations. These samples were re-runs of soil samples collected throughout the investigation and used in a pilot study to evaluate the potential applicability of the ex-situ XRF soil cup method; the data were not intended to be used for site characterization or risk assessment. The pilot study was performed to evaluate the interchangeability of XRF analyzers and to assess a different soil preparation methodology, specifically to evaluate the effects of particle size on soil concentration. All positive results for these samples were qualified as estimated biased low (J-) and all nondetect results for these samples were rejected (R). These samples will not be used for risk assessment.

Additionally, one laboratory report that is part of the site characterization yielded holding time exceedances for mercury only. Of these results, only one was rejected (R) as unuseable because of the holding time exceedance. The remaining mercury results were qualified (J-). The one rejected result will not be used in the risk assessment.

### 3.3.2 LABORATORY AND FIELD BLANKS

Laboratory and field blank samples are analyzed to assess the existence and magnitude of contamination resulting from laboratory and/or field activities. For the RAES TO 0001 sample collection, laboratory blanks consisted of calibration and method/preparation blanks; and field blanks consisted of equipment rinsate blanks. [Table G-7](#) summarizes the various blank types and purposes.

**Table G-7. Blank Types and Purposes**

Blank Type	Purpose of Blank
Calibration blank	Evaluate analytical instruments for possible laboratory contamination
Method/preparation blank	Evaluate extraction/preparation and analytical procedures for possible laboratory contamination
Equipment rinsate blank	Verify the decontamination procedures were appropriately performed

At a minimum, calibration blanks were analyzed once every analytical period for each instrument. Method/preparation blanks were extracted (or prepared) at a frequency of one per analytical batch per matrix, or per 20 samples, whichever was greater.

If a problem with any blank existed, associated sample data were carefully evaluated to determine whether they were affected. When laboratory blank contamination was identified,

associated sample results were compared to the reporting limit (RL). Detected results at less than the RL were considered nondetected at the level of the RL, and qualified “U” if the detection in the blank was positive. If the blank detection was a negative value, positive results below the RL were qualified “J-” and nondetected results were qualified “UJ”.

In total, sample results from 121 (95 percent) of the metals SDGs and one (1.3 percent) of the mercury SDGs were qualified as a result of laboratory calibration blank violations. One or more sample result from 66 (52 percent) of the metals SDGs and 72 (90 percent) of the mercury SDGs was qualified as a result of laboratory preparation blank violations. Finally, samples from 58 (49 percent) of the metals SDGs and none of the mercury SDGs were qualified as a result of equipment blank violations.

### **3.3.3 INTERFERENCE CHECK SAMPLE (ICS) RESULTS**

ICS results are evaluated to determine the validity of the analytical results based on the instrument’s ability to overcome interferences typical of those found in samples. Percent recoveries are calculated from the analyses and should fall between 80 and 120 percent. Recoveries above 120 percent resulted in “J+” qualifications for positive results. Recoveries below 80 percent resulted in “J-” qualifications for positive results and “UJ” qualifications for nondetected results.

One or more sample results from two (1.6 percent) of the metals SDGs were qualified as a result of ICS results. ICS evaluation is not performed for mercury analysis.

### **3.3.4 MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate the effect of each sample matrix on the sample preparation procedures and the measurement methodology. Percent recoveries are calculated from the analyses and should fall between 75 and 125 percent. Recoveries calculated above 125 percent resulted in “J+” qualifications for positive results, and recoveries below 75 percent resulted in “J-” qualifications for positive results and “UJ” qualifications for nondetected results. If the post digestion spikes (which were analyzed in tandem with the MS/MSD) yielded recoveries within limits, results were qualified “J”.

One or more sample results from 121 (95 percent) of the metals SDGs were qualified as a result of MS/MSD violations. None of the mercury SDGs exhibited QC violations for MS/MSD.

### **3.3.5 LABORATORY DUPLICATES**

Laboratory duplicate results are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Relative percent differences (RPD) are calculated from the analyses and should not exceed 35 percent. Results with RPDs above 35 percent resulted in “J” qualifications.

One or more sample results from 38 (30 percent) of the metals SDGs and none of the mercury SDGs were qualified as a result of violations of duplicate sample analysis criteria.



### 3.3.6 SERIAL DILUTIONS

Serial dilution analysis evaluates whether matrix interference is affecting data quality. Percent differences are calculated from the analyses and should not exceed 10 percent. This criterion applies only when the concentration of the analyte in the undiluted sample is at least 50 times the method detection limit (MDL). Results with percent differences above 10 percent resulted in “J” qualifications.

One or more sample results from 63 (50 percent) of the metals SDGs were qualified as a result of violations of the serial dilution criteria. Serial dilutions are not performed for mercury analyses.

### 3.3.7 FIELD DUPLICATES

Field duplicate results are used to demonstrate acceptable field precision by the sampling crew at the time of sample collection. RPDs are calculated from the analyses and should not exceed 35 percent. Results with RPDs above 35 percent resulted in “J” qualifications.

One or more sample results from 50 (53 percent) of the metals SDGs were qualified as a result of violations of the field duplicate criteria. None of the mercury SDGs exhibited QC violations for field duplicates.

## 3.4 RADIOLOGICAL DATA REVIEW

The following sections provide information on what aspects were reviewed for each QC item resulting in qualification of at least one radiological sample result and states the number of SDGs that were affected by each type of QC issue. [Table G-8](#) and [Table G-9](#) summarize which SDGs had sample results that were qualified based on each type of QC issue, as documented in each data validation report.

No violations of the following QC items were noted for any of the radiological analyses, and therefore they are not discussed further in this report:

- Holding times
- Standard traceability
- Calibration
- Background level
- Spectral interpretation
- Sample activity calculation verification

No violations of any QC items were noted for the GFPC – gross alpha analyses, and therefore it is not discussed further in this report. The QC items requiring qualifications are discussed in the sections below.

Table G-8. Summary of Data Validation Quality Control Violations for Gamma and Alpha Spectroscopy by Sample Delivery Group

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radio-logical)	Stage	Gamma and Alpha Spectrometry	Gamma Spectrometry							Alpha Spectrometry							
						Rejected Samples (Y/N)	Sample Density	Laboratory Duplicates	Field Duplicates	Nuclide Identification and Interferences	Required Detection Limits	Detection Decisions	Negative Sample Results	Equipment Blank	Laboratory Control Samples	Laboratory Duplicates	Field Duplicates	Tracer Yield and Uncertainty	Required Detection Limits	Negative Sample Results
1	RAES1-0001	1805032	1805031	2B	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	Y	N	NA
2	RAES1-0002	1805034	1805033	2B	N	N	N	NA	N	N	Y	N	N	N	NA	NA	N	N	N	NA
3	RAES1-0003	1805036	1805035	2B	N	Y	N	NA	Y	N	Y	N	N	N	NA	NA	N	Y	N	NA
4	RAES1-0004	1805039	1805038 <sup>3</sup>	2B	N	Y	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
5	RAES1-0005	1805041	1805040	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
6	RAES1-0006	1805042	1805043	2B	N	N	N	NA	Y	N	N	N	N	N	NA	NA	N	N	N	NA
7	RAES1-0007	1805322	1805321	2B	N	Y	N	Y	Y	Y	Y	N	N	N	NA	Y	N	N	N	NA
8	RAES1-0008	1805320	1805319	2B	N	Y	N	N	Y	Y	Y	N	N	N	N	NA	N	N	N	NA
9	RAES1-0009	1805318	1805317	2B	N	Y	N	Y	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
10	RAES1-0010	1805324	1805323	2B	N	Y	N	N	Y	N	N	N	N	N	NA	NA	N	N	N	NA
11	RAES1-0011	1805334	1805333	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
12	RAES1-0012	1805336	1805335	2B	N	N	N	Y	Y	N	Y	N	N	N	N	NA	N	N	N	NA
13	RAES1-0013	1805326	1805325	2B	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
14	RAES1-0014	1805332	1805331	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	Y	Y	N	NA
15	RAES1-0015	1805328	1805327	4	N	N	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
16	RAES1-0016	1805330	1805329	2B	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
17	RAES1-0017	1805338	1805337	2B	N	Y	N	Y	Y	Y	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
18	RAES1-0018	1805340	1805339	2B	N	N	N	NA	N	N	N	N	NA	N	NA	NA	N	N	N	NA
19	RAES1-0019	1805582	1805581	2B	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
20	RAES1-0020	1805584	1805583	2B	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
21	RAES1-0021	1805587	1805586	2B	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
22	RAES1-0022	1805585	1805588	4	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
23	RAES1-0023	1805591	1805590	4	N	Y	N	NA	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
24	RAES1-0024	1805589	1805592	2B	N	Y	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
25	RAES1-0025	1805624	1805625	2B	N	Y	N	Y	Y	N	Y	Y	N	N	N	Y	N	Y	N	NA
26	RAES1-0026	1805626	1805627	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	Y	N	N	N	NA
27	RAES1-0027	1805628	1805629	2B	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
28	RAES1-0028	1805630	1805631	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
29	RAES1-0029	1805632	1805633	2B	N	Y	N	Y	Y	Y	N	Y	NA	NA	NA	NA	NA	NA	NA	NA
30	RAES1-0030/0031	1806158	1806157	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
31	RAES1-0032/0033	1806160	1806159	2B	N	Y	N	Y	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
32	RAES1-0034/0035	1806162	1806161	4	N	Y	N	N	Y	Y	Y	N	N	N	N	NA	N	N	N	NA
33	RAES1-0036	1806236	1806221	2B	N	Y	N	N	Y	Y	Y	N	N	N	N	NA	N	N	N	NA
34	RAES1-0037	1806235	1806222	2B	N	Y	N	Y	Y	Y	Y	N	N	N	N	NA	N	N	N	NA
35	RAES1-0038	1806228	1806227	2B	N	N	N	Y	Y	Y	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
36	RAES1-0039	1806231	1806223	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA

Table G-8. Summary of Data Validation Quality Control Violations for Gamma and Alpha Spectroscopy by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radiological)	Stage	Gamma and Alpha Spectrometry	Gamma Spectrometry							Alpha Spectrometry							
						Rejected Samples (Y/N)	Sample Density	Laboratory Duplicates	Field Duplicates	Nuclide Identification and Interferences	Required Detection Limits	Detection Decisions	Negative Sample Results	Equipment Blank	Laboratory Control Samples	Laboratory Duplicates	Field Duplicates	Tracer Yield and Uncertainty	Required Detection Limits	Negative Sample Results
37	RAES1-0040	1806234	1806224 <sup>3</sup>	2B	N	Y	N	Y	Y	Y	Y	Y	N	N	NA	NA	N	N	N	NA
38	RAES1-0041	1806232	1806225	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
39	RAES1-0042	1806233	1806226	2B	N	N	N	Y	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
40	RAES1-0043	1806229	1806230	2B	N	N	NA	NA	N	N	N	N	NA	N	N	NA	N	Y	N	NA
41	RAES1-0044	1806312 <sup>3</sup>	1806311	4	N	Y	N	NA	N	Y	Y	N	N	N	NA	NA	N	N	N	NA
42	RAES1-0045	1806558	1806561	2B	N	N	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
43	RAES1-0046	1806560	1806559	2B	N	Y	N	NA	N	N	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
44	RAES1-0047	1806695	1806694	2B	N	N	N	N	Y	N	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
45	RAES1-0048	1806555	1806554	2B	N	Y	Y	Y	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
46	RAES1-0049	1806567	1806566	2B	N	N	N	N	Y	Y	Y	N	N	N	N	NA	N	N	N	NA
47	RAES1-0050	1806627	1806626	2B	N	N	N	Y	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
48	RAES1-0051	1806628	1806629	2B	N	Y	N	N	Y	N	Y	N	N	N	N	NA	N	N	N	NA
49	RAES1-0052	1806691	1806690	2B	N	Y	Y	NA	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
50	RAES1-0053	1806699 <sup>3</sup>	1806698	2B	N	Y	N	N	N	Y	N	N	N	N	N	NA	N	N	N	NA
51	RAES1-0054	1806631	1806630	2B	N	Y	Y	Y	N	N	N	N	N	N	N	NA	N	N	N	NA
52	RAES1-0055	1806633	1806632	2B	N	Y	N	Y	Y	Y	N	N	N	N	NA	NA	N	N	N	NA
53	RAES1-0056	1806693	1806692	2B	N	N	N	NA	Y	Y	N	N	NA	NA	NA	NA	NA	NA	NA	NA
54	RAES1-0057	1806624	1806625	2B	N	Y	N	Y	Y	N	Y	Y	N	N	N	Y	N	Y	N	NA
55	RAES1-0058	1806637	1806636	2B	N	Y	N	N	Y	Y	N	N	N	N	NA	NA	N	N	N	NA
56	RAES1-0059	1806639	1806638	2B	N	Y	N	NA	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
57	RAES1-0060	1806635	1806634	2B	N	Y	N	Y	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
58	RAES1-0061	1806701	1806700	2B	N	Y	N	Y	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
59	RAES1-0062	1806697	1806696	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
60	RAES1-0063	1806641	1806640	2B	N	N	NA	NA	N	N	N	N	N	N	NA	NA	N	N	N	NA
61	RAES1-0064	1807369, 1809587	1807370	2B	N	N	N	N	Y	Y	Y	N	N	N	N	NA	Y	Y	N	NA
62	RAES1-0065	1807262	1807263	2B	N	Y	N	N	Y	N	Y	N	N	N	N	NA	N	N	N	NA
63	RAES1-0066	1807327	1807328	2B	N	N	N	N	Y	N	Y	N	N	N	N	NA	N	N	N	NA
64	RAES1-0067	1807264	1807265	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	Y	N	N	N	NA
65	RAES1-0068	1807330	1807331	4	N	Y	N	NA	Y	Y	Y	Y	N	N	NA	NA	N	N	N	NA
66	RAES1-0069	1807325	1807326	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	Y	N	NA
67	RAES1-0070	1807350	1807351	2B	N	Y	N	NA	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
68	RAES1-0071	1807353	1807354	2B	N	Y	N	NA	Y	N	N	N	N	N	N	NA	N	N	N	NA
69	RAES1-0072	1807365	1807366	4	N	Y	N	NA	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
70	RAES1-0073	1807367	1807368	2B	N	N	N	NA	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
71	RAES1-0074	1807452	1807451	2B	N	N	N	NA	Y	N	N	N	N	N	NA	NA	N	N	N	NA
72	RAES1-0075	1808303	1808302	2B	N	Y	N	N	Y	Y	N	N	N	N	NA	NA	N	N	N	NA
73	RAES1-0076	1808356	1808360	2B	N	Y	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA

Table G-8. Summary of Data Validation Quality Control Violations for Gamma and Alpha Spectroscopy by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radio-logical)	Stage	Gamma and Alpha Spectro-metry	Gamma Spectrometry							Alpha Spectrometry							
						Rejected Samples (Y/N)	Sample Density	Laboratory Dupli-cates	Field Dupli-cates	Nuclide Identifi-cation and Interfer-ences	Requi-red Detec-tion Limits	Detec-tion Deci-sions	Neg-ative Sample Results	Equip-ment Blank	Labo-ratory Control Samples	Labo-ratory Dupli-cates	Field Dupli-cates	Tracer Yield and Uncer-tainty	Requi-red Detec-tion Limits	Neg-ative Sample Results
74	RAES1-0077	1808488	1808489	2B	N	Y	N	N	Y	N	Y	N	N	N	N	NA	N	N	N	NA
75	RAES1-0078	1808476	1808475	2B	N	Y	N	N	Y	Y	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
76	RAES1-0079	1808483	1808484	2B	N	Y	N	NA	Y	Y	Y	N	N	N	NA	NA	Y	N	N	NA
77	RAES1-0080	1808491	1808493	2B	N	Y	N	NA	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
78	RAES1-0081	1808478	1808479	2B	N	Y	N	N	Y	N	Y	N	N	N	N	NA	N	N	N	NA
79	RAES1-0082	1808498	1808499	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
80	RAES1-0083	1808480	1808481	2B	N	N	N	N	Y	Y	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
81	RAES1-0084	1808487	1808486	2B	N	N	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
82	RAES1-0085	1808434	1808435	2B	N	Y	Y	NA	Y	N	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
83	RAES1-0086	1808432	1808433	2B	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	NA
84	RAES1-0087	1808494	1808495	2B	N	N	N	NA	N	Y	N	N	NA	NA	NA	NA	NA	NA	NA	NA
85	RAES1-0088/-0091	1809473	1809474	2B	N	Y	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
86	RAES1-0089	1809288	1809289	4	N	N	N	N	Y	N	Y	N	Y	N	NA	NA	N	N	N	N
87	RAES1-0090	1809283	1809284	2B	N	Y	N	NA	Y	Y	Y	N	N	N	N	NA	N	N	N	N
88	RAES1-0092	1809285	1809286	2B	N	Y	N	NA	Y	N	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
89	RAES1-0093	1809300	1809301	2B	N	Y	N	NA	Y	N	N	N	NA	NA	NA	NA	NA	NA	NA	NA
90	RAES1-0094/-0109/-0119	1809479	1809480	2B	N	N	N	N	Y	Y	Y	N	Y	N	Y	NA	Y	N	N	N
91	RAES1-0095	1809298	1809299	2B	N	Y	N	NA	Y	Y	Y	N	N	N	N	NA	Y	Y	N	N
92	RAES1-0096	1809302	1809303	2B	N	N	N	N	Y	N	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
93	RAES1-0097	1809365	1809366	2B	N	Y	N	N	Y	Y	Y	N	N	N	NA	NA	Y	N	N	Y
94	RAES1-0098	1809349	1809351	2B	N	Y	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	N
95	RAES1-0099	1809352	1809353	2B	N	Y	N	N	Y	Y	N	N	N	N	NA	NA	N	N	N	N
96	RAES1-0100	1809422	1809423	2B	N	Y	N	N	Y	Y	N	N	N	N	NA	NA	N	N	N	N
97	RAES1-0101/-0111	1809475	1809476	2B	N	Y	N	N	Y	Y	Y	N	N	N	N	NA	Y	N	N	NA
98	RAES1-0102	1809414	1809415	2B	N	Y	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	NA
99	RAES1-0103	1809355	1809356	2B	N	Y	N	NA	Y	Y	Y	N	N	N	Y	NA	N	N	N	N
100	RAES1-0104	1809357	1809358	2B	N	N	N	N	Y	N	Y	N	N	N	NA	NA	N	N	N	N
101	RAES1-0105	1809361	1809363	2B	N	Y	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	N
102	RAES1-0106	1809416	1809417	2B	N	N	N	Y	N	Y	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
103	RAES1-0107	1809410	1809411	4	N	N	N	N	N	Y	Y	N	N	N	NA	NA	Y	Y	N	N
104	RAES1-0108	1809428	1809429	2B	N	Y	N	N	Y	Y	Y	Y	N	N	NA	NA	Y	N	N	N
105	RAES1-0110	1809453	1809454	2B	N	Y	N	N	Y	Y	N	N	N	Y	NA	NA	Y	N	N	N
106	RAES1-0112	1809420	1809421	2B	N	N	N	N	Y	N	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
107	RAES1-0113/-0116	1809477	1809478	4	N	Y	N	N	Y	Y	Y	N	N	N	N	NA	Y	N	N	Y

Table G-8. Summary of Data Validation Quality Control Violations for Gamma and Alpha Spectroscopy by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radiological)	Stage	Gamma and Alpha Spectrometry	Gamma Spectrometry							Alpha Spectrometry							
						Rejected Samples (Y/N)	Sample Density	Laboratory Duplicates	Field Duplicates	Nuclide Identification and Interferences	Required Detection Limits	Detection Decisions	Negative Sample Results	Equipment Blank	Laboratory Control Samples	Laboratory Duplicates	Field Duplicates	Tracer Yield and Uncertainty	Required Detection Limits	Negative Sample Results
108	RAES1-0114	1809424	1809425	2B	N	Y	N	N	Y	Y	Y	N	Y	N	NA	NA	Y	N	N	N
109	RAES1-0115	1809426	1809427	2B	N	Y	N	NA	Y	Y	N	N	Y	N	N	N	N	N	N	N
110	RAES1-0117	1809418	1809419	2B	N	Y	N	NA	Y	Y	N	N	N	N	NA	NA	N	N	N	N
111	RAES1-0118	1809412	1809413	2B	N	N	N	N	Y	Y	Y	N	N	N	NA	NA	N	N	N	N
112	RAES1-0120	1809408	1809409	2B	N	N	NA	NA	N	N	N	N	NA	N	NA	NA	N	N	N	NA
113	RAES1-0121	1810032	1810033	2B	N	Y	N	NA	Y	Y	Y	N	N	N	NA	NA	N	N	N	NA
114	RAES1-0122	1810028	1810029	2B	N	Y	N	N	Y	N	Y	N	NA	NA	NA	NA	NA	NA	NA	NA
115	RAES1-0123	1810001	1810002	2B	N	N	N	N	Y	Y	Y	N	Y	N	NA	NA	N	N	N	N
116	RAES1-0124	1810003	1810004	2B	N	N	N	N	Y	Y	N	N	N	N	NA	NA	N	N	N	N
117	RAES1-0125/-0126	1810024	1810025	4	N	N	N	N	Y	Y	Y	N	N	N	N	NA	Y	N	N	N
118	RAES1-0127/-0131	1810077	1810076	2B	N	Y	N	N	Y	Y	Y	N	Y	N	NA	NA	Y	N	N	N
119	RAES1-0128/-0133	1810026	1810027	2B	N	Y	N	N	Y	Y	N	N	N	N	NA	NA	Y	N	N	N
120	RAES1-0129/-0140	1810072	1810073	2B	N	Y	N	Y	Y	N	Y	N	N	N	NA	N	N	N	N	NA
121	RAES1-0130	1810126	1810127	2B	N	N	Y	Y	Y	Y	Y	N	N	N	N	NA	Y	N	N	N
122	RAES1-0132	1810080	1810079	4	N	Y	N	Y	Y	Y	Y	N	N	N	N	NA	Y	N	N	N
123	RAES1-0134	1810030	1810031	2B	N	N	NA	NA	N	N	N	N	N	N	NA	NA	N	N	N	NA
124	RAES1-0135/-0136/-0138	1810122 <sup>3</sup>	1810123	2B	N	Y	N	N	Y	Y	Y	N	N	N	N	NA	N	N	N	NA
125	RAES1-0137/-0139	1810124	1810125	2B	N	Y	N	N	Y	Y	Y	N	N	N	NA	NA	Y	Y	Y	N
126	RAES1-0141	1810069	1810068	2B	N	N	NA	N	N	N	Y	N	N	N	NA	N	N	N	N	NA
127	RAES1-0142	1811450	1811450	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
128	NA	1903120	1903120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total Number of Paired SDGs with Qualification Associated</b>					<b>0</b>	<b>81</b>	<b>5</b>	<b>22</b>	<b>111</b>	<b>62</b>	<b>100</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>18</b>	<b>11</b>	<b>1</b>	<b>2</b>
<b>Total Number of Paired SDGs with Analysis</b>					<b>127</b>	<b>126</b>	<b>121</b>	<b>94</b>	<b>126</b>	<b>126</b>	<b>126</b>	<b>126</b>	<b>107</b>	<b>110</b>	<b>30</b>	<b>9</b>	<b>110</b>	<b>110</b>	<b>110</b>	<b>27</b>
<b>Percent Paired SDGs Affected by QC Issue</b>					<b>0.0%</b>	<b>64%</b>	<b>4.1%</b>	<b>23%</b>	<b>88%</b>	<b>49%</b>	<b>79%</b>	<b>4.8%</b>	<b>5.6%</b>	<b>0.9%</b>	<b>6.7%</b>	<b>56%</b>	<b>16%</b>	<b>10%</b>	<b>0.9%</b>	<b>7.4%</b>

Notes:

All results for QC issues not shown were acceptable without qualifications.

Blue shaded cells indicate the lab report contained at least one sample that had a QC violation associated with the QC item, resulting in a change in qualifier.

<sup>1</sup> Paired SDG number refers to the number assigned to the paired inorganic and radiological laboratory reports that correspond to the same set of samples.

<sup>2</sup> Refers to the validation methodology selected for the laboratory reports. See Section 3.1 for a description of the methodologies.

<sup>3</sup> One sample from the SDG was requested to be redigested and reanalyzed to confirm results. See paired SDG number 128 (SDG number 1903120). The laboratory report was not validated.

See Table L2 in Appendix L of the RSE Report for sample IDs. A total of five samples were included in SDG 1903120.

**Table G-8. Summary of Data Validation Quality Control Violations for Gamma and Alpha Spectroscopy by Sample Delivery Group (Continued)**

Notes: (Continued)

- N No QC violation occurred associated with the QC item; no qualifiers were added.
- NA Not applicable
- QC Quality control
- SDG Sample delivery group
- Y QC violation occurred associated with the QC item, resulting in a change in qualifier.

Table G-9. Summary of Data Validation Quality Control Violations for Other Radiological Analyses by Sample Delivery Group

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radio-logical)	Stage	Other Radiological Analyses	Liquid Scintillation Counting - Lead-210				Lucas Cell - Radium-226		Gas Flow Proportional Counting – Radium-228					Liquid Scintillation Counting - Radon-222	
					Rejected Samples (Y/N)	Instrument Performance	Field Duplicates	Chemical Yield	Required Detection Limits	Equip-ment Blank	MS	Method Blank	Labora-tory Control Samples	Chem-ical Yield	Requi-red Detec-tion Limits	Negative Sample Results	Instrum-ent Perform-ance	Requi-red Detec-tion Limits
1	RAES1-0001	1805032	1805031	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	RAES1-0002	1805034	1805033	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
3	RAES1-0003	1805036	1805035	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
4	RAES1-0004	1805039	1805038 <sup>3</sup>	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
5	RAES1-0005	1805041	1805040	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
6	RAES1-0006	1805042	1805043	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
7	RAES1-0007	1805322	1805321	2B	N	N	N	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
8	RAES1-0008	1805320	1805319	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
9	RAES1-0009	1805318	1805317	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
10	RAES1-0010	1805324	1805323	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
11	RAES1-0011	1805334	1805333	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
12	RAES1-0012	1805336	1805335	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
13	RAES1-0013	1805326	1805325	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
14	RAES1-0014	1805332	1805331	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
15	RAES1-0015	1805328	1805327	4	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
16	RAES1-0016	1805330	1805329	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
17	RAES1-0017	1805338	1805337	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
18	RAES1-0018	1805340	1805339	2B	N	N	NA	N	N	NA	NA	N	N	N	N	N	NA	NA
19	RAES1-0019	1805582	1805581	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
20	RAES1-0020	1805584	1805583	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
21	RAES1-0021	1805587	1805586	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
22	RAES1-0022	1805585	1805588	4	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
23	RAES1-0023	1805591	1805590	4	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
24	RAES1-0024	1805589	1805592	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
25	RAES1-0025	1805624	1805625	2B	N	N	Y	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
26	RAES1-0026	1805626	1805627	2B	N	N	N	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
27	RAES1-0027	1805628	1805629	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
28	RAES1-0028	1805630	1805631	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
29	RAES1-0029	1805632	1805633	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30	RAES1-0030/0031	1806158	1806157	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
31	RAES1-0032/0033	1806160	1806159	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
32	RAES1-0034/0035	1806162	1806161	4	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
33	RAES1-0036	1806236	1806221	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
34	RAES1-0037	1806235	1806222	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
35	RAES1-0038	1806228	1806227	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36	RAES1-0039	1806231	1806223	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
37	RAES1-0040	1806234	1806224 <sup>3</sup>	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
38	RAES1-0041	1806232	1806225	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table G-9. Summary of Data Validation Quality Control Violations for Other Radiological Analyses by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radio-logical)	Stage	Other Radiological Analyses	Liquid Scintillation Counting - Lead-210				Lucas Cell - Radium-226		Gas Flow Proportional Counting – Radium-228					Liquid Scintillation Counting - Radon-222	
					Rejected Samples (Y/N)	Instrument Performance	Field Duplicates	Chemical Yield	Required Detection Limits	Equip-ment Blank	MS	Method Blank	Labora-tory Control Samples	Chem-ical Yield	Requi-red Detection Limits	Negative Sample Results	Instrum-ent Perform-ance	Requi-red Detec-tion Limits
39	RAES1-0042	1806233	1806226	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
40	RAES1-0043	1806229	1806230	2B	N	N	NA	N	N	NA	NA	N	N	N	N	N	NA	NA
41	RAES1-0044	1806312 <sup>3</sup>	1806311	4	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
42	RAES1-0045	1806558	1806561	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
43	RAES1-0046	1806560	1806559	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
44	RAES1-0047	1806695	1806694	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
45	RAES1-0048	1806555	1806554	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
46	RAES1-0049	1806567	1806566	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
47	RAES1-0050	1806627	1806626	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
48	RAES1-0051	1806628	1806629	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
49	RAES1-0052	1806691	1806690	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
50	RAES1-0053	1806699 <sup>3</sup>	1806698	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
51	RAES1-0054	1806631	1806630	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
52	RAES1-0055	1806633	1806632	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
53	RAES1-0056	1806693	1806692	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
54	RAES1-0057	1806624	1806625	2B	N	N	Y	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
55	RAES1-0058	1806637	1806636	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
56	RAES1-0059	1806639	1806638	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
57	RAES1-0060	1806635	1806634	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
58	RAES1-0061	1806701	1806700	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
59	RAES1-0062	1806697	1806696	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	RAES1-0063	1806641	1806640	2B	N	N	NA	N	N	NA	NA	N	N	N	N	N	NA	NA
61	RAES1-0064	1807369, 1809587	1807370	2B	N	N	NA	N	N	NA	NA	N	N	N	N	N	NA	NA
62	RAES1-0065	1807262	1807263	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
63	RAES1-0066	1807327	1807328	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
64	RAES1-0067	1807264	1807265	2B	N	N	N	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
65	RAES1-0068	1807330	1807331	4	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
66	RAES1-0069	1807325	1807326	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
67	RAES1-0070	1807350	1807351	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
68	RAES1-0071	1807353	1807354	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
69	RAES1-0072	1807365	1807366	4	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
70	RAES1-0073	1807367	1807368	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
71	RAES1-0074	1807452	1807451	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
72	RAES1-0075	1808303	1808302	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
73	RAES1-0076	1808356	1808360	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
74	RAES1-0077	1808488	1808489	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
75	RAES1-0078	1808476	1808475	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
76	RAES1-0079	1808483	1808484	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
77	RAES1-0080	1808491	1808493	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA



Table G-9. Summary of Data Validation Quality Control Violations for Other Radiological Analyses by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radio-logical)	Stage	Other Radiological Analyses	Liquid Scintillation Counting - Lead-210				Lucas Cell - Radium-226		Gas Flow Proportional Counting – Radium-228					Liquid Scintillation Counting - Radon-222	
					Rejected Samples (Y/N)	Instrument Performance	Field Duplicates	Chemical Yield	Required Detection Limits	Equip-ment Blank	MS	Method Blank	Labora-tory Control Samples	Chem-ical Yield	Requi-red Detec-tion Limits	Negative Sample Results	Instrum-ent Perform-ance	Requi-red Detec-tion Limits
78	RAES1-0081	1808478	1808479	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
79	RAES1-0082	1808498	1808499	2B	N	N	NA	N	N	N	NA	N	N	N	Y	N	NA	NA
80	RAES1-0083	1808480	1808481	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
81	RAES1-0084	1808487	1808486	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
82	RAES1-0085	1808434	1808435	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
83	RAES1-0086	1808432	1808433	2B	N	N	N	N	Y	NA	NA	N	N	Y	Y	N	Y	N
84	RAES1-0087	1808494	1808495	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
85	RAES1-0088/0091	1809473	1809474	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
86	RAES1-0089	1809288	1809289	4	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
87	RAES1-0090	1809283	1809284	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
88	RAES1-0092	1809285	1809286	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
89	RAES1-0093	1809300	1809301	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
90	RAES1-0094/0109/0119	1809479	1809480	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
91	RAES1-0095	1809298	1809299	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
92	RAES1-0096	1809302	1809303	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
93	RAES1-0097	1809365	1809366	2B	N	N	NA	N	N	N	NA	N	Y	Y	N	N	NA	NA
94	RAES1-0098	1809349	1809351	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
95	RAES1-0099	1809352	1809353	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
96	RAES1-0100	1809422	1809423	2B	N	N	NA	N	N	N	NA	N	Y	N	N	N	NA	NA
97	RAES1-0101/0111	1809475	1809476	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
98	RAES1-0102	1809414	1809415	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
99	RAES1-0103	1809355	1809356	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
100	RAES1-0104	1809357	1809358	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
101	RAES1-0105	1809361	1809363	2B	N	N	NA	N	N	N	NA	N	Y	N	N	N	NA	NA
102	RAES1-0106	1809416	1809417	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
103	RAES1-0107	1809410	1809411	4	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
104	RAES1-0108	1809428	1809429	2B	N	N	NA	N	N	Y	NA	N	Y	N	N	Y	NA	NA
105	RAES1-0110	1809453	1809454	2B	N	N	NA	Y	Y	N	NA	N	N	N	N	N	NA	NA
106	RAES1-0112	1809420	1809421	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
107	RAES1-0113/0116	1809477	1809478	4	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
108	RAES1-0114	1809424	1809425	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
109	RAES1-0115	1809426	1809427	2B	N	N	NA	N	N	N	NA	N	Y	N	N	N	NA	NA
110	RAES1-0117	1809418	1809419	2B	N	N	NA	N	N	N	NA	N	Y	N	N	N	NA	NA
111	RAES1-0118	1809412	1809413	2B	N	N	NA	N	N	N	NA	N	Y	N	N	N	NA	NA
112	RAES1-0120	1809408	1809409	2B	N	N	NA	N	N	NA	NA	N	N	N	N	N	NA	NA
113	RAES1-0121	1810032	1810033	2B	N	N	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table G-9. Summary of Data Validation Quality Control Violations for Other Radiological Analyses by Sample Delivery Group (Continued)

Paired SDG Number <sup>1</sup>	Chain-of-Custody	SDG Number (Metals and Other Inorganic)	SDG Number (Radiological)	Stage	Other Radiological Analyses	Liquid Scintillation Counting - Lead-210				Lucas Cell - Radium-226		Gas Flow Proportional Counting – Radium-228					Liquid Scintillation Counting - Radon-222	
					Rejected Samples (Y/N)	Instrument Performance	Field Duplicates	Chemical Yield	Required Detection Limits	Equipment Blank	MS	Method Blank	Laboratory Control Samples	Chemical Yield	Required Detection Limits	Negative Sample Results	Instrument Performance	Required Detection Limits
114	RAES1-0122	1810028	1810029	2B	N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
115	RAES1-0123	1810001	1810002	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
116	RAES1-0124	1810003	1810004	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
117	RAES1-0125/-0126	1810024	1810025	4	N	N	NA	N	N	N	NA	Y	N	N	N	N	NA	NA
118	RAES1-0127/-0131	1810077	1810076	2B	N	N	NA	N	N	N	NA	N	N	N	N	N	NA	NA
119	RAES1-0128/-0133	1810026	1810027	2B	N	Y	NA	N	Y	N	NA	N	N	N	N	Y	NA	NA
120	RAES1-0129/-0140	1810072	1810073	2B	N	N	N	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
121	RAES1-0130	1810126	1810127	2B	N	Y	NA	N	N	N	NA	N	N	N	N	N	NA	NA
122	RAES1-0132	1810080	1810079	4	N	Y	NA	N	N	N	NA	N	N	N	N	N	NA	NA
123	RAES1-0134	1810030	1810031	2B	N	N	NA	N	N	NA	NA	N	N	N	N	N	NA	NA
124	RAES1-0135/-0136/-0138	1810122 <sup>3</sup>	1810123	2B	N	Y	NA	N	N	NA	NA	NA	NA	NA	NA	NA	NA	NA
125	RAES1-0137/-0139	1810124	1810125	2B	N	Y	NA	N	N	N	NA	N	N	N	N	N	NA	NA
126	RAES1-0141	1810069	1810068	2B	N	N	N	N	N	NA	NA	N	N	N	N	N	Y	Y
127	RAES1-0142	1811450	1811450	2B	N	NA	NA	NA	NA	N	Y	NA	NA	NA	NA	NA	NA	NA
128	NA	1903120	1903120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total Number of Paired SDGs with Qualification Associated</b>					<b>0</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>
<b>Total Number of Paired SDGs with Analysis</b>					<b>127</b>	<b>110</b>	<b>8</b>	<b>110</b>	<b>110</b>	<b>31</b>	<b>1</b>	<b>38</b>	<b>38</b>	<b>38</b>	<b>38</b>	<b>38</b>	<b>2</b>	<b>2</b>
<b>Percent Paired SDGs Affected by QC Issue</b>					<b>0.0%</b>	<b>4.5%</b>	<b>25%</b>	<b>0.9%</b>	<b>2.7%</b>	<b>3.2%</b>	<b>100%</b>	<b>2.6%</b>	<b>18%</b>	<b>5.3%</b>	<b>5.3%</b>	<b>5.3%</b>	<b>100%</b>	<b>50%</b>

Notes:

All results for QC issues not shown were acceptable without qualifications.

Blue shaded cells indicate the lab report contained at least one sample that had a QC violation associated with the QC item, resulting in a change in qualifier.

- 1 Paired SDG number refers to the number assigned to the paired inorganic and radiological laboratory reports that correspond to the same set of samples.
- 2 Refers to the validation methodology selected for the laboratory reports. See Section 3.1 for a description of the methodologies.
- 3 One sample from the SDG was requested to be redigested and reanalyzed to confirm results. See paired SDG number 128 (SDG number 1903120). The laboratory report was not validated. See Table L2 in Appendix L of the RSE Report for sample IDs. A total of five samples were included in SDG 1903120.

MS Matrix spike  
 N No QC violation occurred associated with the QC item; no qualifiers were added.  
 NA Not applicable  
 QC Quality control  
 SDG Sample delivery group  
 Y QC violation occurred associated with the QC item, resulting in a change in qualifier.

### **3.4.1 SAMPLE DENSITY**

Sample density evaluation is performed to determine whether the sample amount collected can affect data quality. Percent differences are calculated from the evaluation and should not exceed  $\pm 15$  percent. Results with a potential high bias were qualified “J+” for positive results and “UJ” for nondetected results. Results with a potential low bias were qualified “J-” for positive results and “UJ” for nondetected results.

One or more sample results from 81 (64 percent) of the gamma spectrometry SDGs were qualified as a result of violation of the sample density criteria.

### **3.4.2 INSTRUMENT PERFORMANCE**

Instrument performance checks are performed prior to the analytical sequence to confirm that the instrumentation used is stable. The daily count rates should be within laboratory-established tolerances. Results that exceeded criteria were qualified “J”.

One or more sample results from five (4.5 percent) of the LSC Pb-210 SDGs and from both of the LSC Rd-222 SDGs were qualified as a result of violations of the instrument performance criteria.

### **3.4.3 METHOD BLANK**

Method blank samples are analyzed to assess the existence and magnitude of contamination resulting from laboratory activities. A description of method blanks is provided in [Table G-6](#). One or more sample result from one (2.6 percent) of the GFPC – Ra-228 SDGs was qualified as a result of violation of the method blank criteria.

### **3.4.4 EQUIPMENT BLANK**

Equipment blank samples are analyzed to assess the existence and magnitude of contamination resulting from field decontamination activities. A description of equipment blanks is provided in [Table G-7](#).

One or more sample results from six (5.6 percent) of the alpha spectrometry SDGs and one (3.2 percent) of the Lucas cell Ra-226 SDGs were qualified as a result of violations of equipment blank criteria.

### **3.4.5 LABORATORY CONTROL SAMPLES**

Laboratory control sample results are used to evaluate the effect of sample preparation procedures and the measurement methodology on analytical results. Percent recoveries are calculated from the analyses and should fall within laboratory-established criteria. Recoveries calculated above the criteria range resulted in “J+” qualifications for positive results, and recoveries below the criteria range resulted in “J-” qualifications for positive results and “UJ” qualifications for nondetected results.

One or more sample results from one (0.9 percent) of the alpha spectrometry SDGs and seven (18 percent) of the GFPC – Ra-228 SDGs were qualified as a result of violations of the laboratory control sample criteria.

### **3.4.6 LABORATORY DUPLICATE**

Laboratory duplicate results are used to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate error ratios (DER) are calculated from the analyses and should not exceed 2.13. Results with DERs above 2.13 percent resulted in “J” qualifications.

One or more sample results from five (4.1 percent) of the gamma spectrometry SDGs and two (6.7 percent) of the alpha spectrometry SDGs were qualified as a result of violations of the laboratory duplicate criteria.

### **3.4.7 MATRIX SPIKE**

Matrix spike results are used to evaluate the effect of each sample matrix on the sample preparation procedures and the measurement methodology. Percent recoveries are calculated from the analyses and should fall within laboratory-established criteria. Recoveries calculated above the criteria range resulted in “J+” qualifications for positive results, and recoveries below the criteria range resulted in “J-” qualifications for positive results and “UJ” qualifications for nondetected results.

The only sample result from the one SDG for which a MS was performed for the Lucas cell Ra-226 analysis, was qualified as a result of a violation of the matrix spike criteria.

### **3.4.8 FIELD DUPLICATES**

Field duplicate results are used to demonstrate acceptable field precision by the sampling crew at the time of sample collection. DERs are calculated from the analyses and should not exceed 2.13. Results with DERs above 2.13 percent resulted in “J” qualifications.

One or more sample results from 22 (23 percent) of the gamma spectrometry SDGs, five (56 percent) of the alpha spectrometry SDGs, and two (25 percent) of the LSC Pb-210 SDGs were qualified as a result of violations of the field duplicate criteria.

### **3.4.9 TRACER/CHEMICAL YIELD AND UNCERTAINTY**

Tracer yield and uncertainty evaluations are performed to ensure preparation and analytical efficiency. Percent recoveries are calculated from the analyses and should fall within laboratory-established criteria. Recoveries calculated above the criteria range resulted in “J+” qualifications for positive results and “UJ” qualifications for nondetected results. Recoveries below the criteria range resulted in “J-” qualifications for positive results and “UJ” qualifications for nondetected results.

One or more sample results from 18 (16 percent) of the alpha spectrometry SDGs, one (0.9 percent) of the LSC Pb-210 SDGs, and two (5.3 percent) of the GFPC Ra-228 SDGs were qualified as a result of violations of the tracer/chemical yield criteria.

### **3.4.10 NUCLIDE IDENTIFICATION AND INTERFERENCES**

Nuclide identification and interferences are evaluated to ensure that sample peak energies are within the expected region of interest (ROI). Peaks that were outside the ROI are considered “tentatively identified” and were qualified “UJ” as estimated nondetected results.

One or more sample results from 111 (88 percent) of the gamma spectrometry SDGs were qualified as a result of violation of the nuclide identification and interferences criteria.

### **3.4.11 REQUIRED DETECTION LIMITS**

Evaluations of the isotope-specific minimum detectable concentrations (MDCs) were performed to verify that they were less than the project-specified required detection limits. Nondetected results with MDCs that exceeded the project-specified required detection limits were qualified “UJ” as estimated nondetected results.

One or more sample results from 62 (49 percent) of the gamma spectrometry SDGs, 11 (10 percent) of the alpha spectrometry SDGs, three (2.7 percent) of the LSC Pb-210 SDGs, two (5.3 percent) of the GFPC Ra-228 SDGs, and one of the two LSC – Rd-222 SDGs were qualified as a result of violations of the required detection limits criteria.

### **3.4.12 DETECTION DECISIONS**

Sample results below the MDC were considered undetected. Results that had a “net quantification” above the MDC, but no peaks found in the peak search routine, were qualified “UJ” as estimated nondetected results.

One or more sample results from 100 (79 percent) of the gamma spectrometry SDGs was qualified as a result of violations of the detection decisions criteria.

### **3.4.13 NEGATIVE SAMPLE RESULTS**

Any negative results should have an absolute value less than the reported total propagated uncertainty (TPU). Negative results with absolute values exceeding the TPU were qualified “UJ” as estimated nondetected results.

One or more samples from six (4.8 percent) of the gamma spectrometry SDGs, one (0.9 percent) of the alpha spectrometry SDGs, and two (5.3 percent) of the GFPC – Ra-228 SDGs were qualified as a result of violations of the negative sample results criteria.

### **3.4.14 SAMPLE UNCERTAINTY**

Sample-specific TPUs should be less than 80 percent of the sample result value and greater than two times the MDC. Results that did not meet this criteria were qualified “J”.

One or more sample results from two (7.4 percent) of the alpha spectrometry SDGs for Po-210 were qualified as a result of violation of the negative sample uncertainty criteria.

## **3.5 EVALUATION SUMMARY**

Precision, accuracy, representativeness, completeness, and comparability parameters were reviewed to validate all analytical data. This section discusses the overall data quality, including the precision, accuracy, representativeness, completeness, and comparability parameters, as established by the data validation.

### **3.5.1 PRECISION**

Precision is a measure of the reproducibility of an experimental value without regard to the true or reference value. The primary indicators of site data precision are RPDs for field and laboratory duplicate samples. For this investigation, one or more sample results in 72 of 127 SDGs were qualified for at least one precision QC issue. Within each SDG, only a subset of the results were qualified. The majority of the precision QC issues involved RPD exceedances for a minority of the metals analyzed (typically one, but up to five, of the 28 metals analyzed). RPDs outside the guidance for field duplicates were noted in the data validation reports. No data were rejected because of laboratory or field precision violations. The data went through the documented data validation process and overall, the results were found to have acceptable precision.

### **3.5.2 ACCURACY**

Accuracy assesses the proximity of an experimental value to the true or reference value. The primary accuracy indicators are MS/MSD and LCS spike percent recoveries, as well as ICS results for metals analyses and tracer/chemical yield for radiological analyses. Of all analytical data from this investigation, one or more sample results from 122 of 127 SDGs were qualified as estimated. Within each SDG, only a subset of the results were qualified. The majority of these qualifications were MS/MSD exceedances which may have only affected the sample spiked for the MS/MSD. No data were rejected because of accuracy violations.

A subset of accuracy is bias, which assesses the direction (high or low) an experimental value may deviate from the true reference value. In addition to MS/MSD, LCS, and tracer/chemical yield percent recoveries, primary indicators of bias are method/preparation and field blanks, ICS results for metals analyses, and sample density for radiological analyses. Of all analytical data from this investigation, one or more sample results from all SDGs were qualified as estimated. The majority of these were blank contamination qualifiers and only affected a subset of the samples submitted within each SDG. No data were rejected because of bias violations. The data went through the documented data validation process and overall, the results were found to have acceptable accuracy.

### 3.5.3 REPRESENTATIVENESS

Representativeness refers to the ability of sample data to reflect true environmental conditions. Determinants of representativeness include sampling locations, frequency, collection procedures, and possible compromises to sample integrity (such as cross-contamination) that can occur during collection, transport, and analysis. Selection of representative sampling sites is important in obtaining samples that accurately show site conditions. Correct sample collection, transport, and analytical procedures are important to ensure that samples closely resemble the medium sampled, and to minimize contamination.

The sampling locations, frequency, and collection protocols for the RAES TO 0001 RSE investigation were described in the SAP (Appendix C of Tetra Tech 2018). These protocols followed standard accepted methods of site characterization and were approved by USEPA and Navajo Superfund. The RAES investigation followed the sampling program outlined in the SAP, with the exception of the deviations discussed in the main text of the RSE Report. Thus, the sampling program for this investigation met all relevant requirements for data representativeness with respect to accepted site characterization approaches, existing guidance, and regulatory compliance.

### 3.5.4 COMPLETENESS

Completeness is defined as the percentage of valid measurements made as compared to the total number of measurements. Valid data are those identified as acceptable or qualified as estimated during the data validation process. Data qualified as rejected are considered unuseable and not valid. Samples planned to be collected but not analyzed are also considered as incomplete. Any planned samples that were not collected are discussed in the deviations section of the main text of the RSE Report. The assessment of completeness consisted of comparing the amount of acceptable and useable results with the total number of results.

The rejected results discussed in [Section 3.3.1](#) were part of a pilot study to evaluate the potential applicability of the ex-situ XRF soil cup method. Those rejected results from the pilot study were not used in the site characterization and were therefore not included in the completeness assessment. Other than those results, only one mercury result collected for the site characterization and risk assessment was rejected. Out of 5,039 samples intended for risk characterization that were collected and analyzed for inorganic analysis, 5,038 samples (99.99 percent) intended for risk characterization were acceptable for use. All 3,738 samples analyzed for radiological analysis were acceptable for use. Therefore, completeness approaches 100 percent.

### 3.5.5 COMPARABILITY

Comparability is a qualitative assessment of how well one data set compares with another. The important determinants of comparability include the uniformity of sampling activities, analytical procedures, data reporting, and data validation. The use of USEPA protocol, specific and well documented analytical methods, approved laboratories, and the standardized process of data review and validation give the RAES TO 0001 RSE data a high degree of analytical comparability. The use of well-established analytical protocols ensures that the data are comparable.

### 3.6 CONCLUSIONS FOR DATA QUALITY AND DATA USEABILITY

Although some qualifiers were added to the data, a final review of the data set against the USEPA data quality parameters discussed in [Section 3.5](#) indicated that the data are of high overall quality. Excluding the soil cup data noted in [Section 3.3.1](#) (which will not be used for site characterization or risk assessment), the data meet all precision, accuracy, representativeness, completeness, and comparability requirements described in USEPA guidance for QA project plans (USEPA 2002) and are useable for risk assessment. The overall assessment of the sampling program, QA/QC data, data review, and data validation results presented in [Section 3.3](#) and [Section 3.4](#) indicate that these monitoring data are of acceptable precision, accuracy, representativeness, completeness, and comparability. Supporting data validation reports are in Appendix M of the main report. Chain-of-custody forms were used to trace possession of the samples from field collection to the analytical laboratory. Completed chain of-custody forms are in [Attachment G3](#).

The USEPA “Risk Assessment Guidance for Superfund” (RAGS) was used to evaluate the useability of the validated data (USEPA, 1989). Exhibit 5-5 in RAGS states that data qualified as estimated (J) based on data validation reports should be used in quantitative risk assessments. Although this guidance is specifically for human health risk assessments, the same useability criteria were applied for all the RSE data. Only data qualified as rejected (R) are considered unuseable for risk assessment.



## 4.0 RADON SAMPLING QUALITY ASSURANCE AND QUALITY CONTROL

One of the study goals identified in the DQO process for the Site Characterization Study (Table C-8 of Appendix B of the RSE Work Plan [Tetra Tech 2018]) is to determine the concentrations of radon gas at mine openings, buried waste cells, drainages, and from waste rock piles. Tetra Tech performed radon monitoring at the AUM sites and Target sites using alpha track etch detectors. Retrieved detectors were analyzed by Radonova Laboratories AB on December 28, 2018. Radonova performs internal QA/QC on their measurement procedures according to ISO17025 standards. The lab report was provided electronically. Data were not validated because they were not planned for use in site characterization or risk assessment.

During the RSE work plan (Tetra Tech 2018) development, the intended purpose of the radon alpha track etch detectors was to provide qualitative data to be used in the conceptual site models. Based on this intended use, the QA/QC program for the alpha track followed the *National Radon Proficiency Program Guidance on Quality Assurance* (USEPA 1997). Following the work plan development, the use of the alpha track etch data was modified to be only quantitative, for documentation purposes. This approach led to a more simplified process for the deployment, retrieval, and quality checks associated with the radon track etch data than those outlined in the work plan. The deviations from the workplan are listed below.

- Only one duplicate sample was deployed with 34 radon detectors, less than the 10 percent of total samples, as stated in the work plan.
- Of the 34 detectors deployed, 26 were retrieved. The remaining 8 detectors, including one field duplicate, were unable to be retrieved because of weather and accessibility issues. Because the resulting data contained no duplicate detectors, a precision check and control charting of the data, as is discussed in Section 4.4.1.3 of the RSE Work Plan (Tetra Tech 2018), was not possible.

[Table G-10](#) summarizes the results of the alpha track etch detectors. Completed chain-of-custody forms are in [Attachment G4](#).

**Table G-10. Results of the Alpha Radon Track Etch Detectors**

Mine ID	Grid ID	Date	Latitude	Longitude	Duplicate	Serial Number	Sample ID	Result (pCi/L)
B10	13	9/15/18	36.52424931	-109.2203999	No	706774-7	B10-RN01-01-091518	0.30 ± 0.14
B16	26	9/15/18	36.53679601	-109.2642703	No	370719-7	B16-RN01-01-091518	< 0.22
B18	19	9/15/18	36.54467318	-109.2509872	No	286973-3	B18-RN01-01-091518	0.22 ± 0.14
B2	13	9/16/18	36.89701571	-109.348763	No	775546-5	B2-RN01-01-091618	0.27 ± 0.14
B26	13	9/14/18	36.52830646	-109.24974	No	152433-9	B26-RN01-01-091418	Not Recovered
B3	18	9/16/18	36.91343352	-109.3436832	No	789039-5	B3-RN01-01-091618	< 0.24
B7	1	9/15/18	36.56528566	-109.2144004	No	388489-7	B7-RN01-01-091518	< 0.22
M1	32	9/16/18	36.90586172	-109.3526015	No	437597-8	M1-RN01-01-091618	0.27 ± 0.14
M14	81	9/14/18	36.54530549	-109.2469803	No	103247-3	M14-RN01-01-091418	0.38 ± 0.14
M14	72	9/14/18	36.54547661	-109.2470027	No	153685-3	M14-RN02-01-091418	0.49 ± 0.14
M15	22	9/14/18	36.5417104	-109.2464835	No	355699-0	M15-RN01-01-091418	0.51 ± 0.14
M16	70	9/14/18	36.54126153	-109.247157	No	467482-6	M16-RN01-01-091418	0.38 ± 0.14
M16	108	9/14/18	36.54109907	-109.2469274	No	468378-5	M16-RN02-01-091418	0.92 ± 0.19
M17	24	9/13/18	36.54000709	-109.249479	No	338837-8	M17-RN02-01-091318	1.3 ± 0.22
M17	64	9/13/18	36.53972974	-109.2491308	No	414781-5	M17-RN01-01-091318	1.8 ± 0.25
M18	114	9/14/18	36.53805293	-109.2548372	No	491484-2	M18-RN01-01-091418	0.27 ± 0.14
M18	41	9/14/18	36.53850796	-109.2547783	No	566323-2	M18-RN02-01-091418	0.30 ± 0.14
M2	56	9/16/18	36.91447606	-109.2834634	No	467962-7	M2-RN01-01-091615	0.81 ± 0.17
M20	397	9/14/18	36.52874215	-109.2425366	No	179329-8	M20-RN01-01-091418	Not Recovered
M21	357	9/12/18	36.53235705	-109.2392801	No	120560-8	M21-RN01-01-092118	Not Recovered
M27	59	9/14/18	36.51146449	-109.2348127	No	395702-4	M27-RN01-01-091418	1.3 ± 0.22
M3	51	9/15/18	36.52366791	-109.2193777	No	239505-1	M3-RN01-01-091518	0.46 ± 0.14
M33	74	9/18/18	36.48524206	-109.2463397	No	337815-5	M33-RN01-01-091818	Not Recovered
M35	11	8/13/18	36.49977448	-109.2484386	No	141033-1	M35-RN01-01-081318	Not Recovered
M35	11	8/13/18	36.49977448	-109.2484386	Yes	222354-3	M35-RN01-02-081318	Not Recovered
M36	24	8/13/18	36.49917104	-109.2497989	No	420393-1	M36-RN01-01-081318	Not Recovered
M37	72	8/13/18	36.50007062	-109.2545057	No	407488-6	M37-RN01-01-081318	Not Recovered

**Table G-8. Results of the Alpha Radon Track Etch Detectors (Continued)**

Mine ID	Grid ID	Date	Latitude	Longitude	Duplicate	Serial Number	Sample ID	Result (pCi/L)
M4	106	9/15/18	36.52487137	-109.2233717	No	942634-7	M4-RN01-01-091518	0.62 ± 0.11
M5	127	9/15/18	36.52188676	-109.2222651	No	533782-9	M5-RN01-01-091518	4.5 ± 0.57
M6	269	9/15/18	36.52292481	-109.2176287	No	979066-8	M6-RN01-01-091518	3.8 ± 0.49
M7	121	9/15/18	36.51960797	-109.2197541	No	166229-5	M7-RN01-01-091518	1.2 ± 0.19
M8	115	9/15/18	36.52496603	-109.2223286	No	198835-1	M8-RN01-01-091518	0.68 ± 0.14
T38	- <sup>1</sup>	9/30/18	36.58519008	-109.2000546	No	360888-2	T38-RN01-01-093018	< 0.27
T9	145	9/14/18	36.5608474	-109.2166673	No	158106-5	T9-RN01-01-091418	< 0.22

Notes:

<sup>1</sup> T38-RN01-01-093018 was placed inside burial cell containment fence.

- No grid ID.

ID Identification

pCi/L Picocuries per liter

## 5.0 CONCLUSIONS

Gamma scanning, chemical and radiological samples, and radon samples were collected for the RSE Investigation between April and October 2018. Based on the review of QA/QC requirements for gamma scanning, chemical and radiological laboratory data, and radon data, data from all but one sample (mercury in soil because of a holding time violation) collected for the RSE investigation intended for use in site characterization or risk assessment is acceptable for use for the intended purposes in the RSE, engineering evaluation/cost analysis (EE/CA), and risk assessments. The one rejected mercury result will not be used for site characterization or risk assessment.

Nondetected soil data from the pilot study that were used to evaluate the potential applicability of the ex-situ XRF soil cup method were rejected because of holding time violations. These data were not intended for use in site characterization or risk characterization.

## 6.0 REFERENCES

- Tetra Tech, Inc. (Tetra Tech). 2018. Northern Agency Tronox Mines Removal Site Evaluation Work Plan; Response, Assessment, and Evaluation Services (RAES). EPA Contract No. EP-S9-17-03, Task Order 0001.
- U.S. Environmental Protection Agency (USEPA). 1997. *National Radon Proficiency Program Guidance on Quality Assurance*. EPA 402-R-95-012. USEPA Office of Radiation and Indoor Air, National Air and Radiation Environmental Laboratory.
- USEPA. 2002. *Guidance for Quality Assurance Project Plans*. EPA/240/R-02/009. December.
- USEPA. 2004. *Multi-Agency Radiological Laboratory Analytical Protocols (MARLAP) Manual*. EPA 402-B-04-001A. July.
- USEPA. 2009. *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use*. EPA, Office of Solid Waste and Emergency Response (OSWER) No. 9200.1-85. EPA 540-R-08-005. January 15.
- USEPA. 2017. *USEPA National Functional Guidelines for Superfund Inorganic Methods Data Review*. Document Number EPA-540-R-2017-001. January.

**ATTACHMENT G1**

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**GAMMA SURVEY QC FORMS**



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2929
Serial No.:	<del>708319</del> BE 208 319
Cal. Due Date:	09-06-19

DETECTOR	
Manufacturer:	Indium
Model:	43-10-1
Serial No.:	PR215938
Cal. Due Date:	07-06-19

Comments:
RAES

Alpha Source: Tu 230 Emission Rate: 3830 cpm/emissions Source Date: 6-15-11 Distance to Source: contact  
 Serial No.: ~~7182-11~~ BE 7132-10  
 Beta Source: Tc 99 Emission Rate: 9920 cpm/emissions Source Date: 3-7-11 Distance to Source: contact  
 Serial No.: 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
9-20-18	0957	-	550	2591	262	1	3128	0	60	0.17	0.08	BE
9-20-18	1222	-	550	2499	251	2	3166	2	70	0.16	0.08	BE

Reviewed by: Peter Asdr

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	146062
Cal. Due Date:	6-12-19

DETECTOR	
Manufacturer:	Ludlum
Model:	43-10
Serial No.:	PR087469
Cal. Due Date:	6-12-19

Comments:
RAEJ
confined space entry

Source: Th-230 Activity: NA uCi Source Date: 6-15-11 Distance to Source: Contact  
 Serial No.: 7132-10 Emission Rate: 3838 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-20-18	0619	5.7	850	100	2336	0	2336	NW	efficiency = 0.15
6-20-18	1840	5.7	845	100	2552	0	2552	NW	efficiency = 0.17 > 0.16

Reviewed by: Patricia Wood Review Date: 6/6/19





# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2340
Serial No.:	184938
Cal. Due Date:	03-20-19

DETECTOR	
Manufacturer:	Iudlum
Model:	43-93
Serial No.:	PR 3-BE 29/930
Cal. Due Date:	03-20-19

Comments:
(AES)
- not used or
used in field at all

Alpha Source: Th 230 Emission Rate: 3830 cpm/emissions Source Date: 06-15-11 Distance to Source: Contact  
Serial No.: 7132-10  
Beta Source: Tc 99 Emission Rate: 9920 cpm/emissions Source Date: 03-7-11 Distance to Source: Contact  
Serial No.: 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
9-11-18	0509	✓	675	detector over responding, out of service temporarily								BG
9-12-18				mglar replaced and returned								

Reviewed by: Patricia Harker

Review Date: 6/6/19



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

RAES

METER	
Manufacturer:	Ludlum
Model:	2360
Serial No.:	276975
Cal. Due Date:	<del>5-2-19 TE</del>

DETECTOR	
Manufacturer:	Ludlum
Model:	43-93
Serial No.:	PR299677
Cal. Due Date:	<del>5-2-19 TE</del>

Comments:
Source counts occurred at 16:23, background at 10:40.
QC, Home 2 suites parking lot, back of SUV

Alpha Source: Ta 230 Emission Rate: 3030 cpm/emissions Source Date: 6-15-2011 Distance to Source: Jig  
 Serial No.: 7132-10  
 Beta Source: Tc 99 Emission Rate: 9920 cpm/emissions Source Date: 3-7-2011 Distance to Source: Jig  
 Serial No.: 7192-11

(parking lot)  
Home 2 suites, back of SUV

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency: <sup>inst output</sup>		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
4-23-18	10:40	✓	725	1447	413	2	2329	4	245	0.38	0.21	TE
				1404	339	4	2332	1	233	0.37	0.21	TE
				1467	416	4	2403	1	237	0.38	0.22	TE
				1434	405	1	2420	1	214	0.37	0.22	TE
				1421	397	3	2438	0	246	0.37	0.22	TE
				1460	414	2	2503	0	208	0.38	0.23	TE
				1503	402	3	2302	1	231	0.39	0.22	TE
				1493	346	5	2429	0	228	0.39	0.22	TE
				1423	329	0	2379	2	227	0.37	0.22	TE
				1405	400	4	2341	0	219	0.37	0.21	TE
4-24-18	6:01	✓	725	<del>2290</del>		(B)2290 ↔ 3(α)		0	193	0.38	0.21	TE
				BS								
				(B)330 ↔	1445(α)			0	(208)	0.37	0.23	TE
Ta 4-24-18	11:20	✓	725	1436	395	2490 ↔ 0						

Reviewed by: Patrick K...

Review Date: 6/6/19

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# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	ludlum
Model:	2360
Serial No.:	276975
Cal. Due Date:	3-2-19

DETECTOR	
Manufacturer:	ludlum
Model:	43-93
Serial No.:	PK 299677
Cal. Due Date:	3-2-19

Comments:
RAES
5-25 → hampton inn ↓ suites parking lot

Alpha Source: Th-230 Emission Rate: 3830 cpm/emissions Source Date: 6-15-2011 Distance to Source: jig  
 Serial No.: 7132-10  
 Beta Source: Tc99 Emission Rate: 9925 cpm/emissions Source Date: 3-7-2011 Distance to Source: jig  
 Serial No.: BE 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
4-5-25	6:02	✓	725	1478	419	2	2363	2	223	0.385	0.22	TE
4/25/2018	16:04	✓	725	1480	399	5	2476	1	223	0.386	0.22	TE
4/26/2018	06:19	✓	725	1427	433	5	2478	0	188	0.372	0.231	TE
4/26/18	11:55	-	-	-	-	-	-	-	-	-	-	BE
4/27/18	635							not intended to be used				
4/27/18	18:56							not used today				TE
4/28/18	05:55							not intended to be used				TE
4/28/18	14:21							did not use				SB
4/29/18	06:38							not intended to use				TE
4/30/18	0610							not intended to use				BE

did not use

Reviewed by: Patrick Hecker

Review Date: 6/6/19



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2340
Serial No.:	276975
Cal. Due Date:	03-2-19

DETECTOR	
Manufacturer:	Indium
Model:	43-93
Serial No.:	PR299677
Cal. Due Date:	03-2-19

Comments:
RAES

Alpha Source: Th 230 Emission Rate: 3830 cpm/emissions Source Date: 06-15-11 Distance to Source: contact  
 Serial No.: 7132-10  
 Beta Source: Tc 99 Emission Rate: 9920 cpm/emissions Source Date: 03-7-11 Distance to Source: contact  
 Serial No.: 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
9-11-18	0510	✓	725	1424	268	4	1915	6	199	0.09	0.04	BE
9-11-18	1820	✓	725	15152	508	10	2601	7	801	0.09	0.05	BE
9-12-18	0454	✓	725	1466	436	9	2351	1	251	0.10	0.05	BE
9-12-18	1730	✓	725	1443	844	2	2995	0	683	0.09	0.06	BE
9-13-18	0450	✓	725	3800	1478	5	2294	3	226	0.10	0.05	BE
9-13-18	1751	✓	725	1397	456	0	2226	0	287	0.09	0.05	BE
9-14-18	0455	✓	725	1465	323	6	2290	0	185	0.10	0.05	BE
9-14-18	1834	✓	725	1476	698	2	2537	0	442	0.10	0.05	BE
9-15-18	0447	✓	725	1412	403	4	2405	2	366	0.09	0.05	BE
9-15-18	1728	✓	725	1424	954	2	2826	0	824	0.09	0.06	BE
9-16-18	0450	✓	725	1473	345	2	2298	1	208	0.10	0.05	BE
9-16-18	1918	✓	725	1419	715	2	2933	0	888	0.09	0.05	BE
9-17-18	0440	✓	725	1384	392	0	2564	0	311	0.09	0.06	BE
9-17-18	1753	✓	725	1452	352	1	2381	1	276	0.09	0.05	BE

Reviewed by:

*Patricia Warr*

Review Date:

6/6/19



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2360
Serial No.:	276975
Cal. Due Date:	03-02-19

DETECTOR	
Manufacturer:	Ludlum
Model:	43-93
Serial No.:	PR3BG KR299677
Cal. Due Date:	03-02-19

Comments:
RAES

Alpha Source: th 230 Emission Rate: 3830 cpm/emissions Source Date: 06-15-11 Distance to Source: contact  
 Serial No.: 7132-10  
 Beta Source: Tc 99 Emission Rate: 9920 cpm/emissions Source Date: 03-07-11 Distance to Source: contact  
 Serial No.: 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
02-18-18	0445	✓	725	1422	347	1	2214	0	212	0.09	0.05	BE

Reviewed by: Patricia Hand

Review Date: 6/6/19



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2360
Serial No.:	276975
Cal. Due Date:	3-2-19

DETECTOR	
Manufacturer:	Ludlum
Model:	43-93
Serial No.:	PR299677
Cal. Due Date:	3-2-19

Comments:
RAES

Alpha Source: Tu230 Emission Rate: 3830 cpm/emissions Source Date: 6-15-11 Distance to Source: contact  
 Serial No.: 7132-6  
 Beta Source: Tc99 Emission Rate: 9920 cpm/emissions Source Date: 3-7-11 Distance to Source: contact  
 Serial No.: 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
9-25-18	0452	✓	725	1346	322	1	2247	0	226	0.09	0.05	BE
9-26-18	0507	✓	725	1457	419	0	2589	0	212	0.095	0.04	BE
9-27-18	0521	✓	725	1553	346	2	2591	2	207	0.10	0.06	BE
9-27-18	1612	✓	725	1508	770	2	2835	0	561	0.10	0.06	BE
9-28-18	0620	✓	725	1491	346	1	2364	1	237	0.10	0.05	BE
9-28-18	1921	✓	725	1343	516	1	2307	0	2817	0.09	0.05	BE

did not use  
did not use

Reviewed by: Patricia Hersh

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	117613
Cal. Due Date:	9-11-19

DETECTOR	
Manufacturer:	Ludlum X
Model:	44-62
Serial No.:	PR347373
Cal. Due Date:	9-11-19

Comments:
QC counts

Source: 137Cs Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: 6 in  
 Serial No.: 93,72 Emission Rate: N/A cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-12-18	1750	5.5	802	100	3195	569		NW	QC counts
↓	↓	↓	↓	↓	3237	553		↓	↓
					3191	546			
					3300	560			
					3179	539			
					3168	581			
					3267	550			
					3014	572			
					2127	561			
					3145	559			

Reviewed by: Patricia Brown

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	222c
Serial No.:	119613
Cal. Due Date:	9-11-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-62
Serial No.:	PA347393
Cal. Due Date:	9-11-19

Comments:
Downhole logging instrument
RACS

Source: 137 Cs Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: 6 ft  
 Serial No.: 72 Emission Rate: N/A cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-13-18	1659	5.6	905	100	3291	581		NW	
9-13-18	1804				<del>————— DID NOT USE —————</del>			NW	

Reviewed by: Patricia Weaver Review Date: 6/6/19





# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2929
Serial No.:	121870
Cal. Due Date:	8-9-19

DETECTOR	
Manufacturer:	Ludlum
Model:	43-10-1
Serial No.:	PR126405
Cal. Due Date:	8-9-19

Comments:
RAES

Alpha Source: tu-230 Emission Rate: 3830 9920 <sup>NW</sup> cpm/emissions Source Date: 6-15-2011 Distance to Source: contact  
 Serial No.: ~~7182-11~~ 7132-0  
 Beta Source: TC-99 <sup>BE</sup> Emission Rate: 9920 cpm/emissions Source Date: 3-7-2011 Distance to Source: contact  
 Serial No.: 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
9-10-18	1710	N/A	850	2490	204	1	3341	1	41	0.16	0.08	NW
9-11-18	0430	N/A	850	2526	236	2	3262	0	48	0.16	0.08	NW
9-12-18	0418	N/A	850	2453	223	1	3296	0	51	0.16	0.08	NW
9-12-18	1657	N/A	850	2480	216	2	3575	0	49	0.16	0.09	NW
9-13-18	0407	N/A	850	2550	252	2	3380	0	60	0.17	0.08	NW
9-13-18	0442	N/A	850	2526	212	1	3263	0	57	0.16	0.08	NW
9-14-18	2030	N/A	850	2436	192	1	3407	0	50	0.16	0.09	NW
9-14-18	2119	N/A	850	2385	241	2	3386	0	46	0.16	0.09	NW
9-15-18	1809	N/A	850	2378	193	1	3158	0	45	0.15	0.08	BE
9-17-18	1927	N/A	850	2460	185	5	3212	0	39	0.16	0.08	BE
9-17-18	2010	N/A	850	2475	220	2	3121	0	47	0.16	0.08	BE
9-20-18	0957	N/A	850	2567	211	2	3210	0	64	0.17	0.08	BE
9-20-18	1200	N/A	850	2483	226	4	3218	0	47	0.16	0.08	BE

Reviewed by: [Signature]

Review Date: 6/6/19

avg. 0.16 BE  
0.16 0.08  
2 B



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2927
Serial No.:	121870
Cal. Due Date:	8-9-19

DETECTOR	
Manufacturer:	Iudlum
Model:	43-10-1
Serial No.:	PR126405
Cal. Due Date:	8-9-19

Comments:
RAES
* 12-3 used Th 230 SN:
4098-07
6570 cpm kept
1-4-2012

Alpha Source: Th-230 Emission Rate: 3830 cpm/emissions Source Date: 6-15-11 Distance to Source: contact  
 Serial No.: 7132-10  
 Beta Source: Tc99 Emission Rate: 9920 cpm/emissions Source Date: 3-7-11 Distance to Source: contact  
 Serial No.: 7102-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
9-26-18	1945	-	850	2477	210	1	3249	0	43	0.16	0.08	BE
9-26-18	2040	-	850	2545	200	0	3223	1	36	0.17	0.09	BE
9-27-18	1943	-	850	2474	214	4	3205	0	43	0.16	0.08	BE
9-27-18	2017	-	850	2415	216	2	3170	0	42	0.16	0.08	BE
10-4-18	0845	-	850	2481	235	1	3133	0	60	0.16	0.08	BE
10-4-18	1420	-	850	2522	202	0	3114	0	51	0.16	0.08	BE
10-5-18	0927	-	850	2454	228	2	3251	1	65	0.16	0.08	BE
10-5-18	1426	-	850	2400	217	0	3295	1	56	0.16	0.08	BE
* 12-3-18	1030	-	850	4469	352	2	3210	1	55	0.17	0.08	BE
* 12-3-18	1300	-	850	4524	344	0	3208	0	52	0.17	0.08	BE

Reviewed by: Patricia [Signature]

Review Date: 6/16/19



# Dual-Channel Function Check Log

\* Rewritten into new form by TE on 05/31/2018

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	43-10-1
Serial No.:	200051
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Ludlum
Model:	23/1 2929
Serial No.:	PR215948
Cal. Due Date:	3-22-19

Comments:
RAES

Alpha Source: Th-230 Emission Rate: 3830 cpm/emissions Source Date: 6-5-11 Distance to Source: Contact  
 Serial No.: 7132-10

Beta Source: Tc-99 Emission Rate: 9920 cpm/emissions Source Date: 3-7-11 Distance to Source: Contact  
 Serial No.: 7182-11

source down to are off  
it is likely that voltage was off

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
5-2-18	1513	N/A	600	2191	169	0	1112	0	16			NW
5-2-18	17 <sup>NW</sup> 20	N/A	600	1989	157	2	1113	0	24			NW
5-4-18	1057	N/A	600	1980	160	1	1114	0	16			NW
5-4-18	1358	N/A	600	1996	160	0	1194	0	15			NW
5-9-18	1917	N/A	600	<del>1958</del>	158	1	1018	0	20			BE
5-10-18	0530	NA	600	1958						BE		
5-10-18	0530	NA	600	1942	162	3	1128	0	17			BE
5-16-18	10:01	NA	600	2557	275	4	3182	0	52			
5-25-18	1800	NA	600	2362	245	0	3144	0	70			NW
5-25-18	2120	NA	600	2557	244	2	3082	0	70			NW
5-26-18	1834	N/A	600	2617	276	1	3151	0	71			NW
5-26-18	2101	N/A	600	2608	284	1	3196	0	67			NW

- a. At ERG office
- b. at townplace suites, farming ton

Reviewed by: [Signature]

Review Date: 6/6/19

\* Past counts may have been conducted w/ lower voltage than recommended by calibration form



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2929
Serial No.:	200051
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Ludlum
Model:	43-10-1
Serial No.:	PR 215948
Cal. Due Date:	3-22-19

Comments: RAES (Tetrach)

Alpha Source: Th-230 Emission Rate: 3838 cpm/emissions Source Date: 6-15-2011 Distance to Source: contact  
 Serial No.: 7132-10  
 Beta Source: Tc-99 Emission Rate: 9920 cpm/emissions Source Date: 3-07-2011 Distance to Source: contact  
 Serial No.: 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
05/16/18	10:01	NA	600	2557	275	4	3182	0	51	0.17	0.08	TE
05/16/18	15:08	NA	600	2559	233	4	3290	1	64	0.17	0.08	TE
05/17/18	09:11	NA	600	2558	265	1	3171	0	62	0.17	0.08	TE
05/17/18	11:06	NA	600	2465	254	2	3195	0	79	0.18	0.08	TE
05/25/18	18:00	NA	600	2362	245	0	3144	0	70	0.19	0.08	NW
05/25/18	21:20	NA	600	2557	244	2	3082	0	70	0.18	0.08	NW
05/26/18	18:34	NA	600	2617	276	1	3151	0	71	0.18	0.08	NW
05/26/18	21:01	NA	600	2608	284	1	3196	0	67	0.18	0.08	NW
06/07/18	19:08	NA	600	2656	258	1	3296	0	58	0.17	0.08	TE
06/07/18	21:31	NA	600	2609	255	1	3207	0	52	0.17	0.08	TE
06/08/18	04:48	NA	600	2570	255	3	3422	0	43	0.17	0.08	TE
06/08/18	05:48	NA	600	2550	271	2	3179	1	57	0.17	0.08	TE
06/13/18	~ 0700 <sup>22</sup> ~ 1400 <sup>24</sup>	NA	600	2514	269	1	3151	1	88	0.16	0.08	TE
06/14/18	~ 1807	NA	600	2609	265	3	3262	0	71	0.17	0.08	TE

Reviewed by: [Signature]

Review Date: 6/16/19



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4214

METER	
Manufacturer:	Ludlum
Model:	2929
Serial No.:	20051
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Ludlum
Model:	43-10-1
Serial No.:	PR215948
Cal. Due Date:	3-22-19

Comments:
NUMERICAL TETRA TECH
RAES TO 001

Alpha Source: Th-230 Emission Rate: 3838 cpm/emissions Source Date: 6-15-11 Distance to Source: Contact  
 Serial No.: 7132-10  
 Beta Source: Tc-99 Emission Rate: 9920 cpm/emissions Source Date: 3-7-11 Distance to Source: Contact  
 Serial No.: \_\_\_\_\_

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
6-22-18	1845	NA	600	2560	265	3	3221	0	47	0.167	0.08	NW
6-23-18	0605	NA	600	2555	249	1	3289	0	49	0.167	0.08	NW

Reviewed by: Peter Hove

Review Date: 6/16/19



# Dual-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2929
Serial No.:	200051
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Ludlum
Model:	43-10-1
Serial No.:	PR215948
Cal. Due Date:	3-22-19

Comments: RAES (Tetrattech) (tray counter #)

Alpha Source: Th-230 Emission Rate: 3838 ~~cpm/emissions~~ Source Date: 6-15-2011 Distance to Source: contact  
 Serial No.: 7132-10  
 Beta Source: Tc-99 Emission Rate: 9920 ~~cpm/emissions~~ Source Date: 3-07-2011 Distance to Source: contact  
 Serial No.: 7182-11

Date	Time	Battery	High Voltage	Alpha Counts		Beta Counts		BKG Counts		Efficiency		Initials
				Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	
06/28/18	13:18	NA	600	2440	269	2	3223	2	80	0.159	0.08	TE
06/28/18	17:09	NA	600	2533	253	6	3311	2	70	0.165	0.08	TE
06/29/18	11:29	NA	600	2432	265	3	3106	2	79	0.158	0.08	TE
06/29/18	16:21	NA	600	2512	254	1	3251	0	77	0.164	0.08	TE
07/02/18	09:02	NA	600	2659	267	4	3197	0	77	0.173	0.08	TE
07/02/18	11:19	NA	600	2560	315	1	3306	0	73	0.167	0.08	TE
07/23/18	09:34	NA	600	2516	309	0	3385	0	71	0.164	0.08	TE
07/23/18	14:18	NA	600	2757	332	5	3383	1	86	0.179	0.08	TE
08/24/18	0944	NA	600	2455	287	1	3503	0	87	0.160	0.09	BE
08/24/18	1330	NA	600	2607	322	1	3518	0	70	0.17	0.09	BE
08/27/18	0810	NA	600	2583	346	5	3540	0	77	0.17	0.09	BE
08/27/18	1030	NA	600	2610	283	0	3502	0	75	0.17	0.09	BE

Reviewed by: Peter W.

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

RAES

METER	
Manufacturer:	Same as Detector <sup>TF</sup>
Model:	
Serial No.:	
Cal. Due Date:	

DETECTOR	
Manufacturer:	Indium
Model:	19
Serial No.:	180310
Cal. Due Date:	29 MARCH 19

Comments:
line on office
back of SUV

Source: Cs 137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
4/30/18	1847	✓	—	—	33	7	26	BE	MR/LR
4/30/18	1915	✓	—	—	32	7	25	BE	

Reviewed by: Peter Haber Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	19
Serial No.:	180310
Cal. Due Date:	3-27-19

DETECTOR	
Manufacturer:	Same as meter
Model:	
Serial No.:	
Cal. Due Date:	

Comments: RAE 1

Source: Cs 137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: 1/2  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-6-18	1825	✓	—	32	12	20	BE	NR / he units
6-7-18	0745	✓	—	32	12	20	BE	
10-8-18	0550	✓	—	32	12	20	BE	
06/12-18	0615	✓	—	32	8	24	BE	
06/12/18	0723	✓	—	33	8	25	BE	

Reviewed by: Patricia H. [Signature]

Review Date: 6/6/19



model 19

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



# Single-Channel Function Check Log

METER	
Manufacturer:	Inlum
Model:	19
Serial No.:	180310
Cal. Due Date:	03-29-19

DETECTOR	
Manufacturer:	
Model:	same as
Serial No.:	meter
Cal. Due Date:	

Comments:
RAES
home 2 sites

Source: Cs-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: - cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-14-18	0448	✓	-	-	33	8	25	BE	
08-14-18	1722	✓	-	-	32	8	24	BE	
08-17-18	0455	✓	-	-	32	8	24	BE	
08-17-18	1645	✓	-	-	32	8	24	BE	
08-21-18	1615	✓	-	-	32	8	24	BE	

Reviewed by: Patricia Hulse

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	19
Serial No.:	144766
Cal. Due Date:	3-29-19

DETECTOR	
Manufacturer:	SAME AS METER
Model:	
Serial No.:	
Cal. Due Date:	

Comments:	PLACES line in parking lot

Source: CS 137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: jis  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
5-13-18	1650	✓	—	30	7	23	BE	NR/hr units
TE 05/13/18	1745	✓	—	31	7	24	BE	
5-14-18	1730	✓	—	30	7	23	BE	changed batteries
TE 05/13/18	1745	✓	—	30	7	23	TE	Date: 05/14/2018

Reviewed by: Patricia H. White

Review Date: 6/5/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	19
Serial No.:	144766
Cal. Due Date:	3-29-19

DETECTOR	
Manufacturer:	SAME AS METER
Model:	
Serial No.:	
Cal. Due Date:	

Comments:
RATES
home 2 suites parking lot,
back of SUV

Source: CS 137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: 50  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
4-5-24-18	0600	✓	-	31	8	23	BO	NR/hr
5-24-18	1824	✓	-	30	12	18	NW	
05/25/18	0615	✓	-	31	8	23	NW	
05/25/18	1757	✓	-	31	7	24	NW	
05/26/18	0609	✓	-	31	8	23	NW	
05/26/18	1821	✓	-	31	7	24	NW	

Reviewed by: Patricia H. [Signature]

Review Date: 6/5/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iadlum
Model:	19
Serial No.:	144766
Cal. Due Date:	03-29-19

DETECTOR	
Manufacturer:	same as meter
Model:	
Serial No.:	
Cal. Due Date:	

Comments: RATES
function checks performed
in back of SUV.

Source: CS137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: — cpm/emissions

Source Date: 1-22-18

Distance to Source: ERG jg

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
07-13-18	0532	✓	—	—	32	7	25	BE	
07-13-18	1435	✓	—	—	31	6	25	BE	
07-15-18	1635	✓	—	—	31	7	24	BE	
07-15-18	1653	✓	—	—	31	7	24	BE	
07-16-18	1633	✓	—	—	31	7	24	BE	
07-16-18	1643	✓	—	—	32	6	26	JH	
07-17-18	1825	✓	—	—	32	7	25	BE	
07-17-18	1841	✓	—	—	33	7	26	BE	

Reviewed by: Patricia Kabe

Review Date: 6/5/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	19
Serial No.:	144766
Cal. Due Date:	3-29-19

DETECTOR	
Manufacturer:	Same as meter
Model:	
Serial No.:	
Cal. Due Date:	

Comments:	RAES (tetratech)

Source: Cs-137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: ERG Jig  
 Serial No.: 72      Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/20/18	08:20	✓	—	—	33	7	26	BE	At core water tower; uR/hr.
06/20/18	19:00	✓	—	—	32	6	26	JM	
06/22/18	05:35	✓	—	—	31	7	24	BE	
06/25/18	17:25	✓	—	—	32	7	25	BE	At Ina Ba
06/25/18	17:50	✓	—	—	32	7	25	JM	

Reviewed by: *Patricia Brown*

Review Date: 6/16/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	19
Serial No.:	144766
Cal. Due Date:	03-29-19

DETECTOR	
Manufacturer:	same as
Model:	meter
Serial No.:	
Cal. Due Date:	

Comments:
RAES

Source: C9-177 Activity: 4.70 uCi Source Date: 01-22-18 Distance to Source: ER&E jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-13-18	1550	✓	-	-	31	9 <sup>BE</sup>	22 <sup>BE</sup>	DE	BG: 9 NET: 22
9-13-18	1807	✓	-	-	31	12 <sup>BE</sup>	11 <sup>BE</sup>	DE	BG: 7 NET: 24
9-14-18	0523	✓	-	-	31	9	22	BE	
9-14-18	1834	✓	-	-	31	7	24	BE	
9-15-18	0447	✓	-	-	31	8	23	BE	
9-17-18	0450	✓	-	-	31	8	23	BE	
9-18-18	1500	✓	-	-	31	8	23	BE	
9/18/18	1800	✓	-	-	36	10	26	TA	

Reviewed by: Patricia Kuhn

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

RAES

METER	
Manufacturer:	ludlum
Model:	241973 ↑
Serial No.:	12 ↓
Cal. Due Date:	4-30-19

DETECTOR	
Manufacturer:	ludlum
Model:	449
Serial No.:	P2085591
Cal. Due Date:	4-30-19

Comments:
towneplace suites
lower back parking lot
back of SUV

Source: Tc99      Activity: — uCi      Source Date: 3-7-2011      Distance to Source: JIS  
 Serial No.: 7182-11      Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
5/7/18	05:45	✓	0.9	—	2000	60	1940	PE	
05/07/18	18:45								Did not use today
05/08/18	05:41	✓	0.9	—	2000	50	1950	TE	
05/08/18 <sup>TE</sup>	19:21	✓	0.9	—	2200	50	2150	GE	
5-9-18	0604	✓	0.9	—	2100	70	2030	SE	
05/09/18 <sup>TE</sup>	1815	✓	0.9	—	2000	50	1950	GE	
5-10-18	0600	✓	0.9	—	2000	60	1940	PE	
5-10-18	19:19	✓	0.9	—	2100	60	2040	TE	
5-11-18	05:09	✓	0.9	—	2000	60	1940	TE	
05/11/18 <sup>TE</sup>	1846	✓	0.9	—	2200	50 <sup>PE</sup>	2140	GE	Bkg: 60
5-12-18	0627	✓	0.9	—	2200	60	2140	SE	
5/12/18	17:30	✓	0.9	—	2100	60	2040	TE	

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281973
Cal. Due Date:	4-30-19

DETECTOR	
Manufacturer:	Ludlum
Model:	449
Serial No.:	PR 085591
Cal. Due Date:	4-30-19

Comments: RAES (Tetratech)
Parking lot of Towne Suites Hotel
Farmington, NM

Source: Ludlum<sup>TE</sup> TC-99 Activity: ✓ uCi Source Date: 3-7-2011 Distance to Source: ERG Jig  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
5/13/18	06:02	✓	0.9	2000	70	1930	TE	
<del>05/13/18<sup>TE</sup></del>								<del>BE did not use</del>
5/14/18	06:20	✓	0.9	2200	50	2150	BE	
5/19/18	18:05						TE	Not used today

Reviewed by: Patricia Humber

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281973
Cal. Due Date:	4-30-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR085991
Cal. Due Date:	4-30-19

Comments:
RAEJ
Function checks location: Parking lot of Home2Suites Hotel in Farmington NM.

Source: Tc-99 Activity: --- uCi Source Date: 3-07-2011 Distance to Source: ERS-Jig<sup>TE</sup>  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions Contact

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/21/18	05:55	✓	0.9	1800	60	1740	TE	
05/21/18	19:05	✓	0.9	<del>2400</del> <sup>2000</sup> TE	70	1930	TE	Extremely windy (gusts); read incorrectly
05/22/18	05:12	✓	0.9	2100	70	2030	TE	
05/22/18	2009	✓	0.9	1600	40	1560	NW	
05/23/18	0535	✓	0.9	2000	70	1930	NW	
05/24/18	1849	✓	0.9	2000	80	1920	NW	Instrument returned @ 1700 on 05/29/18
<del>5/24/18</del>							NW	Misplaced entry
05/25/18	0621	✓	0.9	2000	60	1940	NW	
05/25/18	1757	✓	0.9	2100	40	<sup>NW</sup> 192060	NW	
05/26/18	0613	✓	0.9	2000	40	1960	NW	
05/26/18	1751	✓	0.9	2100	50	2050	RES	

Reviewed by: Patricia Hernandez

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281973
Cal. Due Date:	4/30/19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR085991
Cal. Due Date:	4/30/19

Comments: RAES
back of Tahoe Juv
home 2 suites

Source: Jc99 Activity: NA uCi Source Date: 3-7-11 Distance to Source: Contact (jij)  
 Serial No.: 2102-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	06:11	✓	0.9	1800	80	1800 <sup>TE</sup>	TE	Met = 1720
06/04/18	1842	✓	0.9	2000	50	1950	TE	
06/05/18	0547	✓	0.9	1900	60	1840	TE	
06/05/18	18:47	✓	0.9	2000	80	1920	TE	
06/06/18	05:48	✓	0.9	2000	60	1940	TE	
06/06/18	1910	✓	0.9	1900	60	1840	RAES	
6/8/18	0553	✓	0.9	2000	60	1940	TE	no field work 6-7-18
06/08/18	18:51	✓	0.9	1900	80	1820	TE	
06/09/18	05:47	✓	0.9	2100	80	2020	TE	
06/09/18	1837	✓	0.9	2100	60	2040	TE	
06/10/18	0552	✓	0.9	2000	50	1950	TE	06/10/18
06/10/18	18:41	✓	0.9	2100	70	2030		

orange

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Orange

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281973
Cal. Due Date:	04/30/19

DETECTOR	
Manufacturer:	Ludlum
Model:	H4-9
Serial No.:	PRO85991
Cal. Due Date:	04/30/19

Comments: RAES project
Function checks conducted
at parking lot of Home2Suites
Farmington, NM

Source: TC-99      Activity: NA      uCi      Source Date: 3-7-11      Distance to Source: Contact (Jig)  
 Serial No.: 7182-11      Emission Rate: 9920      cpm/emissions

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:25	✓	0.9	2000	70	1930	TE	
06/12/18	07:34	✓	0.9	2000	60	1940	BE	

Reviewed by: Patricia Aske

Review Date: 6/6/19

**Single-Channel Function Check Log**

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281973
Cal. Due Date:	04/30/19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PROB5991
Cal. Due Date:	04/30/19

Comments: RAES

Source: Tc99 Activity: — uCi Source Date: 3-7-11 Distance to Source: ERG/jig/contact  
 Serial No.: 7162-11 Emission Rate: 9920 cpm/emissions

**GM**

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06-18-18	0556	✓	0.9	2000	60	1940	BE	
6-18-18	1936	✓	0.9	2000	50	1950	NW	
6-19-18	0546	✓	0.9	1900	80	1820	BE	
6-19-18	1844	✓	0.9	2000	50	1950	BE	
06-20-18	0546	✓	0.9	2000	60	1940	BE	
06-20-18	1858	✓	0.9	2000	40	1960	FF	
6-21-18	0551	✓	0.9	2000	40	1960	BE	did not use 6-21-18
6-22-18	0546	✓	0.9	2000	70	1930	BE	
6-23-18	0547	✓	0.9	2000	60	1940	BE	
6-24-18	0556	✓	0.9	2000	60	1940	BE	
06-25-18	0549	✓	0.9	2000	60	1940	BE	

Reviewed by: *Patricia Huber*

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281973
Cal. Due Date:	04/30/19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PROB5991
Cal. Due Date:	04/30/19

Comments:	RAES
	home 2 suites parking lot,
	back of SUV

Source: Tc99 Activity: — uCi Source Date: 03-07-2011 Distance to Source: ERG jig  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

GM

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
10 July 18	0611	✓	900	2100	40	2060	TE	
07/10/18	19:34						TE	Did not get it back from Tefradch
07/11/18								It has detector
07/12/18								It has detector
12 July 18	1803	✓	900	2000	60	1940	TE	
07/13/18	0605	✓	900	2000	60	1940	BE	
07/15/18	1429							BE not used.
07/14/18	05:43	✓	900	2000	80	1920	TE	
07/14/18	1531							BE did not use
15 July 18	0447	✓	900	2000	60	1940	TE	
15 July 18	1810							BE did not use
07/16/18	04:45	✓	900	2000	70	1930	TE	did not use.

Reviewed by: Patricia Hunter

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281973
Cal. Due Date:	04/30/19

DETECTOR	
Manufacturer:	Ludlum
Model:	H4-9
Serial No.:	PROB5991
Cal. Due Date:	04/30/19

Comments: RAES
home 2 suites parking lot
back of SUV

Source: Tc99 Activity: - uCi  
Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions  
Source Date: 03-07-2011 Distance to Source: ERG jig

GM

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
17 July 18	0436	✓	900	1900	80	1820	SI	
07/17/18	1728						RAJ	dil rest use

Reviewed by: Patricia Hernandez

Review Date: 6/6/19



# Single-Channel Function Check Log

C.M.  
 Environmental Restoration Group, Inc.  
 3809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2227 BE 12
Serial No.:	281973
Cal. Due Date:	04-30-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-9
Serial No.:	PR085911
Cal. Due Date:	04-30-19

Comments:
RAES
have 2 suites parking lot
back of SUV

Source: Tc-99 Activity: — uCi Source Date: 03-07-2011 Distance to Source: Energy jig/contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
08-12-18	0541	✓	0.9	—	2000	60	1940	BE	did not use today
08-13-18	0449	✓	0.9	—	2100	50	2050	BE	
08-13-18	1034	✓	0.9	—	2100	80	2020	BE	
08-14-18	0446	✓	0.9	—	2100	50	2050	BE	did not use
08-15-18	0440	✓	0.9	—	2000	70	1930	BE	
08-15-18	1711	✓	0.9	—	2200	60	2140	BE	
08-16-18	0452	✓	0.9	—	2000	50	1950	BE	
08-16-18	0451	✓	0.9	—	2000	60	1940	BE	
08-17-18	0454	✓	0.9	—	2000	40	1960	BE	did not use
08-18-18	0447	✓	0.9	—	2100	60	2040	BE	
08-18-18	1840	✓	0.9	—	2200	60	2140	BE	
08-19-18	0658	✓	0.9	—	2200	40	2160	BE	did not use

Reviewed by: Patricia Harker Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

GM

METER	
Manufacturer:	Indium
Model:	12
Serial No.:	281773
Cal. Due Date:	04-30-19

DETECTOR	
Manufacturer:	Indium
Model:	44-9
Serial No.:	FR 085991
Cal. Due Date:	04-30-19

Comments:
RAES
home 2 suites parking lot
back of SW

Source: Tc-99 Activity: - uCi Source Date: 03<sup>BE</sup> Distance to Source: ERG/jig/contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions 03-07-2011

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-20-18	0548	✓	0.9	-	2100	50	2050	BE	
08-20-18	1836	✓	0.9	-	2000	40	1960	BE	
08-21-18	0447	✓	0.9	-	2000	50	1950	BE	
08-21-18	1605	✓	0.9	-	2100	70	2030	BE	

Reviewed by: *Patricia B...* Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

gm

METER	
Manufacturer:	Inclun
Model:	12
Serial No.:	281973
Cal. Due Date:	04-30-19

DETECTOR	
Manufacturer:	Inclun
Model:	44-9
Serial No.:	PR085991
Cal. Due Date:	04-30-19

Comments:
RAES

Source: Tc-99 Activity: - uCi Source Date: 03-07-2011 Distance to Source: contact  
 Serial No.: 7102-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-11-08	0447	✓	0.9	-	2000	50	1950	BE	
9-11-08	1813	✓	0.9	-	2000	60	1940	BE	
9-12-08	0453	✓	0.9	-	2000	60	1940	BE	
9-12-08	1743	✓	0.9	-	2000	50	1950	BE	
9-13-08	0450	✓	0.9	-	2200	60	2140	BE	
9-13-08	1750	✓	0.9	-	2000	50	1950	BE	
9-14-08	0455	✓	0.9	-	2000	60	1940	BE	did not use
9-15-08	0455	✓	0.9	-	2100	50	1950	BE	
9-15-08	1720	✓	0.9	-	2000	70	1930	BE	
9-16-08	0455	✓	0.9	-	2100	50	2050	BE	
9-16-08	1920	✓	0.9	-	2200	50	2150	BE	
9-17-08	0440	✓	0.9	-	2000	60	1940	BE	

Reviewed by: Pete Henderson

Review Date: 6/6/19



# Single-Channel Function Check Log

GM

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Inclum
Model:	12
Serial No.:	201973
Cal. Due Date:	04-30-19

DETECTOR	
Manufacturer:	Inclum
Model:	44-9
Serial No.:	P2065991
Cal. Due Date:	04-30-19

Comments:
RAES

Source: Tc-99      Activity: - uCi      Source Date: 03-07-2011      Distance to Source: contact  
 Serial No.: 7132-11      Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-17-18									
<del>9-18-18</del>	1736	✓	0.9	—	2100	50	2050	BE	
<del>9-17-18</del>	BE								
9-18-18	0445	✓	0.9	—	2000	40	1960	BE	

Reviewed by: Patricia Barber      Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

am



METER	
Manufacturer:	Indium
Model:	12
Serial No.:	281973
Cal. Due Date:	4-30-19

DETECTOR	
Manufacturer:	Indium
Model:	449
Serial No.:	PR085991
Cal. Due Date:	4-30-19

Comments:
RAES

Source: Tc99 Activity: - uCi Source Date: 3-7-11 Distance to Source: contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-25-18	0450	✓	2.9	-	2100	50	2050	BE	
9-25-18	1841	✓	0.9	-	2200	40	2160	BE	
9-26-18	0513	✓	0.9	-	2000	60	1940	BE	
9-26-18	1918	✓	0.9	-	2100	60	2040	BE	
9-27-18	0907	✓	0.9	-	2000	40	1960	BE	
9-27-18	1616	✓	0.9	-	2100	50	2050	BE	
9-28-18	0527	✓	0.7	-	2000	60	1940	BE	did not use
9-29-18	0527	✓	0.9	-	2100	70	1930	BE	2030 NET did not use
9-30-18	0532	✓	0.9	-	2000	40	1960	BE	did not use

Reviewed by: Rafael Hernandez

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	ludlum
Model:	12
Serial No.:	201973
Cal. Due Date:	4-30-19

DETECTOR	
Manufacturer:	ludlum
Model:	44-9
Serial No.:	PR085991
Cal. Due Date:	4-30-19

Comments:
RAES

Source: Tc99 Activity: - uCi Source Date: 3-7-11 Distance to Source: contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
12-10-08	0900	✓	-	-	2000	40	1960	RAE	
12-11-18	0600	✓	-	-	2200	60	2140	RAE	

Reviewed by: Peter [Signature] Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	12
Serial No.:	281933
Cal. Due Date:	6-18-19

DETECTOR	
Manufacturer:	Indium
Model:	44-9
Serial No.:	PR112193
Cal. Due Date:	6-18-19

Comments:	RAES

Source: Tc99 Activity: — uCi Source Date: 1-22-18 Distance to Source: contact  
 Serial No.: 7192-11 Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06-19-18	0619	✓	0.9	—	2200	40	2160	BE	
									did not use BE
6-20-18	0545	✓	0.9	—	2100	40	2060	BE	
6-20-18	1855	✓	0.9	—	2000	40	1960	BE	
06-21-18	0552	✓	0.9	—	2000	40	1960	BE	did not use 6-21-18
6-22-18	0548	✓	0.9	—	2000	40	1960	BE	
6-23-18	0548	✓	0.9	—	2000	40	1960	BE	
6-23-18	1855	✓	0.9	—	2000	60	1940	BE	
6-24-18	0555	✓	0.9	—	2000	50	1950	BE	
6-25-18	0549	✓	0.9	—	2000	40	1950	BE	
6-25-18	1804	✓	0.9	—	2200	40	2160	BE	

Reviewed by: *Patricia K. ...*

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4234

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281933
Cal. Due Date:	6-18-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR112193
Cal. Due Date:	6-18-19

Comments:	RAES
	home 2 suites parking lot,
	back of SUV

Source: Tc-99 Activity: — uCi Source Date: 03-07-2011 Distance to Source: ERG J.J.  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

611

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Notes
10 July 18	0610	✓	900	—	2000	60	1940	37	
07/10/18	19:34	✓	900	—	2000	80	1920	TE	@ Home 2 suites parking lot
07/11/18	05:45	✓	900	—	2100	60	2040	TE	did not use
07/12/18	05:45	✓	900	—	2000	80	1920	TE	did not use
07/13/18	0600	✓	900	—	2100	50	2050	BE	
07/13/18	1409	✓	900	—	2200	40	2160	BE	
07/14/18	05:43	✓	900	—	2000	60	1940	TE	
07/14/18	1537	✓	900	—	1800	40	1760	BE	
15 July 18	0440	✓	900	—	1800	40	1760	JH	
07/15/18	1711	✓	900	—	2000	40	1960	BE	
07/16/18	04:45	✓	900	—	2100	60	2040	TE	
07/16/18	1703	—	—	—	—	—	—	PE	did not use

Reviewed by: Peter Tocher

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
2809 Washington St. NE, Suite 190  
Albuquerque, NM 87113  
(505) 296-4234

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	281933
Cal. Due Date:	6-18-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR112193
Cal. Due Date:	6-18-19

Comments:	RAES
	home 2 suites parking lot,
	back of SUV

Source: Tc99  
Serial No.: 7182-11

Activity: - uCi  
Emission Rate: 9920 cpm/emissions

Source Date: 03-07-2011

Distance to Source: ERA jig



Date	Time	Battery	High Voltage	Threshold	Source Counts	ERG Counts	Net Counts	Initials	Note(s):
17 July 10	0442	✓	900	-	2000	40	1960	JH	did not use

Reviewed by: Patricia A. ...

Review Date: 6/6/19

GM



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	12
Serial No.:	281933
Cal. Due Date:	06-18-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-9
Serial No.:	PR112193
Cal. Due Date:	06-18-19

Comments:
RAES
home 2 suites Pa-bright
back of SUV

Source: Tc-99 Activity: — uCi Source Date: 03-07-2011 Distance to Source: ERG/jig/contact.  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-12-18	0542	✓	0.9	—	2100	60	2040	BE	did not use today
08-13-18	0450	✓	0.7	—	2000	60	1940	BE	did not use
08-14-18	0447	✓	0.9	—	2100	60	2040	BE	
08-14-18	1709	✓	0.9	—	2000	50	1950	BE	
08-15-18	0449	✓	0.9	—	2060	70	1930	BE	did not use
08-16-18	0453	✓	0.9	—	2000	60	1940	BE	did not use
08-17-18	0454	✓	0.9	—	2100	40	2060	BE	did not use
08-18-18	0447	✓	0.9	—	2100	60	2040	BE	did not use
08-19-18	0658	✓	0.9	—	2000	40	1960	BE	
08-19-18	0926	✓	0.9	—	2200	60	2140	BE	
08-20-18	0548	✓	0.9	—	2000	40	1960	BE	
08-20-18	1830	✓	0.9	—	2100	40	2060	BE	

Reviewed by: Pete Hanks

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

GM



METER	
Manufacturer:	Iudlum
Model:	12
Serial No.:	281933
Cal. Due Date:	06-18-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-9
Serial No.:	PR112193
Cal. Due Date:	26-13-14

Comments:
RAES
home 2 suites parking lot
back of SUV

Source: Tc-99 Activity: - uCi Source Date: 03-07-2011 Distance to Source: ERG/jig/contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

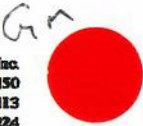
Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-21-18	0447	0.9	✓	-	2200	80	2120	BE	lid not use

Reviewed by: *Patricia Hank* Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Indium
Model:	12
Serial No.:	281933
Cal. Due Date:	06-18-19

DETECTOR	
Manufacturer:	Indium
Model:	44-9
Serial No.:	PR112193
Cal. Due Date:	06-18-19

Comments:
RAES

Source: Tc-99  
 Serial No.: 7102-11

Activity: - uCi  
 Emission Rate: 9920 cpm/emissions

Source Date: 03-07-2011

Distance to Source: contact

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-11-18	0447	✓	0.9	-	80	40	40	RE	under responding (dead batteries) and broken cable not used rest of trip
9-12-18									

Reviewed by: Patricia Hunter

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

am

METER	
Manufacturer:	lundum
Model:	12
Serial No.:	281933
Cal. Due Date:	06-18-19

DETECTOR	
Manufacturer:	lundum
Model:	44-9
Serial No.:	PR112193
Cal. Due Date:	06-18-19

Comments:
RAES

Source: Tc-99 Activity: — uCi Source Date: 03-07-2011 Distance to Source: contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-25-18	0450	✓	0.9	—	2100	50	2050	BE	did not use
9-26-18	0511	✓	0.9	—	2000	50	1950	BE	did not use
9-27-18	0510	✓	0.9	—	2200	50	2150	BE	did not use
9-28-18	0527	✓	0.9	—	2200	50	2150	BE	
9-28-18	1927	✓	0.9	—	2100	50	2050	BE	
9-29-18	0527	✓	0.9	—	2000	40	1960	BE	did not use

Reviewed by: Peter H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	125270
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR308498
Cal. Due Date:	<del>12 TE</del> 3-22-19

Comments:	RAES
	Parking lot of Home 2 suite
	back of SUV

Source: TC-99      Activity: \_\_\_\_\_ uCi      Source Date: 3-07-2011      Distance to Source: ERG Jig  
 Serial No.: 7182-11      Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
04/26/2018	06:24	✓	100	na	2200	100	2100	TE	Parking lot of Home 2 suite
	20:24	✓	0.9 kV		2200	60	2140	BE	
4-27-18	6:31	✓	0.9	—	2200	60	2040	BE	
4-27-18	18:53	✓	0.9 kV	—	2200	70	2130	TE	
4-28-18	05:55	✓	0.9	—	2200	70	2130	TE	
4-28-18	18:30	✓	0.9	—	2300	70	2230	BE	windy
4-29-18	06:38	✓	0.9	—	2300	70	2230	TE	
	16:55	✓	0.9	—	2200	60	2140	BE	
4-29-18	06:06	✓	0.9	—	2280	60	2140	BE	
4-30-18	17:16	✓	0.9	—	2100	60	2040	TE	

Reviewed by: Patricia Hulse

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

RAES

METER	
Manufacturer:	In d lum
Model:	12
Serial No.:	125270
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	In d lum
Model:	44-9
Serial No.:	PR308498
Cal. Due Date:	3-22-19

Comments:
towne place suites
back lower parking lot
SUV

Source: Tc 99  
Serial No.: 7162-11

Activity: 9 uCi  
Emission Rate: 9920 cpm/emissions

Source Date: 3-7-11

Distance to Source: jis



Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
5-7-18	05:45	✓	0.9	—	2000	40	2060	BE	NET: 2040 BE 1960
05/07/18	18:40	✓	0.9	—	2100	50	2050	TE	
05/08/18	05:41	✓	0.9	—	2100	50	2050	TE	NET: 2050
05/08/18	19:03	✓	0.9	—	2200	60	2140	BE	
5-9-18	06:05	✓	0.9	—	2200	60	2140	BE	
05/09/18	18:15	✓	0.9	✓	2200	80	2120	BE	
5-10-18	06:00	✓	0.9	—	2100	70	2030	BE	
5-10-18	19:19	✓	0.9	—	2000	70	1930	TE	
5-11-18	06:09	✓	0.9	—	2100	70	2030	TE	
05/11/18	18:46	✓	0.9	—	2200	70	2130	BE	
5/11/18	06:28	✓	0.9	—	2200	70	2130	BE	
5/12/18	17:30	✓	0.9	—	2300	70	2230	TE	

Reviewed by: Rafael H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	125270
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR 308498
Cal. Due Date:	3-22-19

Comments: <i>RAES</i>
Parking lot of Towie Suites Hotel
Farming ton, NM

Source: Te-99 Activity:            uCi Source Date: 3-7-11 Distance to Source: ERG Jig  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/13/18	06:05	✓	0.9	2000	60	1940	TE	
05/13/18	18:15	✓	0.9	2200	60	2140	TE	
5/14/18	06:20	✓	0.9	2100	60	2040	TE	
5/14/18	18:18	✓	0.9	2200	60	2140	TE	

Reviewed by: *Patricia Harker*

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	125270
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR 308498
Cal. Due Date:	3-22-19

Comments:
RAES
Function checks Location: Parking lot of Home 2 Suites Hotel in Farmington, NM

Source: Tc-99  
Serial No.: 7182-11

Activity:            uCi  
Emission Rate: 9920 cpm/emissions

Source Date: 3-07-11

Distance to Source: Contact



Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/21/18	05:57	✓	0.9	—	2200	60	2140	TE	
05/21/18	19:05	✓	0.9	—	2300	80	2220	TE	Extremely windy (gusts)
05/22/18	05:12	✓	0.9	—	2100	70	2030	TE	
05/22/18	2007	✓	0.9	—	2000	40	1960	NW	
05/23/18	0538	✓	0.9	—	2100	70	2030	NW	
05/23/18	1820	✓	0.9	—	2200	50	2150	BE	
5/24/18	06020	✓	0.9	—	2000	40	1960	BE	
05/24/18	1846	✓	0.9	—	2100	60	2040	NW	
05/25/18	0618	✓	0.9	—	2000	80	1920	NW	
05/25/18	1759	✓	N/A*	—	2100	60	2040	NW	* HV button not working
05/26/18	0611	✓	0.9	—	2100	60	2040		
05/26/18	1751	✓	0.9	—	2200	70	2130	BE	

Reviewed by: Patricia Kuhn

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	<del>125272</del> <sup>BE</sup> 125270
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR308498
Cal. Due Date:	3-22-19

Comments: RAES
home 2 suites
back of Tahoe SUV

Source: Tc99 Activity: NA uCi Source Date: 30<sup>BE</sup> Distance to Source: contact (jig)  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions 3-07-11  
green

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	<del>07:29</del>	✓	0.9	1900	50	1850	TE	Time: 06:11
06/04/18	18:40	✓	0.9	2100	60	2040	BE	
06/05/18	05:48	✓	0.9	2000	70	1930	BE	
06/05/18	18:47	✓	0.9	2000	60	1940	TE	
06/06/18	05:48	✓	0.9	2100	70	2030	TE	
06/06/18	19:11	✓	0.9	2000	50	1950	BE	
06/08/18	05:54	✓	0.9	2000	60	1940	BE	no field work 6-7-18
06/08/18	18:51	✓	0.9	2100	70	2030	TE	
06/09/18	05:47	✓	0.9	2000	70	1930	TE	
06/09/18	18:36	✓	0.9	2100	60	2040	BE	
06/10/18	05:51	✓	0.9	2100	60	2040	BE	
06/10/18	18:40	✓	0.9	2300	80	2220	TE	

Reviewed by: Patricia Hulse

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

green

METER	
Manufacturer:	Wdlum
Model:	12
Serial No.:	<del>125272</del> <sup>125270</sup>
Cal. Due Date:	03/22/19

DETECTOR	
Manufacturer:	Wdlum
Model:	44-9
Serial No.:	PR 308498
Cal. Due Date:	03/22/18

Comments:	RAES project
	Function checks conducted at
	Honeduites hotel parking lot
	Farmington, NM

Source: Tc99 Activity: NA uCi Source Date: 03-07-11 Distance to Source: contact (515)  
 Serial No.: 718211 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:25	✓	0.9	2100	80	2020	TE	
06/12/18	07:34	✓	0.9	2200	80	2120	TE	

Reviewed by: *Patricia J. ...* Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	<del>125272</del> <sup>BE</sup> 125270
Cal. Due Date:	03/22/19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR308498
Cal. Due Date:	03/22/19

Comments:	RAES

Source: Tc99 Activity: - uCi Source Date: 3-7-11 Distance to Source: ERG jig/contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-18-18	0556	✓	0.7	2100	60	2040	BE	
6-18-18	1934	✓	0.9	2200	60	2140	NW	
6-19-18	0547	✓	0.9	2000	70	1930	BE	
6-20-18	0547	✓	0.9	2200	50	2150	BE	BE did not use
6-20-18	1851	✓	0.9	2300	50	2250	SI	
6-21-18	0552	✓	0.9	2200	60	2140	BE	did not use 6-21-18
6-22-18	0547	✓	0.9	2200	60	2140	BE	
6-23-18	0548	✓	0.9	2000	60	1940	BE	
6-24-18	0556	✓	0.9	2200	60	2140	BE	NET: 2140
6-25-18	0550	✓	0.9	2100	60	2040	BE	

Reviewed by: [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	125272 <sup>82</sup> <sub>25220</sub>
Cal. Due Date:	03/22/19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR308498
Cal. Due Date:	03/22/19

Comments:	RAES
	home 2 suites parking lot,
	back of SUV

Source: Tc-99 Activity: \_\_\_\_\_ uCi Source Date: 03-07/2011 Distance to Source: ERG Job  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

GM

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
<del>10 July</del>	<del>0611</del>	<del>✓</del>	<del>900</del>	<del>2100</del>	<del>40</del>	<del>2060</del>	<del>SH</del>	<del>39</del>
10 July 18	0613	✓	900	2100	40	2060	SH	
07/10/18	19:20							
07/11/18	05:45	✓	900	1900	60	1840	TE	Did not use today
07/12/18	05:45	✓	900	2000	70	1930	TE	did not use
07/13/18	06:03	✓	900	2200	50	2150	TE	did not use
07/13/18	14:30	✓	900				BE	
07/14/18	05:45							TE TT has, was not used.
15 July 18	0445	✓	900	2000	40	1960	SH	TE has this meter.
7/15/18	1710							
07/16/18	04:45	✓	900	1900	60	1840	TE	did not use
07/16/18	1700	✓	900	2100	50	2050	SH	

Reviewed by: Peter Hunter

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	<del>125272</del> <sup>BE</sup> 125270
Cal. Due Date:	03/22/19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR308498
Cal. Due Date:	03/22/19

Comments:	RAES
	home 2 suites parking lot,
	back of SWV

Source: Tc99 Activity: — uCi Source Date: 03-07-2011 Distance to Source: ERG jig  
 Serial No.: 7102-11 Emission Rate: 9920 cpm/emissions

GM

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
17 July 18	0437	✓	900	2200	40	2160	BE	
07/17/18	1729	✓	900	2200	40	2160	BE	

Reviewed by: Patricia Wheeler

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

GM

METER	
Manufacturer:	Indlum
Model:	12
Serial No.:	125 270
Cal. Due Date:	03-22-19

DETECTOR	
Manufacturer:	Indlum
Model:	44-9
Serial No.:	PR 328498
Cal. Due Date:	03-22-19

Comments:
RAES
home 2 suites parking lot
back of SUV

Source: Tc99 Activity: — uCi Source Date: 03-07-2011 Distance to Source: ER Craig/contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-12-18	0540	✓	0.9	—	2100	40	2060	BE	
08-12-18	1859	✓	0.9	—	2200	80	2120	BE	windy
08-13-18	0449	✓	0.9	—	2000	60	1940	BE	did not use
08-14-18	0446	✓	0.9	—	2000	70	1930	BE	did not use
08-15-18	0448	✓	0.9	—	2000	40	1960	BE	
08-15-18	1712	✓	0.9	—	2000	50	1950	BE	
08-16-18	0451	✓	0.9	—	2000	70	1930	BE	did not use
08-17-18	0453	✓	0.9	—	2000	80	1920	BE	did not use
08-18-18	0447	✓	0.9	—	2000	50	1950	BE	did not use
08-19-18	0658	✓	0.9	—	2200	50	2150	BE	did not use
08-20-18	0548	✓	0.9	—	2200	60	2140	BE	did not use
08-21-18	0447	✓	0.9	—	2200	40	2160	BE	did not use

Reviewed by: Patricia Hernandez

Review Date: 6/6/19



# Single-Channel Function Check Log

Gm

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	12
Serial No.:	125270
Cal. Due Date:	03-22-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-9
Serial No.:	PR 308498
Cal. Due Date:	03-22-19

Comments:
RAES

Source: Tc-99      Activity: — uCi      Source Date: 03-07-2011      Distance to Source: ERG jig/contact  
 Serial No.: 7182-11      Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
09-11-18	0448	✓	0.9	—	2100	60	2040	BE	
9-11-18	1816	✓	0.9	—	2200	50	2150	BE	
9-12-18	0454	✓	0.9	—	2200	60	2140	BE	
9-12-18	1744	✓	0.9	—	2200	80	2120	BE	
9-13-18	0450	✓	0.9	—	2200	70	2130	BE	d. Prout
9-14-18	0455	✓	0.9	—	2200	60	2140	BE	did not test
9-15-18	0443	✓	0.9	—	—	—	—	BE	non-responsive
9-16-18	0446	✓	0.9	—	2000	60	1940	BE	
9-16-18	1920	✓	0.9	—	2200	60	2140	BE	
9-17-18	0440	✓	0.9	—	2200	60	2140	BE	

Reviewed by: Ruth Hester

Review Date: 6/6/19



# Single-Channel Function Check Log

GM



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	12
Serial No.:	125290
Cal. Due Date:	03-22-19

DETECTOR	
Manufacturer:	Indium
Model:	44-P
Serial No.:	PR308490
Cal. Due Date:	03-22-19

Comments:
RAES

Source: T099 Activity: — uCi Source Date: 03-07-2016 Distance to Source: contact  
 Serial No.: 7182-11 Emission Rate: 9970 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-17-12	1900	✓	0.9	—	2200	50	2150	DE	
9-18-12	0445	✓	0.9	—	2100	40	2060	DE	

Reviewed by: Patricia Henders

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

GM



METER	
Manufacturer:	Iudlum
Model:	12
Serial No.:	125270
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-9
Serial No.:	PR 308498
Cal. Due Date:	3-22-19

Comments:
RAES

Source: Tc99 Activity: - uCi Source Date: 3-7-11 Distance to Source: contact  
 Serial No.: 71021 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
0450	9-25-18	✓	0.9	-	2100	50	2050	BE	
9-25-18	1040	✓	0.9	-	2100	50	2050	BE	
9-26-18	0512	✓	0.9	-	2100	60	2040	BE	
9-26-18	1918	✓	0.9	-	2100	50	2050	BE	
9-27-18	0507	✓	0.9	-	2000	50	1950	BE	did not use
9-28-18	0527	✓	0.9	-	2100	50	2050	BE	did not use
9-29-18	0527	✓	0.9	-	2000	40	1960	BE	
9-29-18	2900	✓	0.9	-	2200	60	2140	BE	
09-30-18	0532	✓	0.9	-	2000	50	1950	BE	did not use

Reviewed by: Patrick Hendon

Review Date: 6/6/19



GM



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	12
Serial No.:	125270
Cal. Due Date:	3-22-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-9
Serial No.:	PR 308498
Cal. Due Date:	3-22-19

Comments:
RAES

Source: Tc 99 Activity: — uCi Source Date: 3-7-11 Distance to Source: contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
2-10-18	0500	✓	—	—	2000	40	1960	DS	

Reviewed by: Peter Hosen

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	274087
Cal. Due Date:	04-30-19

DETECTOR	
Manufacturer:	Ludlum
Model:	449
Serial No.:	PE 271657
Cal. Due Date:	04-30-19

Comments: Tetra Tech RAE1 Parkington Towne Suites Farmington, MO

Source: Tc99 Activity: — uCi Source Date: 3-7-2011 Distance to Source: ERG Site  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/11/2018	06:14	✓	0.9	—	2100	70	2030	TE	
<del>05/11/18</del>									<del>BB did not use</del>
<del>5/12/18</del>	<del>0623</del>	<del>✓</del>	<del>0.9</del>	<del>—</del>	<del>2000</del>	<del>50</del>	<del>1950</del>	<del>TE</del>	<del>Not used today</del>
5/12/18	17:30	✓	0.9	—	2200	70	2130	TE	
05/13/18	06:05	✓	0.9	—	2000	60	1940	TE	
05/13/18	18:15	✓	0.9	—	2000	60	1940	TE	
5/14/18	0620	✓	0.9	—	2000	60	1940	TE	
5/14/18	18:18	✓	0.9	—	2100	70	2030	TE	

Reviewed by: Peter H...

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	274087
Cal. Due Date:	4-30-18 <sup>TE</sup> 19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	R291657
Cal. Due Date:	4-30-19

Comments:
RAEJ
Function checks location: Parking lot of Home2Suites hotel in Farmington, NM

Source: TC-99 Activity:      uCi Source Date: 3-07-11 Distance to Source: ERG TE Contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/21/18	05:55	✓	0.9	2100	70	2030	TE	
05/21/18	19:05	✓	0.9	2000	80	1920	TE	Extremely windy (gusts)
05/22/18	05:12	✓	0.9	2000	80	1920	TE	
05/22/18	2005	✓	0.9	2100	60	2040	NW	
05/23/18	0540	✓	0.9	2200	60	2140	NW	
05/23/18	1830	✓	0.9	2100	70	2030	BE	
5/24/18	0620	✓	0.9	2200	60	2140	BB	
05/24/18	1851	✓	0.9	2100	40	2060	NW	
05/25/18	0615	✓	0.9	2000	60	1940	NW	
<del>05/25/18</del>	<del>0618</del>	<del>✓</del>	<del>0.9</del>	<del>2000</del>	<del>80</del>	<del>1920</del>	<del>NW</del>	<del>NW (wrong detector)</del>
05/25/18	1754	✓	0.9	2200	50	2150	NW	
05/26/18	0614	✓	0.9	2100	50	2050	NW	
05/26/18	1750	✓	0.9	2100	60	2040	BB	

Reviewed by: Patricia Kuhn

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	274087
Cal. Due Date:	4-30-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR 291657
Cal. Due Date:	4-30-19

Comments:	RAES
	home 25miles
	back of Tahoe SUV

Source: Tc99 Activity: NA uCi Source Date: 3-7-11 Distance to Source: contact (jig)  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

blue

Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	06:45 <sup>TE</sup>	✓	0.9	1800	50	<del>1800</del> <sup>TE</sup>	TE	Net=1750 Times 06:11
06/04/18	1838	✓	0.9	2000	50	1950	BE	
06/05/18	0549	✓	0.9	2000	60	1940	BE	
06/05/18	18:47	✓	0.9	2100	60	2040	TE	
06/06/18	05:48	✓	0.9	2000	70	1930	TE	
06/06/18								Batt check OK, HV OK, w repair for detector
<del>06/06/18</del>	<del>0554</del>	<del>✓</del>	<del>0.9</del>					BE
06/08/18	0615	✓	0.9	2000	60	1940	BE	detector functioning normally now.
06/08/18	18:51						TE	Not used today
06/09/18	05:47	✓	0.9				TE	Not reading anything.
06/10/18	18:26						TE	not working properly

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	274087
Cal. Due Date:	04/30/19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR 291657
Cal. Due Date:	04/30/19

Comments:	RAES

Source: Tc99      Activity: — uCi      Source Date: 3-7-11      Distance to Source: ERUJIS/contact  
 Serial No.: 7102-11      Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
0-6-18	0555	✓	0.9	3200	60	3140	BE	much higher than expected
6-8-02	1934	✓	0.9	~100	50	50	NW	NOT RESPONSIVE; <u>MILLED</u>

Reviewed by: Patricia Henderson

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	indium
Model:	model 12
Serial No.:	229277
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	indium
Model:	<del>model 12</del> BE 4-9
Serial No.:	PR 147896
Cal. Due Date:	3-19-19

Comments:
2AES
Home 2 suites parking lot
back of SUV

Source: Tc 99 Activity: 9920 uCi Source Date: 3-7-11 Distance to Source: jig  
 Serial No.: 7192-11 Emission Rate: ↓ cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
4-25-18	8:21	✓	—	—	2200	400 BE	2120	BE	inner bc parking lot
4-25-18	20:24	✓	0.9	—	2200 ↑	80 ↑	2140	BE	Home 2 suites parking lot
4-27-18	6:31	✓	0.9	—	2000	80 BE	1920	BE	
4-27-18	18:55	✓	0.9	—	2200	80	2200 TE	TE	
4-28-18	05:55	✓	0.9	—	2000 TE	80	1920	TE	
4-28-18	18:30	✓	0.9	—	2200	80	2180	BE	windy
4-29-18	06:38	✓	0.9	—	2000	80	1920	TE	
4-29-18	16:55	✓	0.9	—	2200	70	2130	BE	
4-30-18	06:06	✓	0.9	—	2200	60	2140	BE	
4-30-18	17:16	✓	0.9	—	2200	80	2180 TE	TE	Net counts 2120

Reviewed by: Patricia H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

RAES

METER	
Manufacturer:	Indium
Model:	202 12
Serial No.:	229277
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Indium
Model:	44-9
Serial No.:	PR147896
Cal. Due Date:	3-19-19

Comments:
towneplace suites
lower back parking lot
back of SUV

Source: T-99 Activity: \_\_\_\_\_ uCi Source Date: 3-7-2011 Distance to Source: Jig  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions



Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/12	05:15	✓	0.9	—	2200	70	2130	BE	
05/07/18	18:40	✓	0.9	—	2000	75	1925	TE	
05/08/18	05:41	✓	0.9	—	2000	75		TE	
05/08/18 <sup>TE</sup>									
5-9-18									BE got wet, letting dry out overnight
5-10-18									+ not functioning.
									not functioning sent back w/Neil

Reviewed by: Peter Hansen

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	12
Serial No.:	229265
Cal. Due Date:	6-18-19

DETECTOR	
Manufacturer:	Indium
Model:	44-9
Serial No.:	PR306458
Cal. Due Date:	6-18-19

Comments:	RAES

Source: Tc99

Activity: - uCi

Source Date: ~~1-22-18~~<sup>BE</sup>

Distance to Source: ERSjij/contact

Serial No.: 7102-11

Emission Rate: 9920 cpm/emissions

3-7-11

GM

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06-19-18	0615	✓	0.9	-	2200	40	2160	BE	BE did not use
06-20-18	0545	✓	0.9	-	2000	50	1950	BE	
06-20-18	1854	✓	0.9	-	2000	50	1950	39	
6-21-18	0557	✓	0.9	-	2200	40	2160	BE	
6-21-18	1815	✓	0.9	-	2000	50	1950	39	
6-22-18	0947	✓	0.9	-	2000	40	1960	BE	
6-22-18	1831	✓	0.9	-	2200	50	2150	39	
6-23-18	0947	✓	0.9	-	2000	50	1950	BE	
6-23-18	1857	✓	0.9	-	2100	60	2040	39	
06-24-18	0757	✓	0.9	-	2000	40	1960	BE	
06-24-18	2025	✓	0.9	-	2200	40	2160	39	

Reviewed by: Patricia Wheeler

Review Date: 6/6/19





# Single-Channel Function Check Log

METER	
Manufacturer:	kdum
Model:	12
Serial No.:	229265
Cal. Due Date:	6-18-19

DETECTOR	
Manufacturer:	Indium
Model:	44-9
Serial No.:	PR 306458
Cal. Due Date:	6-18-19

Comments: RAES

Source: Tc 99  
 Serial No.: 7182-11

Activity: - uCi  
 Emission Rate: 9920 cpm/emissions

Source Date: <sup>BSE</sup>  
~~4-22-~~  
3-7-11

Distance to Source: jij / contact

GM

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-25-18	0547	✓	8.9	-	2000	50	1950	BSE	

Reviewed by: Patricia W. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	2 292 65
Cal. Due Date:	6-18-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR 306458
Cal. Due Date:	6-18-19

Comments: RAES
home 2 suites parking lot,
back of SUV

Source: TC-99      Activity:          uCi      Source Date: 03-07-2018      Distance to Source: ERG Log  
 Serial No.: 7182-11      Emission Rate: 9920 cpm/emissions      **6M**

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
10 July 18	0607	✓	900	—	2000	40	1960	JJ	
07/10/18	14:34	✓	900	—	<del>4000</del> 4000	80	2020	TE	Source counts 2100
07/11/18	05:45	✓	900	—	2000	60	1940	TE	did not use
07/12/18	05:45	✓	900	—	2000	60	1940	TE	
12 July 18	1805	✓	900	—	2000	60	1940	JJ	
07/13/18	0604	✓	900	—	2000	60	1940	BE	
07/13/18	1430	✓	900	—	2000	60	1940	BE	
07/14/18	05:43	✓	900	—	1900	<del>600</del> 60	1840	TE	
07/14/18	1536	✓	900	—	—	—	—	—	BE got wet, drying out.
07/16/18	04:43	—	—	—	—	—	—	TE	Still drying
07/16/18	0704	—	—	—	—	—	—	BE	Q. Q. not use

Reviewed by: Patricia Anderson

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	12
Serial No.:	229265
Cal. Due Date:	6-18-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-9
Serial No.:	PR 306458
Cal. Due Date:	6-18-19

Comments: RAES
home 2 suites parking lot,
back of SW.

Source: T099  
 Serial No.: 7182-11

Activity: - uCi  
 Emission Rate: 9920 cpm/emissions

Source Date: 73-07-2011

Distance to Source: ERG Jig

6M

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
12 July	0440	✓	90v	-	2000	60	1940	SM	

Reviewed by: Patricia Hester

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

GM

METER	
Manufacturer:	Iudlum
Model:	12
Serial No.:	229265
Cal. Due Date:	06-18-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-9
Serial No.:	PR 306458
Cal. Due Date:	06-18-19

Comments:
RAES

Source: Tc-99  
 Serial No.: 7102-11

Activity: — uCi  
 Emission Rate: 2920 cpm/emissions

Source Date: 03-07-2011

Distance to Source: ERG Jig / contact.

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
08-12-18	0542	✓	0.9	—	2200	80	2120	BE	did not use today
08-13-18	0449	✓	0.9	—	2000	70	1930	BE	did not use
08-14-18	0447	✓	0.9	—	2000	50	2 BE 1950	BE	
08-14-18	1708	✓	0.9	—	2000	40	1960	BE	
08-15-18	0449	✓	0.9	—	2000	60	1940	BE	did not use
08-16-18	0452	✓	0.9	—	2200	60	2140	BE	did not use
08-17-18	0454	✓	0.9	—	2100	40 BE 50	204 BE 2050	BE	did not use
08-18-18	0447	✓	0.9	—	2200	60	2140	BE	did not use
08-19-18	0658	✓	0.9	—	2000	60	1940	BE	
08-19-18	0928	✓	0.9	—	2200	60	2140	BE	
08-20-18	0548	✓	0.9	—	2000	60	1940	BE	did not use
08-21-18	0447	✓	0.9	—	2200	50	2150	BE	did not use

Reviewed by: Patricia Hernandez

Review Date: 6/6/19



# Single-Channel Function Check Log

GM  
 Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	12
Serial No.:	229265
Cal. Due Date:	06-18-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-9
Serial No.:	PR306458
Cal. Due Date:	06-18-19

Comments:
RAES

Source: Tc-99 Activity: - uCi Source Date: 03-07-2011 Distance to Source: ERG/jig / contact  
 Serial No.: 7182-11 Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-11-18	0447	✓	0.9	-	2100	40	2060	BE	Signature
9-12-18	0453	✓	0.9	-	2000	50	1950	BE	
9-13-18	0450	✓	0.9	-	2200	60	2140	BE	
9-13-18	0756	✓	0.9	-	2100	60	2040	BE	
9-14-18	0455	✓	0.9	-	2000	60	1940	BE	
9-14-18	1834	✓	0.9	-	2000	70	2030	BE	
9-15-18	0451	✓	0.9	-	2000	60	1940	BE	
<del>9-15-18</del>	<del>0455</del>	<del>✓</del>	<del>0.9</del>	<del>-</del>	<del>2000</del>	<del>60</del>	<del>1940</del>	<del>BE</del>	<del>BE</del>
9-15-18	1727	✓	0.9	-	2000	50	1950	BE	
9-16-18	0455	✓	0.9	-	2000	60	1940 <sup>BE</sup>	BE	2040
9-16-18	1920	✓	0.9	-	2000	80	1920	BE	
9-17-18	0440	✓	0.9	-	2100	50	2050 <sup>BE</sup>	BE	2050

Reviewed by: Peter H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

BM



METER	
Manufacturer:	Inclun
Model:	12
Serial No.:	229265
Cal. Due Date:	06-18-19

DETECTOR	
Manufacturer:	Inclun
Model:	44-9
Serial No.:	PR 306453
Cal. Due Date:	06-18-19

Comments:
RAES

Source: Tc-99      Activity: - uCi      Source Date: 03-07-2011      Distance to Source: contact  
 Serial No.: 7182-11      Emission Rate: 9920 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-17-18	1908	✓	0.9	-	2000	50	1950	BE	
9-18-18	0445	✓	0.9	-	2000	50	1950	BE	

Reviewed by: *Patricia W. White*      Review Date: 6/6/19

GM



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



# Single-Channel Function Check Log

METER	
Manufacturer:	Indiam
Model:	12
Serial No.:	229265
Cal. Due Date:	6-18-19

DETECTOR	
Manufacturer:	Indiam
Model:	44-9
Serial No.:	PR 306458
Cal. Due Date:	6-18-19

Comments:
RAES

Source: Tc99  
Serial No.: 7182-11

Activity: - uCi  
Emission Rate: 9920 cpm/emissions

Source Date: 3-7-11

Distance to Source: contact

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-25-18	0450	✓	0.9	-	2200	40	2160	BE	
9-25-18	1840	✓	0.9	-	2200	40	2160	BE	
9-26-18	0512	✓	0.9	-	2100	60	2040	BE	
9-26-18	1918	✓	0.9	-	2200	60	2140	BE	
9-27-18	0507	✓	0.9	-	2100	60	2040	BE	
9-27-18	1930	✓	0.9	-	2100	80	2020	BE	
9-28-18	0527	✓	0.9	-	2200	50	2150	BE	did not use
9-29-18	0527	✓	0.9	-	2100	50	2050	BE	did not use
9-30-18	0532	✓	0.9	-	2000	80	1920	BE	did not use

Reviewed by: Patricia Kasper

Review Date: 6/6/19







# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	117648
Cal. Due Date:	3-20-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR174359
Cal. Due Date:	3-20-19

Comments:
RAGS: Trip 1

Source: C5-137      Activity: 3.24 uCi      Source Date: 4-18-16      Distance to Source: 6 inches  
 Serial No.: 329-99      Emission Rate: N/A cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
3-31-18	0620	5.5	808	99	45480	8215	37265	NW	Holiday Inn Express lot
3-31-18	1830	5.3	801	99	45319	7196	38123	NW	
4-1-18	0609	5.2	809	99	45753	8031	37722	NW	
4-1-18	1720	5.3	803	9.8	45893	6916	38977	NW	
<del> </del>									
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Reviewed by: Patricia Huber

Review Date: 6/6/19



# Single-Channel Function Check Log

downhole  
- black

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 130  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	117649
Cal. Due Date:	01-14-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR288466
Cal. Due Date:	06-14-19

Comments:
RAES
QC - initial 10 counts

Source: Cs-137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG jig  
 Serial No.: 72      Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Includes	Note(s)
9-10-18	1548	5.8	1198	100	51492	55599	5943	BE	
					52015	5971	46044		
					51631	5923	45708		
					52001	5962	46119		
					51909	5846	46063		
					51613	5845	45768		
					51611	6104	45507		
					51490	5889	45601		
					51918	6038	45880		
					51725	5901	4288	BE	NET: 45824
						avg	45806		

Reviewed by: *Patricia J. ...*      Review Date: 6/6/19



# Single-Channel Function Check Log

Black  
 Environmental Restoration Group, Inc.  
 3809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	117649
Cal. Due Date:	6-14-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR23B466
Cal. Due Date:	6-14-19

Comments:	RAGS
	8-ft cable

Source: CS137 Activity: 4.30 uCi Source Date: 1-22-19 Distance to Source: ERCA jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-18-18	0552	5.8	1202	100	51551	5250	46301	BE	
6-18-18			did not	use				NW	
6-19-18	0611	5.9	1204	100	52274	6584	45688	BE	
6-19-18									BE did not use
6-21-18	0622	5.8	BE foot	100	51750	6784	44966	BE	HV: 1204
6-22-18	0548	5.9	1201	101	53212	5970	47242	BE	
6-23-18	0548	5.8	1201	101	53912	5443	48469	BE	d: do not use 6-23-18
6-24-18	0554	5.8	1200	100	53873	6270	47603	BE	
6-25-18	0550	5.8	1202	100	53170	6712	46458	BE	

Reviewed by: Patricia Anderson

Review Date: 6/6/19



# Single-Channel Function Check Log

BLACK  
down hole  
detector

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	117049
Cal. Due Date:	06-14-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR288406
Cal. Due Date:	06-14-19

Comments:
RAES
home & suite, back of SUV
parking lot

Source: 05-137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG jig  
 Serial No.: 72      Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05-12-18	0543	5-8	1196	100	50740	BE 56368	44372	BE	did not use today

Reviewed by: Patricia B...

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

down hole  
WHITE

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	282966
Cal. Due Date:	06-14-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	DR 208815
Cal. Due Date:	06-14-19

Comments:
KAES
QC -
initial 10 counts

Source: CS-137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG jig  
 Serial No.: 72      Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Notes(s)
9-10-18	14:15:44	6.0	1202	102	53019	46968	6051	BE	
					52849	6051	46798		
					53215	5946	47269		
					53011	6079	46932		
					52682	6031	46601		
					52681	6018	46603		
					52443	5805	46578		
					53105	5802	47213		
					52480	6052	46428		
					52503	6047	46456	BE	
						avg:	46785		

Reviewed by: Patricia W...

Review Date: 6/6/19

white



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	232966
Cal. Due Date:	6-4-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	DR 208815
Cal. Due Date:	6-14-19

Comments: RAES
8-ft cable

Source: C5137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08/18-18	0552	6.2	1202	100	53007	4755	48252	BE	
6-2-18	1931			DID	NOT USE			NW	
6-19-18									BE did not use

Reviewed by: Peter Huber

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.
   
 8809 Washington St. NE, Suite 150
   
 Albuquerque, NM 87113
   
 (505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	222L
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR 355763
Cal. Due Date:	3-19-19

Comments: RAES
QC Location: Home 2 Suites parking lot. (Farmington, NM)

Source: Cs-137      Activity: 4.30 uCi      Source Date: 1/22/18      Distance to Source: ERG Jig  
 Serial No.: 72      Emission Rate: na cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
04-24-2018	04:29	5.6	1004	101	54622	8226	46396	TE	
					54557	8003	46554	TE	
					54829	7980	46849	TE	
					55252	8264	46988	TE	
					55094	7890	47204	TE	
					55820	8128	47692	TE	
					56883	8176	48707	TE	
					56204	8054	48150	TE	
					57017	8020	48997	TE	
					57435	7935	49500	TE	
<del>04/24/2018</del>	19:19	5.5	997	100	53004	6967	46037	RS	Hampton inc & suites parking lot

Reviewed by: *Patricia Harker*      Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR 355763
Cal. Due Date:	3-19-19

Comments: RAES Project
QC Location: Parking lot of Hampton Inn & Suites (across from NM)

Source: Cs 137 Activity: 4:30 uCi Source Date: 4/22/18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
04/25/2018	05:58	5.5	1004	101	54030	5609	48421	BE	Hampton inn & suites
<del>04/25/2018</del>									<del>Not used this day</del>
04/26/2018	06:10	5.5	1000	100	55202	7611	47591	TE	Parking lot of Home 2 suites
04/26/18 <sup>TE</sup>	20:02	5.4	993	100	53201	6415	46786	BE	
4-27-18	6:06	5.4	999	100	53546	7140	46398	BE	
4-27-18	18:51	5.3	991	100	52501	6026	46475	TE	
4-28-18	05:41	5.4	1000	100		72	6062	TE	
					53975	6862	47113	TE	
04-28-18	14:12	5.4	996	100	53500	7170	46410	BE	(rain lightly), windy
04-29-18	06:10	5.4	1001	100	54583	6499	48084	TE	
04-29-18 <sup>TE</sup>	16:29	5.3	996	100	52935	6339	46596	BE	sunny, warm

Reviewed by: Peter Warner

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	ludlum
Model:	44-10
Serial No.:	PR 355763
Cal. Due Date:	3-19-19

Comments:
RAES
Home 2 suites
parking lot

Source: C-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
043013	604	5.1	1000	100	53174	6161	47013	BE	NET 47013
04/30/18 <sup>TE</sup>	1717	5.3	995	100	52700	6591	46109	BE	Sight wind NET: 46109 NW

Reviewed by: Patricia Hunter Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

red

RAES

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4413
Serial No.:	PR 355765
Cal. Due Date:	3-19-19

Comments:
towne place lower back
parking lot, back of
sub

Source: Cs137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
5-6-18	1710	5.3	997	100	51675	6749	44926	BE	
					51522	6716	44806	BE	
					51574	6708	44866	BE	
					61180	6479	44701	BE	
					52050	6521	45529	BE	
					51045	6724	44371	BE	
					52204	6669	45535	BE	
					51765	6868	44897	BE	
					51660	6838	44822	BE	
					51456	6932	44524	BE	
	TE		TE			TE			TE

Reviewed by: Patricia Anderson Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 355 763
Cal. Due Date:	3-19-19

Comments: RAES (Tetratech) Function checks conducted at Towne Suites hotel Farmington, NM in lower parking lot.
--

Source: Cs-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: NA cpm/emissions

Source Date: 1-22-18

Distance to Source: ERG-Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/07/18	05:26	6.4	1001	100	53340	7330	46010	TE	changed batteries
05/07/18	18:32							TE	didn't use today
05/08/18	05:31	6.4	1001	100	54135	6859	47276	TE	
05/08/18	18:48	6.1	994	100	53303	7048	46255	TE	
05/09/18	06:00	6.1	1001	100	53325	7540	45785	TE	
05/09/18	18:11	5.8	993	99	52556	7760	44796	TE	
05/10/18	06:05	5.9	1001	100	53005	7297	45708	TE	
05/10/18	19:05	5.6	994	100	51807	6464	45343	TE	
05/11/18	05:50	5.7	1000	100	53307	6379	46928	TE	
05/11/18	18:46	5.6	996	100	52385	6732	45653	TE	
05/12/18	06:25	5.7	1000	100	53639	6956	46683	TE	
05/12/18	17:20							TE	didn't use today

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 355763
Cal. Due Date:	3-19-19

Comments: <i>RAES (Tetra Tech)</i>
<i>Function checks conducted at</i>
<i>Towne Suites hotel Farmington, NM</i>
<i>in lower parking lot.</i>

Source: Cs-137      Activity: 4-30 uCi      Source Date: 1-22-18      Distance to Source: ERG-Jig  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/13/18	05:43	5-7	1000	100	52471	6453	46018	TE	
05/13/18									<i>didn't use today</i>
05/14/18	06:01	5-7	1003	100	52579	7595	44984	TE	<i>cold morning</i>
05/14/18	18:04	5-6	996	100	55154	6725	48429	TE	

Reviewed by: *Patricia Hester*

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355763
Cal. Due Date:	3-19-19

Comments: RAES (Tetratech)
Function checks location: home 2 sites parking lot back of SUV

Source: Cs-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: - cpm/emissions

Source Date: 1/22/18

Distance to Source: ERG-Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/21/18	05:35	5.5	1000	100	52560	6498	46062	TE	
05/21/18	18:50	5.6	996	99	52728	6216	46512	TE	Very windy (gusto)
05/22/18	04:50	5.3	1001	100	53625	6007	47618	TE	
05/22/18	1925	5.4	997	99	51775	6332	45443	NW	
05/23/18	0512	5.5	1003	100	52962	6306	46656	NW	
05/23/18	1834	5.4	996	99	51773	6846	44927	BE	
5/24/18	0600	5.4	1002	100	53133	7153	45980	BE	
5/24/18	1832	5.4	995	99	52737	5880	46857	NW	
05/25/18	0555	5.4	1003	100	51180	6485	44745	NW	
05/25/18	1736	5.3	994	99	51551	6402	45149	NW	
05/26/18	0550	5.4	1002	100	53200	6146	47054	BE NW	NET: 47054
05/26/18	1757	5.3	995	99	52308	6977	45331	BE NW	NET: 45331 08-2818

Reviewed by: Peter Hunter

Review Date: 6/16/19

QC check-



# Single-Channel Function Check Log



Red

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355763
Cal. Due Date:	3-19-19

Comments:	RAES (Tetrattech)
Function checks location:	back of Tahoe
	home 2 sites

Source: Cs-137 Activity: 4.30 uCi Source Date: 01/22/18 Distance to Source: ERG-Jig  
 Serial No.: 72 Emission Rate: \_\_\_\_\_ cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	05:42	5.1	1001	100	55007	5416	49591	TE	Changed batteries
06/04/18	18:34	6.0	995	99	54428	6515	47913	DE	
06/05/18	05:45	6.0	1000	100	54232	7000	47232	BE	
06/05/18	18:21	5.8	995	100	54956	5862	49094	TE	
06/06/18	05:31	5.7	999	100	55789	6291	49498	TE	
06/06/18									DE did not use
06/08/18	05:50	5.9	1000	100	55196	5578	49618	BE	no fieldwork 6-07-18
06/08/18	18:34	5.7	984	100	52959	5400	47559	TE	
06/09/18	05:25	5.5	1000	100	54016	6243	47773	TE	
06/09/18									DE did not use
06/10/18	05:53	5.8	1000	100	54364	5563	48801	DE	
06/10/18	18:30	5.7	995	99	54077	5737	48340	TE	

Reviewed by: rim

Review Date: 7-5-18



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Red

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 355763
Cal. Due Date:	3-19-19

Comments: RAE3 (Tetra Tech)
Function checks to catron:

Source: CS-137 Activity: 4-30 uCi Source Date: 1-22-18 Distance to Source: ERG Trg  
 Serial No.: 72 Emission Rate:      cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:09	5.5	999	100	53213	5778	47435	TE	
<del>06/11/18</del>									<del>BES did not use</del>

Reviewed by: Patricia Hoover Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 355763
Cal. Due Date:	3-19-19

Comments: RAES (Tetra Tech)
Function checks to catron:

Source: C5137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
6-18-18	0554	5.7	1000	100	54577	5425	49152	BE	
6-18-18	1920	5.6	996	99	53002	6472	46530	W	
06-19-18	0546	5.6	1001	100	54831	6543	48288	BE	
16-19-18	1844	5.6	995	100	54123	6170	47953	BE	
06-20-18	0548	5.6	1001	100	54380	6264	48116	BE	
6-20-18	1842	5.5	995	100	54321	5720	48601	JY	
6-21-18	0553	5.6	1001	100	54108	6558	47550	BE	NET 47550
06-21-18								J	BE did not use
6-22-18	0545	5.5	1000	100	55603	7344	48259	BE	
6-22-18	1836	5.4	994	99	52333	6313	46020	JY	
6-23-18	0545	5.4	100	100	53381	5941	47440	BE	
6-23-18	1910	5.3	995	99	52709	5311	47398	JY	

Reviewed by: Patricia H. M.

Review Date: 6/6/19





# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355763
Cal. Due Date:	3-19-19

Comments: RAES (Tetratech)
Function checks location:

Source: Co 137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
06-24-18	0551	5.3	1000	100	54028	6273	47755	BE	NET: 47555
6-24-18	2037	5.3	995	100	52693	4904	47789	JH	
6-25-18	0551	5.3	1001	100	55126	6151	48975	BE	
6-25-18	1816	5.3	993	99	54717	5058	49659	37	

Reviewed by: Peter Hanks

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355763
Cal. Due Date:	3-19-19

Comments: RAES (TetraTech)
Function checks location: home 2 suites, parking lot back of SUV

Source: C<sub>3</sub> 137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG Trg  
 Serial No.: 72      Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
10 July 18	0552	5.3	999	101	55228	6187	49041	JH	
07/10/18	19:20	5.2	995	100	55119	5772	49347	TE	
07/11/18	05:27	5.2	998	100	53545	5649	47896	TE	
11 July 18	1901	5.1	995	99	52335	5879	46456	JH	
07/12/18	05:30	5.2	998	100	55117	6143	48974	TE	
12 July 18	1813	5.1	997	100	54171	5538	48633	JH	
07/13/18	0551	5.1	999	100	54546	6095	48451	BE	changed batteries, BATT. 6.3
07/13/18	1131	6.0	995	99	53367	6259	47108	BE	
07/14/18	05:27	6.1	998	100	53491	5861	47630	TE	
07/14/18	1541	5.3	995	100	52853	5841	47012	BE	
15 July 18	0509	5.7	998	100	52979	5625	47354	JH	
07/15/18	0714	5.6	995	99	52299	5803	46496	BE	

Reviewed by: Patricia Henderson

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	3-19-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355763
Cal. Due Date:	3-19-19

Comments: RAES (TetraTech)
Function checks location: home 2 suites parking lot, back of SUV

Source: CS137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: ERG Trg  
 Serial No.: 72      Emission Rate:          cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
07/16/18	04:28	5.3	997	100	54945	<del>54835</del>	49207	TE	BKG counts: 5738
07/16/18	1702	5.6	995	100	53087	5876	47261	BE	
17 July 18	0456	5.7	998	100	53658	5423	48235	SA	
07/17/18	1727	5.5	994	100	54101	5949	48152	BE	

Reviewed by: Patricia Horn

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Inalum
Model:	2221
Serial No.:	271435
Cal. Due Date:	03-19-19

DETECTOR	
Manufacturer:	Inalum
Model:	44-10
Serial No.:	PK 355763
Cal. Due Date:	03-19-19

Comments:
RAES
home 2 suites parking lot,
back of SUV

Source: C3-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG's jty  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-12-18	0539	5.7	999	100	52537	6528	45999	BE	
08-12-18	1858	5.5	997	100	53878	6828	47050	BE	
08-13-18	0447	5.6	999	100	53082	6542	46540	BE	did not use
08-14-18	0445	5.6	999	100	54178	7046	47132	BE	
08-14-18	1707	5.4	997	100	54097	6645	47452	BE	
08-15-18	0447	5.5	998	100	53909	6802	47107	BE	did not use
08-16-18	0450	5.5	996	100	52780	6490	46290	BE	did not use
08-17-18	0452	5.5	999	101	56490	6390	52094	BE	source was slightly out of position
08-17-18	1640	5.3	995	100	53539	6405	47134	BE	
08-18-18	0446	5.1	997	100	52866	6606	46260	BE	chg batteries
08-18-18	1501	5.9	998	100	53843	6601	47182	BE	
08-19-18	0650	6.0	1003	100	54100	6788	47612	BE	

Reviewed by: Peter Weber

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	03-19-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR 355763
Cal. Due Date:	03-19-19

Comments:
RAE
home 2 suites parking lot
back of SUV

Source: 05-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

cal: 1000V

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-19-18	0921	5.7	997	100	54607	6561	48046	BE	
08-20-18	0545	5.06	1003	100	55196	7474	47722	BE	
08-20-18	1835	5.6	998	100	54613	6773	47840	BE	
08-21-18	0445	5.7	1001	100	53949	6850	47099	BE	
08-21-18	1613	5.6	1000	100	53027	6524	46503	BE	

Reviewed by: Peter H. [Signature] Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3309 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271435
Cal. Due Date:	03-19-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR355763
Cal. Due Date:	03-19-19

Comments:
RAES

Source: Cs-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-11-18	0445	5.7	1002	100	52491	6984	45507 <sup>BE</sup>	BE	NET = 45487
9-11-18	1810	5.5	998	100	52657	6370	46287	BE	
9-12-18	0452	5.6	1003	100	53050	6863	46187	BE	
9-12-18	1740	5.4	998	100	53030	6420	46610	BE	
9-12-18	0450	5.5	1003	100	53354	6622	46732	BE	
9-13-18	1759	5.4	997	100	52369	6795	45574	BE	
9-14-18	0455	5.4	1004	100	51390	7616	43774	BE	d. P. not used

Reviewed by: Peter Weber

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	271435
Cal. Due Date:	03-19-19

DETECTOR	
Manufacturer:	Iudlum
Model:	4410
Serial No.:	PR355763
Cal. Due Date:	03-19-19

Comments:
RAES

Source: Cs-137 Activity: 4.30 uCi Source Date: <sup>BE</sup> 10-01-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-26-18	0506	S.3	1206	101	53745	7553	46192	BE	
9-26-18	1920	S.1	1002	100	52432	6602	45830	BE	
9-27-18	0507	S.1	1007	101	53581	7154	46427	BE	did not use
9-28-18	0522	U.3	1007	101	51603	7499	44104	BE	
9-28-18	1924	S.7	1001	100	52820	9071	45749	BE	
9-29-18	0525	S.8	1007	101	53563	7111	46452	BE	
9-29-18	1857	S.6	1000	100	53139	7097	46042	BE	
9-30-18	0530	S.6	1006	101	52266	7948	44318	BE	
9-30-18	1830							BE	did not use

Reviewed by: Petero [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 130  
Albuquerque, NM 87113  
(505) 298-4224

242

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	108870
Cal. Due Date:	09-05-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR357755
Cal. Due Date:	09-05-19

Comments:
RAES
QC - initial 10 counts

Source: CS-137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG j 19  
 Serial No.: 72      Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-10-18	1544	6.0	1098	100	50820	6238	44582	PE	
↓	↓	↓	↓	↓	50896	6317	44579	↓	
↓	↓	↓	↓	↓	52184	6298	45886	↓	
↓	↓	↓	↓	↓	51447	6566	44881	↓	
↓	↓	↓	↓	↓	51049	6399	44642	↓	
↓	↓	↓	↓	↓	51235	6284	44951	↓	
↓	↓	↓	↓	↓	50626	6270	44356	↓	
↓	↓	↓	↓	↓	51532	6471	45061	↓	
↓	↓	↓	↓	↓	50857	6189	44668	↓	
↓	↓	↓	↓	↓	51301	6210	45091	↓	

Reviewed by: Peter H. ...

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

1x1



METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	108 070
Cal. Due Date:	09-04-19

DETECTOR	
Manufacturer:	Indium
Model:	44-2
Serial No.:	PR363534
Cal. Due Date:	09-04-19

Comments:
RAES
QC - initial 10 counts

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

950

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-10-19	1704	5.9	950	100	10382	1446	8936	RE	
					10105	1420	8765		
					10028	1320	8708		
					9987	1489	8498		
					10026	1449	8577		
					9987	1429	8558		
					9968	1401	8567		
					10183	1427	8756		
					10343	1384	8959		
					10119	1465	8704	RE	

Reviewed by: Patricia Kahan

Review Date: 6/5/19



# Single-Channel Function Check Log

(x)  
Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	108870
Cal. Due Date:	09-04-18 BE19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-2
Serial No.:	PR363534
Cal. Due Date:	09-04-19

Comments:
RAES

Source: 05-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-11-18	0446	5.7	1002	100	52471	6557	45914	BE	BE
9-11-18	0446	5.9	956	100	9777	1557	8220	BE	
9-11-18	1820	5.8	951	100	10015	1343	8672	BE	
9-12-18	0453	5.9	957	100	10170	1427	8743	BE	
9-12-18	1747	5.3	951	100	10182	1449	8733	BE	
9-13-18	0450	5.2	957	100	10597	1506	9091	BE	
9-13-18	1802	5.7	950	100	9912	1272	8640	BE	
9-14-18	0455	5.7	956	100	10178	1424	8754	BE	
9-14-18	1837	5.7	950	100	9825	1315	8510	BE	
9-15-18	0455	5.7	956	100	10110	1419	8691	BE	
9-15-18	1720	5.6	950	100	9959	1339	8620	BE	

Reviewed by: Patricia Kunkle

Review Date: 6/5/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

1x1



METER	
Manufacturer:	Ino/Inm
Model:	2221
Serial No.:	108070
Cal. Due Date:	09-04-19

DETECTOR	
Manufacturer:	Ino/Inm
Model:	44-2
Serial No.:	PR 363534
Cal. Due Date:	09-04-19

Comments:
RAES

Source: CS-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG jls

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-16-18	0454	5.7	956	102	10281	1583	8698	BE	
9-16-18	1920	5.7	958	100	10273	1362	8911	BE	
9-17-18	0440	5.7	954	100	9967	1450	8517	BE	
9-17-18	1735	5.6	949	99	10357	1490	8867	BE	
9-20-18	0445	5.4	954	100	9982	1365	8617	BE	

Reviewed by: Peter Huber

Review Date: 6/5/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Indlum
Model:	2221
Serial No.:	108070
Cal. Due Date:	9-4-19

DETECTOR	
Manufacturer:	Indlum
Model:	44-2
Serial No.:	PR363534
Cal. Due Date:	9-4-19

Comments:
RAES

Source: CS137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-25-18	0457	5.7	956	100	10391	<del>1644</del>	8948	BE	BG: 1710
9-25-18	1837	5.6	953	101	10407	1351	9056	BE	
9-26-18	0508	5.7	957	100	10372	1324	9048	BE	
9-26-18	1420	5.6	954	102	10264	1266	8998	BE	
9-27-18	0907	5.6	958	101	10425	1362	9073	BE	Can't find check → lost down hole

Reviewed by: Patricia Hulse

Review Date: 6/15/19



# Single-Channel Function Check Log

yellow stick  
 Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	Ludlum TE 2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR 320678
Cal. Due Date:	4-23-19

Comments:	Retracted (RAES)
Location:	Home 2 suites hotel parking lot (Farmington NM)

Source: C5-137 Activity: 4.30 uCi Source Date: 1/22/2018 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate:            cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
4-28-18	14:07	5.3	1000	100	55309	8314	46995	TE	w/ig, light rain.
					54894	8640	46254	TE	
					55419	8560	46859	TE	
					54926	8349	46579	TE	
					54745	8358	46387	TE	
					54024	8410	45614	TE	
					55623	8185	47438	TE	
					55225	8268	46957	TE	
					54914	8381	46533	TE	
4-29-18	06:15	5.4	1000	100	54789	8326	46463	TE	
					<del>55371</del>	7063	48308	TE	Counts source = 55371 not used

4-30-18

Reviewed by: Patricia Brown

Review Date: 6/6/19

not intended for use



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	<del>2/28</del> 4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	P1-320670
Cal. Due Date:	4-23-19

RAES

Comments:
towneplace lower back
parking lot,
back of SWD

Source: Cs137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
5-6-18	1712	5.4	999	100	53066	6476	<del>53066</del>	BE	NET: 46590
					53176	6767	46409	BE	
					53362	6684	46678	BE	
					53013	6501	46432	BE	
					52950	6498	46432	BE	
					53636	6243	47293	BE	
					51990	6685	45205	BE	
					51742	6732	45010	BE	
					53204	6854	46350	BE	
					52792	6901	45891	BE	

Reviewed by: Patricia Hernandez

Review Date: 6/6/19



# Single-Channel Function Check Log



METER	
Manufacturer:	Ludlum
Model:	2222
Serial No.:	176947
Cal. Due Date:	04-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 320678
Cal. Due Date:	04-23-19

Comments: RAES (Tetrated)
Function checks conducted
in towne place suites hotel
(lower parking lot) Farmington, NM

Source: Cs-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: na cpm/emissions

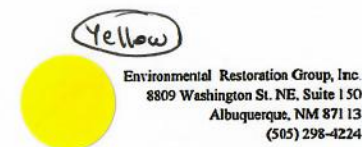
Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/07/18	05:24	5.8	1000	99	54111	7583	46528	TE	changed batteries
05/07/18	18:35	5.8	997	98	52662	6889	45773	TE	
05/08/18	05:25	5.8	1002	99	53990	6867	47123	TE	
05/08/18									Did not used today
05/09/18	06:02	5.8	1000	99	54745	7305	47440	TE	
05/09/18									Didn't use today
05/10/18	06:07	5.8	1000	99	53225	7406	45819	TE	
05/10/18	19:19							TE	Didn't use today
05/11/18	05:50	5.8	1000	99	54380	6365	48015	TE	
05/12/18	18:45	5.6	997	98	52662	7349	45313	TE	
05/12/18	06:25	5.6	1001	98	53426	7009	46417	TE	
05/12/18	19:20							TE	Didn't use today

Reviewed by: Patricia Huber

Review Date: 6/6/19



# Single-Channel Function Check Log



METER	
Manufacturer:	hwdlum
Model:	222L
Serial No.:	176947
Cal. Due Date:	04-23-19

DETECTOR	
Manufacturer:	hwdlum
Model:	4410
Serial No.:	PR 320678
Cal. Due Date:	04-23-19

Comments: RAES (Tetra Tech)
Function checks conducted in TownePlace Suites hotel in Farmington NM (@ Lower parking lot)

Source: Cs-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Sig  
 Serial No.: 72 Emission Rate: na cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/13/18	05:43	5.6	1001	99	53302	6286	47016	TE	
05/13/18									Didn't use today
05/14/18	06:01	5.6	1004	99	54008	8054	45954	TE	
05/14/18	18:04	5.5	997	98	55491	6269	49222	TE	

Reviewed by: Patricia Hester

Review Date: 6/6/19





# Single-Channel Function Check Log



Environmental Restoration Group, Inc  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR320678
Cal. Due Date:	4-23-19

Comments: RAES (Tetra tech)
Function checks location: Parking lot of Home2 Suites Hotel in Farmington, NM

Source: Cs-137 Activity: 4-30 uCi Source Date: 01/22/18 Distance to Source: ERG-Jig  
 Serial No.: 72 Emission Rate: --- cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/21/18	05:33	5.2	1002	99	52027	6624	45403	TE	Changed batteries
05/21/18	18:50							TE	Not used today
05/22/18	04:50	5.9	1003	99	54157	6295	47862	TE	
05/22/18	1925				DID NOT USE			NW	
05/23/18	0512	6.0	1005	98	54283	6445	<del>47837</del>	BE	47837 Net QC 08-28-18 BE
05/23/18									DE did not use
5/24/18	0601	6.0	1005	99	54535	7916	46619	BE	
5/24/18	1832	5.7	997	98	52403	6293	46110	NW	
05/25/18	0555	5.8	1004	99	51406	6707	44699	NW	
05/25/18	1736	5.6	997	98	52146	6841	45305	NW	
05/26/18	0550	5.6	1005	99	51727	7406	44316		
05/26/18	1754	5.5	997	99	53672	7101	46571	BE	

Reviewed by: *Patricia H...*

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR320678
Cal. Due Date:	4-23-19

Comments: RAES (Tetra tech)
Function checks location: home 2 suites back of Tahoe Inn

Source: CS-137      Activity: 4-30 uCi      Source Date: 01/22/18      Distance to Source: ERG-Jig  
 Serial No.: 72      Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	05:43	5.1	1004	101	55072	5816	49256	TE	Changed batteries
06/04/18	18:36	5.4	997	98	55224	7260	47964	BE	
06/05/18	0545	5.5	1003	99	55014	7490	47524	BE	
06/05/18	18:22	5.8	998	99	54026	5588	48438	TE	
06/06/18	05:31	5.2	1003	99	55750	6329	49421	TE	Date: 06/06/18
06/06/18	19:16	5.4	1000	98	54308	5838	48470	BE	
06/08/18	0605	5.4	1003	99	54874	5942	48932	BE	no fieldwork 6-7-18
06/08/18	18:37	5.4	998	98	52201	5800	46401	TE	
06/09/18	05:25	5.1	1001	99	54968	6742	48226	TE	Changed batteries
06/09/18	1833	5.8	998	98	52946	5178	47768	BE	
06/10/18	0557	5.8	1003	98	55375	5431	49944	BE	
06/10/18	18:30	5.6	999	98	52898	5530	47368	TE	

Reviewed by: Patricia H...

Review Date: 6/6/19



# Single-Channel Function Check Log



Yellow

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 320 678
Cal. Due Date:	4-23-19

Comments: RAES (Tetrattech)
home 2 suites
back of Tahoe

Source: CS-137  
 Serial No.: 72

Activity: 4-30 uCi  
 Emission Rate:      cpm/emissions

Source Date: 1-22-18

Distance to Source: ERG-Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:09	5.5	1004	99	55236	5950	49286	TE	
06/12/18	07:36	5.6	1005	79	5411	6616	47795	BE	

Reviewed by: *Peter Hansen*

Review Date: 6/6/19



# Single-Channel Function Check Log



Yellow

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 320 678
Cal. Due Date:	4-23-19

Comments: RAES (Tetrattech)

Source: Cs137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: NA cpm/emissions

Source Date: <sup>BE</sup> 1-22-18

Distance to Source: ERG-Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-18-18	0553	5.5	1005	99	54734	5203	49531	BE	
6-18-18	1919	5.4	1001	98	53595	6385	47214	NW	
6-19-18	0546	5.5	1005	100	51990	6785	47205	BE	
6-19-18	1847	5.4	999	100	54268	6968	47296	BE	
6-20-18	0548	5.4	1005	99	55212	6474	48738	BE	
6-20-18	1844	5.4	1000	98	54739	6073	48666	JH	
6-21-18	0553	5.4	1005	99	55237	6876	48361	BE	
6-22-18	1830	5.4	999	98	54233	5965	48268	JH	
6-22-18	0544	5.4	1005	98	55873	7451	48427	BE	
6-22-18	1842	5.3	1000	98	52872	6097	46775	JH	
6-23-18	0546	5.3	1005	99	55003	6137	48866	BE	
6-23-18	1906	5.2	1000	98	55464	5566	49898	JH	

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 320 678
Cal. Due Date:	4-23-19

Comments: RAES (Tetratech)

Source: CS 137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: NA cpm/emissions

Source Date: 1-22-18

Distance to Source: ERG-Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
6-21-18	0550	5.3	1003	99	55249	6055	49194	BE	
6-24-18	2030	5.2	1001	98	52744	6736	46008	JA	
6-25-18	0545	5.2	1006	99	<del>55315</del>	10639	49193	BE	Source: 55832
6-25-18	1823	5.1	999	98	52285	5336	46949	JA	

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log

Yellow

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 320 678
Cal. Due Date:	4-23-19

Comments: RAES (Tetrach)
home 2 suites parking lot, back of SUV

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG-Jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
10 July 18	0554	6.1	1004	99	55423	5692	49731	JY	
07/10/18	19:20	5.7	1000	98	53736	5695	48041	TE	
07/11/18	05:27	5.7	1003	98	54218	5976	48242	TE	
11 July 18	1904	5.5	1000	98	52666	5876	46820	JY	
07/12/18	05:30	5.5	1004	99	55608	6100 <del>TE</del>	49505	TE	BKG counts: 6103
12 July 18	1815	5.5	1002	99	54576	5880	48696	JY	
07/13/18	0545	5.5	1003	99	55801	5968	49833	BE	
		5.4	1003	99					BE
07/13/18	1432	5.4	1000	99	52599	6242	46357	DE	
07/14/18	05:24	5.5	1003	99	55304	5795	49509	TE	
07/14/18	1542	5.3	1002	98	54271	6577	47694	BE	
15 July 19	0512	5.3	1004	98	53324	5696	48228	JY	

Reviewed by: Peter Harker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 320 678
Cal. Due Date:	4-23-19

Comments: RAE S (Tetratech)
home 2 suites parking lot
back of SUV

Source: C5137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: 1 cpm/emissions

Source Date: 1-22-18

Distance to Source: ERG-Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
07/15/18	1716	5.3	999	98	53594	6162	47432	BE	Net: 47432
07/16/18	04:28	5.2	1002	98	55906	5972	49934	TE	
07/16/18	1703							BE	D: not use
17 July 18	0455	5.3	1003	98	54634	5724	48910	JN	
07/17/18	1727	5.2	999	98	54702	5854	48848	BE	

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Inclum
Model:	2221
Serial No.:	176947
Cal. Due Date:	04-23-19

DETECTOR	
Manufacturer:	Inclum
Model:	44-10
Serial No.:	PR 320 678
Cal. Due Date:	04-23-19

Comments:
RAES
home 2 miles parking lot
back of SUV

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-12-18	0540	5.3	998	100	52492	6562	45930	BE	did not use today
08-13-18	0549	5.3	997	100	54352	6952	47400	BE	did not use
08-14-18	0446	5.3	995	99	53918	6728	47190	BE	
08-14-18	0708	5.1	990	99	54258	6705	47553	BE	changed batteries
08-15-18	0448	6.1	994	99	54956	6832	48124	BE	adjusted HV to 1000
08-15-18	0710	5.7	996	100	55224	6496	48728	BE	
08-16-18	0451	5.8	1000	100	54575	6666	47909	BE	
08-16-18	1753	5.6	998	99		6912		BE	missing source count, NR
08-17-18	0453	5.6	1001	99	53659	6510	47149	BE	did not use
08-18-18	0446	5.6	1001	99	54698	6321	48377	BE	
08-18-18	1818	5.4	998	99	53444	7640	47004	BE	
08-19-18	0656	5.4	1002	99	55381	7251	48130	BE	

Reviewed by: Peter Weber

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Judlum
Model:	2221
Serial No.:	170947
Cal. Due Date:	04-23-19

DETECTOR	
Manufacturer:	Judlum
Model:	44-10
Serial No.:	PR32067B
Cal. Due Date:	04-23-19

Comments:
RAES
home 2 suites parking lot
back of SUV

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
1920	08-19-18	5.4	997	99	54223	6651	47572	BE	
08-20-18	0545	5.4	1002	99	55441	7306	48135	BE	
08-20-18	0835	5.3	995	98	55015	7179	47836	BE	
08-21-18	0445	5.4	1001	99	55249	7048	48196	BE	did not use

Reviewed by: *Patricia Johnson* Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Inclum
Model:	7221
Serial No.:	176947
Cal. Due Date:	04-23-19

DETECTOR	
Manufacturer:	Inclum
Model:	44-10
Serial No.:	PR320678
Cal. Due Date:	04-23-19

Comments:
RAES

Source: C5-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: - cpm/emissions

Source Date: 01-22-18 Distance to Source: ERG site

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-11-18	0444	5.4	1002	99	52963	6795	46168	BE	lid not use
9-12-18	0450	5.4	1003	99	53155	7118	46037	BE	
9-12-18	1735	5.2	998	99	52434	6521	45913	BE	
9-13-18	0450	5.2	1002	99	53519	7129	46390	BE	
9-13-18	1752	5.2	998	99	52939	7093	45846	BE	
9-14-18	0455	5.2	1002	99	53838	7750	46088	BE	lid not use
9-15-18	0459	5.2	1002	99	52596	6965	45631	BE	
9-15-18	1927	5.0	997	99	54023	6578	47445	BE	chg. batteries
9-16-18	0453	6.1	1001	99	53757	7230	46527	BE	
9-16-18	1918	5.7	998	99	53284	6712	46572	BE	
9-17-18	0440	5.7	1002	99	55173	7395	47778	BE	
9-17-18	1907	5.5	998	99	52868	6418	46450	BE	

Reviewed by: Peter Hoban

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	176947
Cal. Due Date:	04-23-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR320678
Cal. Due Date:	04-23-19

Comments:
RAES

Source: Cs-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: — cpm/emissions

Source Date: 01-22-78

Distance to Source: ERG Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
7-18-18	0445	5.6	1002	99	54819	7108	47711	RS	

Reviewed by: Peter Weber

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	176947
Cal. Due Date:	4-23-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR320678
Cal. Due Date:	4-23-17

Comments:
RAES

Source: CS177 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-25-18	0459	5.6	1003	100	53217	7166	46053	BE	
9-25-18	1840	5.4	1000	100	54012	7173	46839	BE	
9-26-18	0510	5.4	1004	100	53071	7367	45704	BE	
9-26-18	1920	5.3	1001	100	53274	6599	46675	BE	
9-27-18	0506	5.3	1005	100	53727	7927	<del>4800</del> 45800	BE	45800 NET
9-27-18	1930	5.2	999	99	53278	6787	46491	BE	
9-28-18	0522	5.2	1005	100	54724	7375	47349	BE	
9-28-18	1925	5.1	996	99	51793	6739	45054	BE	
9-28-18	0525	6.0	1004	100	52985	7439	45546	BE	
9-29-18	1400	5.6	1000	100	53621	6396	47225	BE	
9-30-18	0530	5.7	1004	100	53732	7218	46514	BE	
9-30-18	1837	5.7	1000	100	52807	7266	45541	BE	

Reviewed by: Peter Weber

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

141



METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	108859
Cal. Due Date:	09-04-19

DETECTOR	
Manufacturer:	Indium
Model:	44-2
Serial No.:	PR363532
Cal. Due Date:	09-04-19

Comments:
RAES
QC <sup>BE</sup>
10 initial counts

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

900

Date	Time	Battery	High Voltage	Threshold	Source Counts	ERG Counts	Net Counts	Initials	Note(s):
9-10-18	1652	5.8	900	100	9819	1293	8526	RE	
					9470	1357	8113		
					9769	1408	8361		
					9633	1435	8198		
					9564	1356	8208		
					9514	1384	8130		
					9615	1451	8164		
					9489	1395	8094		
					9705	1424	8281		
					9655	1471	8184	RE	

Reviewed by: Patrick Kamber

Review Date: 6/5/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-0234

1x1

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	108859
Cal. Due Date:	09-04-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-2
Serial No.:	PR 363532
Cal. Due Date:	09-04-19

Comments:
RAES

Source: Cs-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-11-18	0447	5.8	904	100	9676 -531	1406	8270	BE	did not use

Reviewed by: Patricia Kuhn

Review Date: 6/5/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

2+2

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	108859
Cal. Due Date:	09-05-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR355764
Cal. Due Date:	09-05-19

Comments:
RAES
QC - initial 10
counts

Source: Cs 137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: 1050 cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-10-18	1544	5.8	1047	100	50290	6186	44104	BE	
					50655	6067	44588	BE	
					51036	6207	44879	BE	
					50938	6391	44547		
					50341	6100	44241		
					51604	6164	45440		
					51066	6206	44860		
					50930	6189	44741		
					50891	6192	44699		
					50766	6114	44652	BE	

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log

Green  
 Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	Ludlum <sup>TE</sup> 222L
Serial No.:	282966
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR-355769
Cal. Due Date:	3-14-19

Comments:	RAES (AZ) QC location: Home 2 Suites parking lot (Farmington, NM)

Source: Cs-137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: na cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
4-24-2018	04:25	5.7	804	100	54886	8197	46689	TE	
					53591	8269	45322	TE	
					56337	8552	47785	TE	
					56606	8719	47887	TE	
					56266	8787	47479	TE	
					55827	8505	47322	TE	
					56781	8520	48261	TE	
					55370	8374	46996	TE	
					54813	8502	46311	TE	
					56053	8404	47649	TE	
4-24-2018	19:21	5.6	799	100	54804	6353	48451	BE	Hampton Inn & suites parking lot
<del>04-24-2018</del>					<del>04-25-2018</del>				

Reviewed by: Patricia Williams

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	282966
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	RR 355769
Cal. Due Date:	3-14-19

Comments: RAES project
QC location: Parking lot of Hampton Inn & Suites

Source: C5137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
04-25-2018	05:50	5.6	804	101	53811	6213	✓47598	RB	hampton inn suites
4-25-18	17:48	5.5	800	100	53432	7348	✓46084	TE	function check @ home 2 suites parking lot.
4-26-18	06:06	6.3	800	101	<del>58793</del>	7732	✓46830	TE	" "
					TE 54562				
4-26-18	2004	6.0	794	100	54345	6482	47863	RB	
4-27-18	605	6.0	799	100	55189	6715	48474	RB	
4-27-18	18:49	5.9	793	100	6561	→53361	46800	TE	
4-28-18	05:41	5.9	800	100	<del>53790</del>	<del>7207</del>		TE	
					↳ 58390	7207	49183	TE	
4-28-18	14:00	5.9	796	100	54074	8145	45929	RB	windy, light rain
4-29-18	06:15	5.9	800	100	56897	7181	49716	TE	
04/29/18 <sup>TE</sup>	1630	5.8	796	100	52743	6696	46047	RB	Sunny, warm

Reviewed by: Peter Anker

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Radlum
Model:	2221
Serial No.:	28266
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Radlum
Model:	44-10
Serial No.:	PK 355769
Cal. Due Date:	3-14-19

Comments:
RAES
home 2 sites
parking lot

Source: C137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
4/30/18	602	5.6	799	100	53472	625	47247	BB	
04/30/18	1717	5.7	795	100	53819	7101	46718	BB	slight wind

Reviewed by: Patricia [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Wellum
Model:	2221
Serial No.:	282966
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Wellum
Model:	44-10
Serial No.:	PR 355769
Cal. Due Date:	3-14-19

Comments: Tetratech (RAES)
Parking lot of Towne Suites
Farmington NM

Source: Cs-137      Activity: 4-30 uCi      Source Date: 1-22-18      Distance to Source: ERG - Tij  
 Serial No.: 72      Emission Rate:        cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
May 06-18	17:06	5.7	797	1.00	52957	7079	45878	TE	
↓	↓	↓	↓	↓	53352	6969	46383	TE	
↓	↓	↓	↓	↓	53668	7170	46498	TE	
↓	↓	↓	↓	↓	53580	7246	46334	TE	
↓	↓	↓	↓	↓	53873	7078	46795	TE	
↓	↓	↓	↓	↓	54085	6743	47342	TE	
↓	↓	↓	↓	↓	53913	7245	46068	TE	
↓	↓	↓	↓	↓	53527	6915	46612	TE	
↓	↓	↓	↓	↓	52922	6684	46238	TE	
↓	↓	↓	↓	↓	53299	6902	46397	TE	
<hr/>									
TE									

Reviewed by: Patricia Huber

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	282966
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355769
Cal. Due Date:	3-14-19

Comments: RAES (Tetrach)
Function checks conducted at Townesuites hotel Farmington, NM at lower parking lot.

Source: Cs-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/07/18	05:23	5.3	800	100	52885	7837	45048	TE	Changed batteries
05/07/18	18:37	5.6	796	100	52442	7143	45249	TE	
05/08/18	05:25	5.6	800	100	53317	7464	45853	TE	
05/08/18	18:53	5.6	793	100	53060	7246	45814	TE	
05/09/18	06:03	5.6	800	100	54603	7142	47461	TE	
05/09/18									didn't use today
05/10/18	06:07	5.6	800	100	53538	7918 <sup>TE</sup>	45621	TE	
05/10/18	19:05	5.6	794	100	53789	6339	47450	TE	
05/11/18	05:50	5.6	799	100	51709	6687	45022	TE	
05/11/18									didn't use today
05/12/18	06:26	5.6	799	100	53126	6881	46245	TE	
05/12/18	19:20							TE	didn't use today

Reviewed by: Peter Walker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	282966
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 355769
Cal. Due Date:	3-14-19

Comments: RAES (Tetratech) Function checks conducted at Towne Suites hotel Farmington, NM at lower parking lot
---

Source: Cs-137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: ERG-Jig  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/13/18	05:43	5.6	799	100	52974	6543	46431	TE	Window in/out broken
05/13/18	18:20	5.5	795	100	52265	6773	45492	TE	
05/14/18	06:02	5.6	802	101	54184	8235	<del>45859</del>	TE	cold morning NET: 45947
05/14/18	18:04	5.5	795	100	55137	6446	48691	TE	

QC check  
08-29-18

Reviewed by: [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Green

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	282966
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355769
Cal. Due Date:	3-14-19

Comments: RAES (Tetratech)
Function checks locations:

Source: \_\_\_\_\_ Activity: \_\_\_\_\_ uCi Source Date: \_\_\_\_\_ Distance to Source: ERG Rig  
 Serial No.: \_\_\_\_\_ Emission Rate: \_\_\_\_\_ cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/21/18	05:33	_____	_____	_____	_____	_____	_____	TE	Equipment in service, no there today
05/22/18	05:15	_____	_____	_____	_____	_____	_____	TE	Equipment in service, may get swapped.

Reviewed by: Peter H...

Review Date: 6/6/19

\* Meter had to be sent back to Manufacturer's for repair of the control pannel. New equipment (Meter & detector) were brought to the field by Neil. New equipment was assigned color green.



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

new green

#2

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	103984
Cal. Due Date:	5-21-18 <sup>RE</sup> 19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR373554
Cal. Due Date:	5-21-18 <sup>RE</sup> 19

Comments:
RAES
10 initial count, function checks
location: Parking lot of House 2 Suite hotel on Farmington, NM

Source: 137Cs Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG JIS  
 Serial No.: 72 Emission Rate: N/A cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/22/18	1939	5.6	900	99	52836	7223	45613	NW	Per initial QC counts
					53287	7468	<del>46359</del> <sup>ISE</sup>	NW	NET: 45819 QC check 08-29-18
					62770	7465	45305	NW	
					52492	7234	45258	NW	
					52199	7076	<del>450433</del>	NW	NET: 45123 QC check 08-29-18
					52009	7302	44707	NW	
					51817	7324	44493	NW	
					51604	7178	44426	NW	
					51956	7320	<del>44204</del>	NW	NET: 44636 QC check 08-29-18
					51956 <sup>ok</sup>	7163	44793	NW	
05/23/18	0512	5.6	909	101	53546	<del>5708</del> <sup>6375</sup>	47171	NW	6375 BKG
05/23/18									BE did not use

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

NEW Green #2

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	282966 BE 103984
Cal. Due Date:	3-14-19 BE 5-21-18 TE 19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355769 BE PR373554
Cal. Due Date:	3-14-19 BE 5-21-18 TE 19

Comments:	RAES (Tetratede)
Function checks location:	Home 2 suites parking lot, back of SUV

Source: CS 137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: jig  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
5/24/18	0600	5.6	900	99	54496	7604	46892	BE	
05/25/18	0555	5.6	905	102	52950	6135	46815	NW	
05/25/18	1752			DiD	Not used			NW	
05/26/18	0550	5.6	905	98	53085	6146	46939	NW	
05/26/18									BE did not use

Reviewed by: Patricia Hernandez      Review Date: 6/6/19





# Single-Channel Function Check Log



Green

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	103984
Cal. Due Date:	5/21/19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR373554
Cal. Due Date:	5/21/19

Comments: RAES (Tetratech)
Function checks Location: home 2 miles back of Tahoe Sav

Source: CS-137

Activity: 4-30 uCi

Source Date: 01/22/18

Distance to Source: ERG Jig

Serial No.: 72

Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	05:42	5.3	803	101	53629	5416	48213	TE	Changed Batteries
06/04/18	18:35	6.0	793	100	52500	5616	46884	BE	
06/05/18	05:46	6.0	797	100	54216	6384	47832	BE	
06/05/18	18:22	5.8	793	100	51916	5510	46406	TE	
06/06/18	05:31	5.6	798	103	54893	6088	48805	TE	
06/06/18	19:16	5.6	796	102	52929	5005	47924	BE	
06/08/18	05:57	5.7	799	103	54789	5001	49788	BE	no fieldwork 6-7-18
06/08/18	18:37							TE	not used today
06/09/18	05:25	5.4	803	107	54850	5915	48935	TE	
06/09/18									BE did not use
06/10/18	05:58	5.7	796	100	54044	4891	49153	BE	
06/10/18	18:27							TE	didn't use today

Reviewed by:

Patricia Walker

Review Date:

6/6/19



# Single-Channel Function Check Log



Green

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	103984
Cal. Due Date:	5/21/19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 373 554
Cal. Due Date:	5/21/19

Comments: RAES (Tetra tech)
Function checks Location:

Source: Cs-137  
Serial No.: 72

Activity: 4-30 uCi  
Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG Trig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:08	5.4	797	103	54124	5777	48347	TE	
06/12/18									ERG did not use

Reviewed by: Peter Hansen

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
4809 Washington St. NE, Suite 190  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	103984
Cal. Due Date:	5/21/19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 373554
Cal. Due Date:	5/21/19

Comments: RAES (Tetratex)
Function checks location:

Source: C5137 Activity: 9.30 uCi Source Date: 1-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-18-18	0553	5.7	801	104	54019	4642	49377	BE	
6-18-18	1917				did not use			NW	
6-19-18	0540	5.8	801	103	53532	6221	47315	BE	
06-19-18	1846	5.7	797	104	50925	5978	44947	BE	
06-20-18	0546	5.7	805	108	54010	5575	48435	BE	
06-21-18	0556	5.7	802	105	52120	6373	45747	BE	cool morning BE did not use
6-21-18									
6-22-18	0545	5.7	802	102	54508	6439	48069	BE	
6-22-18	1834	5.5	794	98	49938	5754	44184	JY	
6-23-18	0544	5.6	799	101	53074	6183	46891	BE	
6-23-18	1914	5.6	800	103	50719	5210	45509	JM	

Reviewed by: Peter Walker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	103984
Cal. Due Date:	5/21/19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 373554
Cal. Due Date:	5/21/19

Comments:	RAES (Tetrattech)
Function checks location:	

Source: CS 137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: ERG jig  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-24-18	0550	5.6	803	103	53601	5742	47859	BE	
6-24-18	2039	5.6	803	107	51052	4631	46421	BE	
6-25-18	0551	5.6	810	108	53516	6005	47513	BE	
6-25-18	1814	5.6	824	126	54996	5160	49836	BE	

Reviewed by: Peter Fisher      Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
9809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Area # 3



METER	
Manufacturer:	Cindlum
Model:	2221
Serial No.:	108853
Cal. Due Date:	07-12-19

DETECTOR	
Manufacturer:	Cindlum
Model:	44-10
Serial No.:	PR 295015
Cal. Due Date:	07-12-19

Comments:
RAES
purple qc check.
home 2 suits parking lot
back of SUV

Source: Cs 137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):	
07-12-18	1955	5.6	1148	100	56816	7609	49807	BE	raining day, overcast/dark	
	1956				56792	8281	48511	BE		
	1957				56489	8315	48174	BE		
	1958				55697	8029	47668	BE		
	1959				56731	8068	48663	BE		
	2000				56032	8156	47876	BE		
	2001				55725	8189	47536	BE		
	2002				56388	7979	48409	BE		BG: 7979
	2003				56965	7999	48966	BE		
	2005				55704	8086	47618	BE		
	2007				56764	8108	48656	BE		

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



New Green # 3

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	108853
Cal. Due Date:	07-12-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR295015
Cal. Due Date:	07-12-19

Comments:	RAES

Source: CS 137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG jig  
 Serial No.: 72      Emission Rate:        cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
07/13/18	0556	5.5	<del>1152</del> 1052	101	55951	5734	50217	BE	
07/13/18	1423								BE
07/14/18	05:27	5.6	1052	100	55528	5339	50189	TE	HV: 1152
07/14/18	1537					<del>5006</del>			BE did not use
15 July 18	0507	5.6	1175	127	53749	5006	48743	JH	
07/15/18	1714								BE did not use
07/16/18	04:28							TE	Aaron has this detector
17 July 18	0500	5.7	1252	210	54003	5563	48440	JH	
07/17/18	1727							BE	did not use

Reviewed by: Patricia Hester

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	254757
Cal. Due Date:	08-09-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR295015
Cal. Due Date:	08-09-19

Comments:
RAES
QC check.
home 2 suites parking lot back of SUV.

Source: CS-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

cal: 1150V

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
08-11-18	15:20	5.6	1148	101	53234	6980	53234	BE	NET: 46254
					51556	6707	51556		NET 44849
					52780	6755	46025		
					52560	6464	46096		
					53341	6600	46741		
					52791	6536	46255		
					53433	6307	47126		
					52965	6917	46048		
					53001	6493	46508		
					53137	6548	46589		
						avg:	46249	±	4625 10%
						net		±	9250 20%

Reviewed by: Peters Holman

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	254757
Cal. Due Date:	08-09-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR 295015
Cal. Due Date:	08-09-19

Comments:
RATES
home 2 miles parking lot
back of SUV

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG dig  
 Serial No.: 72 Emission Rate: — cpm/emissions

cal: 1150

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
08-12-18	0537	5.6	1149	100	53447	6340	4707	BE	
08-12-18	1057	5.5	1145	101	54185	BE 5923	48262	BE	
08-13-18	0445	5.6	1150	101	52780	6568	46212	BE	did not use
08-14-18	0444	5.6	1150	102	54185	6278	47907	BE	did not use
08-15-18	0445	5.6	1149	101	53593	6519	47074	BE	
08-15-18	1707	5.5	1148	101	53661	6047	47114	BE	
08-16-18	0449	5.5	1150	102	52803	6523	46280	BE	
08-16-18	1756	5.4	1147	102	53191	6312	46879	BE	
08-17-18	0450	5.4	1150	102	53352	6103	47249	BE	
08-17-18	1140	5.2	1148	102	54345	5937	48408	BE	change batteries.
08-18-18	0446	6.2	1150	102	53477	6587	46890	BE	
08-18-18	1502	5.3	1147	102	53778	6372	47546	BE	

Reviewed by: Peter Hahn

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	254757
Cal. Due Date:	08-09-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR 295015
Cal. Due Date:	08-09-19

Comments:
RAES
home 2 suites parking lot
bank of SUV

Source: CS-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-19-18	0656	5.8	1154	104	55100	6705	48395	BE	→ green mal functioning
08-20-18	0645	—	—	—	—	—	—	BE	Removed from service

Reviewed by: Petera K... Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
4809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4234



METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	202973
Cal. Due Date:	08-30-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR 295015
Cal. Due Date:	08-30-19

Comments:
RAES
QC-10 initial counts

Source: CS-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG jig

1150

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-10-18	1544	5.9	1148	100	51943	45615	6328	BE	
					52008	6197	45811		
					51980	6210	45770		
					51804	6306	45498		
					52234	6324	45910		
					51576	6146	45430		
					52312	6321	45991		
					52346	6237	46109		
					51354	6204	45150		
					52232	6054	46178	BE	

Reviewed by: Patricia Anderson

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	7221
Serial No.:	282973
Cal. Due Date:	08-30-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR 295015
Cal. Due Date:	08-30-19

Comments:
RAES

Source: CS-137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG jiq  
 Serial No.: 72      Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage BE	Threshold BE	Source Counts	BKG Counts	Net Counts	Initials	Notes(s)
9-11-18	0443	5.8	5.8 1051	102	51962	6957	45005	BE	did not use
9-12-18	0450	5.8	1052	102	52455	6443	46012	BE	did not use
9-13-18	0450	5.8	1053	103	54667	7200	47467	BE	did not use
9-14-18	0455	5.8	1154	103	53370	6698	46672	BE	did not use
9-15-18	0453	5.6	1152	104	53685	6846	46839	BE	
9-15-18	1926	5.5	1045	102	51452	6360	45092	BE	
9-16-18	0450	5.5	1151	103	53267	6907	46360	BE	
9-16-18	1717	5.4	1147	102	53518	7018	46500	BE	
9-17-18	0440	5.5	1052	102	53932	7860	46072	BE	
9-17-18	1907	5.5	1145	102	53052	6233	46819	BE	
9-18-18	0445	5.5	1152	103	53824	7108	46716	BE	did not use

Reviewed by: Peter Horn

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
2809 Washington St. NE, Suite 130  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Inelium
Model:	2221
Serial No.:	282973
Cal. Due Date:	08-30-19

DETECTOR	
Manufacturer:	Inelium
Model:	44-10
Serial No.:	PR 295015
Cal. Due Date:	08-30-19

Comments:
RAES

Source: CS-137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG jiff  
 Serial No.: 72      Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-25-18	0458	5.5	1155	102	52286	6377	45909	BE	
9-25-18	1839	5.3	1050	99	54286	6505	47781	BE	
9-26-18	0510	5.4	1155	100	54430	6670	47760	BE	
9-26-18	1920	5.2	1150	100	52568	6043	46525	BE	
9-27-18	0509	5.2	1157	100	52815	7112	45703	BE	did not use
9-28-18	0522	5.3	1157	109	52312	7122	45190	BE	
9-28-18	1925	5.2	1048	100	53565	6957	46608	BE	
9-29-18	0525	5.1	1057	101	5484	7748	46786	BE	chg. batteries
9-29-18	1859	5.8	1149	99	52256	6352	45904	BE	
09-30-18	0530	5.8	1155	100	53305	7491	45814	BE	
9-30-18	0830	5.6	1148	99	53264	6290	46968	BE	

Reviewed by: [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

*purple*  
 Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	282960
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 295 012
Cal. Due Date:	3-13-19

Comments:	RAES (AZ)
	QC location: Home2suities parking lot. (Farmington, NM)

Source: Cs-137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: na cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
04-24-2018	04:30	5.5	1055	100	57073	9464	47609	TE	
					57156	9389	47767	TE	
					57658	9124	48534	TE	
					56128	9690	46438	TE	
					56295	9638	46657	TE	
					55924	10113	45811	TE	
					57381	9051	48330	TE	
					57281	9319	47962	TE	
					56090	9003	47087	TE	
					56183	9569	46614	TE	
4-24-2018	19:28	5.4	1048	100	54591	7816	46775	BE	hampton inc + suites parking lot

Reviewed by: Peter Hahn

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

RAES

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	282960
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Indium
Model:	4410
Serial No.:	PR295012
Cal. Due Date:	3-13-19

Comments: Tetratech (RAES)

Source: C-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: NA cpm/emissions

Source Date: 1/22/18

Distance to Source: 1/2

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
4-25-18	5:54	5.4	1054	101	55305	7277	48088	BE	base 25 hampton in 45 minutes
4-25-18	17:48	5.2	1049	100	57810	7699	50111	TE	Home 2 suites hotel parking lot.
4-26-18	05:55	5.4	1050	100	58793	8915	49878	TE	Home 2 suites hotel parking lot
4-26-18	20:01	6.0	1042	100	55458	7126	48332	BE	
4-27-18	6:05	6.0	1050	101	55772	8113	47654	BE	
4-27-18	18:50	5.8	1042	100	57455	6929	50526	TE	
4-28-18	05:40	5.9	1050	100	57182	8130	49052	TE	
4-28-18	14:11	5.0	1046	100	56280	7756	48524	BE	rain (lightly), windy
4-29-18	<del>TAKEN OUT OF ORDER ON 04/29/18</del>								

Reviewed by: Peter Haver

Review Date: 6/6/19



# Single-Channel Function Check Log

Blue

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2222
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR321856
Cal. Due Date:	3-13-19

Comments: RAES
Location: Home 2 suites parking lot (Farmington, NM)

Source: Cs-137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: na cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
4-24-2018	04:25	5.9	1053	100	55386	7060	48326	TE	
					55428	7325	48103	TE	
					55162	7262	47899	TE	
					53864	7306	46558	TE	
					55910	7387	48523	TE	
					56246	7324	48832	TE	
					55651	7202	48449	TE	
					56032	7418	48614	TE	
					55297	7374	47923	TE	
					55797	7555	48242	TE	
4-24-18	19:24	5.8	1046	100	52654	5974	46680	BE	Humphreys + Swifts parking lot

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

RAES

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR 321856
Cal. Due Date:	3-13-19

Comments:

Source: C-137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: 100  
 Serial No.: 72 Emission Rate: NA cpm/emissions

BE  
we  
my  
not

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
<del>5-25-18</del>	<del>5:56</del>	<del>5.6</del>	<del>1049</del>	<del>99</del>					<del>hampton</del>
5-25-18	6:00	5.6	1052	100	52671	6703	45968	TE	hampton inn + suites parking lot
5-25-18	17:46	5.6	1048	100	51713	6643	45070	TE	Function check @ Home 2 Suites parking lot
<del>5-25-18</del>		<del>5.3</del>	<del>1049</del>	<del>100</del>	<del>TE</del>				
4-26-18	06:10	5.7	1050	100	52413	7125	45288	TE	Parking lot of Home 2 Suites
4-26-18	19:56	5.5	1043	100	53180	6482	46692	BE	" back of store
4-27-18	6:04	5.6	1049	101	51324	6643	44636	BE	
4-27-18	18:57							TE	Not used today
4-28-18	05:39	5.6	1050	100	54653	7353	47300	TE	
4-28-18	14:20	5.5	1046	100	52907	7592	45315	BE	windy, light rain
4-29-18	06:10	5.6	1051	100	54297	5453	47830	TE	Bkg counts = 6467
04/29/18 <sup>TE</sup>	16:27	5.5	1045	100	52693	5908	46785	BE	Sunny, warm

Reviewed by: Peter Hader

Review Date: 6/6/19

\* ✓ = it is within +/- 10%





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



RAES

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Iudlum
Model:	4410
Serial No.:	PR 321851
Cal. Due Date:	3-13-19

Comments:

Source: Cs137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: Jig  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
4-30-18	600	5.6	1050	100	51560	6252	45308	REB	
04/30/18 RE									RE default use

Reviewed by: Peter Hahn

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

RAE S

METER	
Manufacturer:	Ludlum
Model:	222
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	P6321856
Cal. Due Date:	3-13-19

Comments:
towne place back (lower)
parking lot
back of SUV

Source: C-137  
 Serial No.: 72

Activity: 4.50 uCi  
 Emission Rate: NA cpm/emissions

Source Date: 1-22-18

Distance to Source: jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
<del>5-6-18</del>	1710	5.4	1047	100	50621	6382	44239	BE	
5-6-18					51919	6496	46423	BE	
					51261	6448	44813	BE	
					51286	6586	44700	BE	
					52052	6509	45543	BE	
					51468	6356	45112	BE	
					51521	6398	45183	BE	
					50872	6238	44634	BE	
					51641	6365	45276	BE	
					50753	6484	44269	BE	
	TE		TE			TE			TE

Reviewed by: Peter Hsu

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 321856
Cal. Due Date:	3-13-19

Comments: RAES (Tetrach)
Function checks conducted at Towne Suites hotel Farmington, NM lower parking lot.

Source: Cs-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/07/18	05:26	6.3	1051	100	52230	6826	45404	TE	changed batteries
05/07/18	18:35	6.0	1045	100	51265	6330	44935	TE	
05/08/18	05:25	6.0	1052	100	51722	6786	44936	TE	
05/08/18	18:48	5.8	1042	100	51727	6543	45184	TE	
05/09/18	06:01	5.8	1050	100	51457	6651	44806	TE	
05/09/18									didn't use today
05/10/18	06:06	5.8	1050	100	52911	6972	45939	TE	
05/10/18	19:05	5.6	1043	100	54423	5836	48587	TE	
05/11/18	05:50	5.6	1049	100	52251	5983	46268	TE	
05/11/18	18:45	5.5	1045	100	51959	6180	45779	TE	
05/12/18	06:24	5.6	1050	100	52122	6306	45816	TE	
05/12/18	17:20	5.5	1046	100	52926	6527	46399	TE	

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 321856
Cal. Due Date:	3-13-19

Comments: RAES (Tetratex)  
Function checks conducted at  
Towne Suites hotel Farmington NM  
in lower parking lot.

Source: C5-137 Activity: 4-30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/13/18	05:43	5.6	1050	100	51801	6360	45441	TE	
05/13/18									didn't use today
05/14/18	06:02	5.6	1052	100	53996	7333	46663	TE	cold mornig
05/14/18	18:04	5.5	1044	100	52230	5700	46530	TE	

Reviewed by: Peter Wang

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

Blue

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 321056
Cal. Due Date:	3-13-19

Comments: RAES (Tetrattech)
Function checks location: Parking lot of Home2 Suites Hotel in Farmington, NM

Source: C5-137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: ERG-Jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/21/18	05:33	5.4	1050	100	51454	6786	44668	TE	Changed batteries
05/21/18	18:50	6.0	1045	100	49898	5980	43918	TE	Windy (gusts)
<del>05/22/18</del>	<del>04:50</del>	<del>5.8</del>	<del>1051</del>	<del>100</del>	<del>53401</del>	<del>5542</del>	<del>47859</del>	<del>TE</del>	<del>Bad cable (look @ Tatus notes)</del>
05/22/18	05:10	5.9	1050	100	52046	7185	44861	TE	
05/22/18	1925	5.7	1046	100	50074	5661	44413	NW	
05/23/18	0512	5.8	1052	100	51218	6324	44894		
05/23/18									DE did not use
5/24/18	8:03	5.7	1051	100	53283	6876	46407	DE	
5/24/18	1632				did not use			NW	
05/25/18	0555	5.6	1051	100	50884	6359	44525	NW	
05/25/18	1752				did not use			NW	
05/26/18	0550	5.8	1052	101	51810	6733	45077		

05/26/18  
 Reviewed by: Peter Walker

Review Date: 6/6/19



# Single-Channel Function Check Log



METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR321856
Cal. Due Date:	3-13-19

Comments: RAES (Tetratech)
Function Checks location: home 2 mi. N parking lot back of SUV (T400)

Source: Cs-137 Activity: 4.30 uCi Source Date: 01/22/2018 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate:        cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
06/04/18	05:42	6.0	1050	100	54296	5351	48945	TE	Changed batteries
06/04/18	18:35	5.8	1042	99	53449	5670	47779	BE	
06/05/18	0548	5.9	1051	100	52736	6253	46483	BE	
06/05/18	18:29							TE	Didn't use today
06/06/18	05:31	5.7	1049	100	56 <sup>TE</sup> 54679	5956	48723	TE	
06/06/18	19:15	5.7	1044	100	53918	4937	48981	BE	
06/07/18	0655	5.7	1049	100	55204	5372	49832	BE	no field work 6-7-18
06/08/18	18:36							TE	Not used today
06/09/18	05:25	5.5	1049	100	55788	6484	49304	TE	
06/09/18	18:35	5.6	1042	100	51679	4287	47392	BE	
06/10/18	0558	5.7	1048	100	53036	4487	48549	BE	
06/10/18	18:27							TE	Didn't use today

Reviewed by: Peter H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Blue

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 321056
Cal. Due Date:	3-13-19

Comments: RAES (Tetratech)
Function checks location:

Source: CS-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG-Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:08	5.4	1049	100	53033	5739	47294	TE	
06/12/18	07:37	5.6	1050	100	53266	5902	47364	BE	

Reviewed by: Peter Hoken

Review Date: 6/6/19



# Single-Channel Function Check Log

Blue  
 Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 871 13  
 (505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR321856
Cal. Due Date:	3-13-19

Comments: RAES (Tetra Tech)
Function Checks location:

Source: C5137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG jij  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-18-18	0554	5.6	1051	100	53723	4942	48781	BE	
6-18-18	1920	5.5	1045	100	52466	5833	46833	NU	
6-19-18	0545	5.3	1050	100	53716	6143	47573	BE	
6-19-18	1846	5.4	1044	100	52252	6623	45629	BE	
6-20-18	0547	5.4	1050	100	53290	5867	47423	BE	
6-21-18	0554	5.5	1051	100	53259	6061	47198	BE	col morning
6-21-18	1828	5.3	1041	100	50733	5223	45510	SN	
6-22-18	0543	5.4	1050	100	54730	1048	48082	BE	
6-22-18	1840	5.2	1044	100	51828	5330	46498	SN	
6-23-18	0546	5.3	1051	101	54448	5698	48750	BE	
6-23-18	1908	5.2	1044	100	52969	4497	48472	SN	

Reviewed by: Patricia Walker

Review Date: 6/6/19





# Single-Channel Function Check Log



METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR321856
Cal. Due Date:	3-13-19

Comments: RAES (TetraTech)
Function Checks location:

Source: CS137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: NA cpm/emissions

Source Date: 1-22-18

Distance to Source: erg jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06-24-18	0551	5.2	1050	100	53213	5645	47568	BE	
06-24-18	2040	5.2	1045	100	51742	4592	47150	31	06-24-18
6-25-18	0551	5.1	1051	100	53508	6558	46950	BE	time based on other for
6-25-18	1818	5.1	1042	100	51528	4460	47068	31	equipment check times on this date BE

Reviewed by: [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR321856
Cal. Due Date:	3-13-19

Comments: RAES (Tetratech)
Function Checks location: home 2 suites parking lot, back of SUV

Source: OS137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ER01jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
10 July 18	0556	6.2	1049	101	52995	5180	8 <sup>39</sup> 47815	JH	
07/10/18	19:20	5.8	1044	100	53213	5548	47665	TE	
07/11/18	05:27	5.8	1048	101	54228	5527	48701	TE	
11 July 18	1858	5.6	1045	100	52170	5370	46800	JH	
07/12/18	05:30	5.7	1050	100	54472	5611	48861	TE	
12 July 18	1810	5.6	1046	101	54324	5343	48981	JH	
07/13/18	0549	5.6	1048	101	53377	5699	47678	BE	
07/13/18	1431	5.5	1044	100	51621	5444	46177	BE	
07/14/18	05:27	5.6	1046	<del>1000</del> 100	53014	5536	47478	TE	
07/14/18	1541	5.5	1045	100	51401	5539	45862	BE	
15 July 18	0511	5.6	1048	101	51483	5331	46152	JH	
07/15/18	1715	5.4	1044	100	51309	5554	45755	BE	

Reviewed by: Peter J. H.

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR321856
Cal. Due Date:	3-13-19

Comments: RAES (Tetratex)  
Function Checks location:  
home 2 suites parking lot,  
back of SUV

Source: CS 137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
07/16/18	04:28	5.3	1046	100	54150	<del>57380</del>	48988	TE	BKG counts: 5162
07/16/18	1705	5.3	1044	100	51948	5810	46138	BE	
17 Jan 18	0458	5.4	1048	100	51129	5278	45851	JJ	
07/17/18	1527	5.3	1042	100	52538	5530	47008	BE	

Reviewed by: Peter Hobbs

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	222L
Serial No.:	271429
Cal. Due Date:	03-13-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR321056
Cal. Due Date:	03-13-19

Comments:
RAES
home25 miles parking lot
back of SW

Source: CS-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Cal: 1050V

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
08-12-18	0543	5.4	1049	100	52542	6273	46269	BE	
08-12-18	1858	5.2	1044	100	53282	5900	47382	BE	charged batteries, usually
08-13-18	0448	6.2	1049	100	52228	6465	45763	BE	
08-13-18	081350	6.0	1045	100	53590	6848	45742	BE	
08-14-18	0447	5.8	1049	100	52304	6369	45935	BE	
08-14-18	1707	5.8	1043	100	52396	6225	46171	BE	
08-15-18	0448	5.8	1048	100	52583	6701	45882	BE	did not use
08-16-18	0450	5.8	1049	100	52790	6761	46029	BE	
08-16-18	1752	5.6	1047	100	51620	6301	44959	BE	45319 NET 08-29-18
08-17-18	0453	5.6	1050	100	53379	6393	46986	BE	did not use
08-18-18	0446	5.6	1049	100	52122	6155	45967	BE	
08-18-18	1502	6.5	1049	100	54343	6453	47890	BE	

Reviewed by:

Peter Weber

Review Date:

6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Inclum
Model:	2221
Serial No.:	271429
Cal. Due Date:	03-13-19

DETECTOR	
Manufacturer:	Inclum
Model:	44-10
Serial No.:	PR 321856
Cal. Due Date:	03-13-19

Comments:
RAES
home 2 suites parking lot
back of SUV

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jia  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-19-18	0656	5.5	1051	100	52450	6414	46036	BE	
08-19-18	1922	5.4	1043	99	53670	5925	47745	BE	
08-20-18	0545	5.5	1051	100	54561	6529	48032	BE	
08-20-18	1035	5.4	1043	99	53338	6181	47157	BE	
08-21-18	0445	5.5	1048	100	52756	6404	46352	BE	
08-21-18	1614	5.5	1047	100	53997	6328	47669	BE	

Reviewed by: Peter H...

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	In dlu
Model:	2221
Serial No.:	271429
Cal. Due Date:	03-13-19

DETECTOR	
Manufacturer:	In dlu
Model:	44-10
Serial No.:	PR321856
Cal. Due Date:	03-13-19

Comments:
RAES

Source: CS-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: - cpm/emissions

Source Date: 01-22-18

Distance to Source: ERAJig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-11-18	0444	5.5	1050	100	52211	6604	45607	BE	did not use
9-12-18	0451	5.5	1051	100	53126	6898	46228	BE	
9-12-18	1737	5.3	1045	100	51136	5867	45269	BE	
9-13-18	0450	5.3	1051	100	51661	6680	44981	BE	
9-13-18	1752	5.2	1045	100	51680	6430	45250	BE	
9-14-18	0455	5.2	1052	100	51802	7113	44689	BE	did not use
9-15-18	0454	5.2	1050	100	52513	7067	45446	BE	did not use
9-16-18	0453	5.3	1050	100	52602	7133	45469	BE	did not use
9-17-18	0440	5.3	1050	101	52874	7354	45520	BE	did not use
9-18-18	0446	5.2	1051	100	52895	7717	45178	BE	

Reviewed by: *Peter H. M.*

Review Date: 6/6/19



# Single-Channel Function Check Log

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271429
Cal. Due Date:	03-13-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	FR 321856
Cal. Due Date:	03-13-19

Comments:
RAES

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-25-18	0456	5.3	1052	101	52290	7161	45129	BE	
9-25-18	1038	5.1	1048	100	53245	6311	46934	BE	chg. batteries
9-26-18	0508	6.2	1053	100	52233	7076	45157	BE	
9-26-18	1920	5.7	1049	100	51959	6322	45637	BE	
9-27-18	0508	5.8	1053	101	53149	7186	45963	BE	
9-27-18	1617	5.6	1046	100	53387	7034	46355	BE	
9-28-18	0622	5.7	1053	100	53481	8100	45381	BE	
9-28-18	1924					1108		BE	did not use
9-29-18	0625	5.7	1054	100	52489	6777	45710	BE	did not use
9-30-18	0530	5.8	1054	100	52892	7025	45867	BE	
9-30-18	1830	5.5	1048	100	50996	6245	44751	BE	BE

Reviewed by: Peter H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	<sup>BE</sup> Indium
Model:	44-10
Serial No.:	<sup>BE</sup> PR3E PR321856
Cal. Due Date:	3-13-19

Comments: RAES
QC checks
- home 2 suites
parking lot

Source: CS137 Activity: 4-23 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 99 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
12-9-18	1731	5.7	1055	100	59028	6411	52117	BE	
					58744	6968	51776	BE	
					59272	6977	52295	BE	
					58785	6902	51883	BE	
					58517	6939	51578	BE	
					58574	6846	51728	BE	
					58935	7025	51910	BE	
					60353	6895	53458	BE	
					59245	6912	52333	BE	
					59973	6818	53155	BE	

Reviewed by: Peter Rosen

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271429
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR321856
Cal. Due Date:	3-13-19

Comments:	RAES

Source: Cs-137      Activity: 4.23 uCi      Source Date: 1-22-18      Distance to Source: Jig  
 Serial No.: 99      Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
12-10-14	0500	S. B	1062	101	57023	6982	50041	BE	did not use
12-11-14	0600	S. 7	1062	101	<del>6060</del>	7227	51833	BE	
					BE				
					59120				

Reviewed by: Peter H...

Review Date: 6/6/19



# Single-Channel Function Check Log

*pink*  
*two color*

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	222L
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments:
QC Location: Parking lot of Hampton Inn & Suites Farmington, NM

Source: \_\_\_\_\_ Activity: \_\_\_\_\_ uCi Source Date: \_\_\_\_\_ Distance to Source: \_\_\_\_\_  
 Serial No.: \_\_\_\_\_ Emission Rate: \_\_\_\_\_ cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
04/24/2018	19:16	6.0	998	100	55563	<del>4866</del> <sup>TE</sup>			Source was close to detector
					55970	7100	48463	TE	
					<del>55970</del>	6949	49021	TE	
					55690	6775	48915	TE	
					54602	6814	47788	TE	
					54956	7085	47871	TE	
					55149	7167	47982	TE	
					55636	7090	48546	TE	
					55483	7046	48437	TE	
					55253	7048	48205	TE	
					55232	6996	48236	TE	

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2222
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES Project
QG Location: Parking lot Hampton Inn & Suites
Jan & Juito

Source: C5137 Activity: 4.30 uCi Source Date: 11/22/18 Distance to Source: 7ig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
04/25/2018	05:55	6.0	1001	100	53145	5598	47547	BE	hampton inn & suites
04/25/2018									Not used this day.
04/26/2018	06:15	6.3	1000	100	54629	7515	47114	TE	Parking lot Home 2 suites
4/26/18	1954							BE	didn't use today
4-27-18	607	6.2	1000	100	54313	6573	47745	BE	
4-27-18	18:54							TE	Not used today
4-28-18	05:39	6.2	999	100	53185	7398	45787	TE	
4-28-18	14:19	6.1	996	100	54315	7290	47017	BE	windy, light rain
4-29-18	06:15	6.4 <sup>TE</sup>	1000	100	53803	6552	47251	TE	
04/29/18 <sup>TE</sup>	1631	5.9	999	100	53072	6216	46856	BE	Sunny, warm

BE

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR 355860
Cal. Due Date:	3-14-19

Comments:
RAES
home 2 suites
parking lot

Source: C5137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
4/30/18	601	6.0	999	100	51902	6051	45851	BE	
04/30/18 <sup>TE</sup>									BE did not use

Reviewed by: Peter M

Review Date: 6/6/17



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

pink



RAES

METER	
Manufacturer:	Rad/um
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Rad/um/SE
Model:	44-10
Serial No.:	PK355B10
Cal. Due Date:	3-14-19

Comments:
back (lower)
towne place parking lot
back of SUV

Source: CS 157  
Serial No.: 72

Activity: 4.70 uCi  
Emission Rate: NA cpm/emissions

Source Date: 1-22-18

Distance to Source: JJ

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
4/26/18	1706	6.0	997	100	53085	6977	46108	BE	
↓	↓	↓	↓	↓	52484	7117	46367	BE	
↓	↓	↓	↓	↓	53253	7015	46238	BE	
↓	↓	↓	↓	↓	53142	6857	46283	BE	
↓	↓	↓	↓	↓	52768	6745	46023	BE	
↓	↓	↓	↓	↓	53271	7081	46190	BE	
↓	↓	↓	↓	↓	53285	6885	46551	BE	Source: 53236
↓	↓	↓	↓	↓	52606	6883	45723	BE	
↓	↓	↓	↓	↓	53017	6766	46251	BE	
↓	↓	↓	↓	↓	53173	6620	46545	BE	
TE	TE	TE	TE	TE	TE	TE	TE	TE	TE

Reviewed by: Peter Hsu

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES (Tetrattech)
Function checks conducted @
Towne Suites hotel Farmington, NM
in the lower parking lot.

Source: Cs-137      Activity: 4-30 uCi      Source Date: 1-22-18      Distance to Source: ERG Jig  
 Serial No.: 72      Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/07/18	05:29	5.6	1000	100	53245	7000	46245	TE	
05/07/18	18:37							TE	didn't use today
05/08/18	05:31	5.9	1000	100	53308	6846	46462	TE	
05/08/18	18:50	5.7	992	100	52939	7441	45498	TE	
05/09/18	06:01	5.7	1000	100	52567	7104	45463	TE	
05/09/18									didn't use today
05/10/18	06:09	5.8	1000	100	52654	3 <sup>TE</sup> 7245	45409	TE	
05/10/18	19:19							TE	didn't use today
05/11/18	05:50	5.8	998	100	52233	6339	45894	TE	
05/11/18	18:45	5.5	995	100	53110	6895	46215	TE	
05/12/18	06:24	5.5	999	101	52229	6593	45636	TE	
05/12/18	17:20	5.6	996	100	53353	6745	46608	TE	

Reviewed by: [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Pink

METER	
Manufacturer:	Lvd lum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Lvd lum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES (Tetrattech)
Function checks conducted at
Towne Suites hotel Farmington, NM
in the lower parking lot.

Source: Cs-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERB Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/13/18	05:43	5.6	1000	100	50742	6172	44570	TE	
05/13/18	18:20	5.5	995	100	51821	6513	45308	TE	
05/14/18	06:03	5.5	1000	101	53771	7202	46569	TE	cold morning
05/14/18	18:03	5.4	994	100	54940	6352	48588	TE	

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Pink

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	2 <sup>TE</sup> 4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments:	RAES (Tetrach)
Function checks location:	Home 2 <sup>nd</sup> to parking lot, back of SUV

Source: C5-137 Activity: 4:30 uCi Source Date: 1/22/18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/21/18	05:33	5.3	999	100	53271	6468	46803	TE	Changed batteries
05/21/18	18:50	5.9	995	100	52491	6172	46319	TE	Very windy (gusts)
05/22/18	04:50	5.9	1000	100	53253	6215	47038	TE	
05/22/18	1925	5.7	996	100	51836	6273	45563	NW	
05/22/18	0512	5.7	1000	100	51271	6391	44880	NW	
05/23/18	1832	5.5	995	100	52458	6807	45651	BE	
5/24/18	0602	5.5	1000	100	52985	7056	52985	BE	Source: 52985 Net: 45929
5/24/18	1832	5.5	994	100	51556	6053	45503	NW	
05/25/18	0555	5.6	1000	100	51708	6578	45130	NW	
05/25/18	1736	5.5	993	99	50943	6304	44639	NW	
05/26/18	0550	5.6	1000	100	51425	6412	45013		
05/26/18	1750	5.5	995	100	52112	6872	45240	BE	

Reviewed by: Peter [Signature]

Review Date: 6/6/19





# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES (Tetratech)
Function check location:
home 2 suites
back of SUV (taken)

Source: C5-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: — cpm/emissions

Source Date: 01/22/2018 Distance to Source: ERG Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	05:43	5.2	1000	101	54489	5961	48528	TE	Changed batteries
06/04/18									-BE not used.
06/05/18	09:47	6.2	999	100	54204	6745	47459	BE	
06/05/18	18:22	5.8	994	100	54886	5373	49513	TE	
06/06/18	05:31	5.8	999	100	54240	5973	48267	TE	
06/06/18	19:18	5.7	995	100	53387	5375	48012	BE	BE
06/08/18	05:59	5.8	999	100	54173	5301	48872	BE	no field work 6-7-18
06/08/18	18:37	5.6	994	100	53363	5800	47563	TE	
06/09/18	05:25	5.3	999	101	53378	6072	47306	TE	
06/09/18	18:33	5.5	993	100	54620	4902	49718	BE	
06/10/18	05:59	5.6	999	100	54969	5193	49776	BE	
06/10/18	18:30	5.4	995	100	53621	5883	47738	TE	

NET:  
48872  
06-28-18 RC

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Pink

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES (Tetra Tech)
Function checked/Location:
back of Tahoe
home 2 suites

Source: CS-137  
Serial No.: 72

Activity: 4-30 uCi  
Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:09	5.4	999	101	55291	6090	49201	TE	
06/12/18	07:37	5.5	999	100	53286	6192	47094	BE	

Reviewed by: [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 871 13  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES (Tetratech)
Function check location:

Source: C5137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG jigg  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-18-18	0534	5.5	999	100	54171	5096	49075	BE	
6-19-18	0541	5.6	1000	100	52401	6308	46173	BE	did not use 6-18-18
6-19-18									did not use BE
6-20-18	0546	5.6	998	100	54471	6152	48319	BE	
6-20-18	1836	5.5	993	100	53603	5484	48119	EM	
6-21-18	0555	5.5	996	100	54349	6893	47456	BE	cold morning
6-21-18	1826	5.4	991	100	51667	5554	46113	JH	
6-22-18	0551	5.4	998	100	55202	6828	48374	BE	
6-23-18	0547	5.4	998	101	54042	5669	48373	BE	
						5790			
6-23-18	1911	5.3	993	100	52501	6450	46051	JH	

Reviewed by: Peter [Signature] Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES (Tetra Tech)
Function check location:

Source: CS137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: erg jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
062418	0552	5.4	998	100	55234	5984	49250	BE	
06-24-18	2034	5.3	994	101	53957	4779	49178	39	
6-25-18	0550	5.3	999	101	55000	6299	48701	BE	
6-25-18	1811	5.3	992	100	55638	5352	50286	39	

Reviewed by: Pete Ann

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES (Tetratech)
Function check location: home 2 suite, parking lot back of SUV

Source: Cs137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
10 July 18	0600	5.3	997	100	52146	5644	46502	JM	
07/10/18	19:20							TE	Did not use today
07/11/18	05:27	5.3	996	100	55699	6143	49556	TE	This day it was not used
07/12/18	05:30	5.3	997	100	56582	5518	51064	TE	was not used today
07/17/18	0553	5.3	998	100	54364	5804	49060	RSE	
07/17/18	1430	5.2	993	100	5951	53382	97431	BE	
07/18/18	05:27	5.2	995	100	55667	5786	49881	TE	
07/14/18	1539	5.1	995	100	52426	6282	46144	BE	changed batteries
15 July 18	0459	6.2	996	100	54972	5748	49224	JM	
07/15/18	1712	5.9	992	100	52785	6288	46497	BE	
07/16/18	<del>05:04:20</del>	5.8	995	100	56034	6320	49644	TE	
07/16/18	1659	5.9	994	100	53514	6026	47488	BE	

Reviewed by: Peter Hester

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments: RAES (Tetrattech)  
Function check location:  
home 2 suites parking lot,  
back of SUV

Source: CS137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: Gregg  
Serial No.: 72      Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
17 July 18	0503	5.7	997	100	52825	5995	46830	JA	
07/17/18	1723	5.5	993	100	53870	5651	48219	BS	

Reviewed by: Patricia Hester

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271438
Cal. Due Date:	03-14-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR355810
Cal. Due Date:	03-14-19

Comments:
RAES
home 2 suits parking lot
back of SUV

Source: Cs-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: - cpm/emissions

Source Date: 01-22-18 Distance to Source: ERG jig

HV: 1000

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
08-12-18	0528	5.6	1001	100	52733	6480	46253	BE	did not use today
08-13-18	0546	5.6	1000	100	53299	6046	46653	BE	did not use
08-14-18	0444	5.6	1000	100	53371	6452	46919	BE	
08-14-18	1706	5.4	995	99	53793	6605	47188	BE	
08-15-18	0446	5.5	997	100	54662	6741	<del>48251</del>	BE	did not use NET: 47921
08-16-18	0449	5.5	998	100	52780	6149	46631	BE	BE
08-16-18	0449	5.5	999	99	53642	6149	47493	BE	did not use
08-17-18	0451	5.6	1000	99	53693	7151	46542	BE	did not use
08-18-18	0446	5.5	1000	100	52700	6857	<del>46115</del>	BE	NET: 45843 - 08-29-18
08-18-18	1812	5.3	997	99	54427	6217	48210	BE	
08-19-18	0656	5.4	1002	100	54651	7077	47577	BE	
08-19-18	1923	5.3	995	99	53474	6628	<del>46846</del>	BE	NET: 46846 - 08-29-18

08-29-18 data entry correction

Reviewed by: Peter [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271439
Cal. Due Date:	03-14-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR355810
Cal. Due Date:	03-14-19

Comments:
RAES
home 2 suites parking lot
back of SUV

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
08-20-18	0545	5.3	1002	100	52786	6767	46019	BE	di not use
08-21-18	0445	5.4	999	100	54021	6953	47068	BE	di not use

Reviewed by: Patricia Walker

Review Date: 6/6/19





# Single-Channel Function Check Log

METER	
Manufacturer:	Radlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	03-14-19

DETECTOR	
Manufacturer:	Radlum
Model:	44-10
Serial No.:	PR 355810
Cal. Due Date:	03-14-19

Comments:
RAES

Source: C5-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate:      cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-11-18	0444	5.3	1000	100	52000	6789	45211	BE	45211 NET - did not use
9-12-18	0451	5.4	1001	100	53010	6534	46474	BE	
9-12-18	1737	5.2	997	99	52357	6279	46078	BE	
9-13-18	0450	5.2	1001	100	52627	6494	46133	BE	
<del>9-13-18</del>	<del>1754</del>	<del>5.2</del>	<del>1044</del>	<del>100</del>	<del>52192</del>	<del>6506</del>	<del>45686</del>	<del>BE</del>	<del>chg. batteries</del>
9-13-18	1754	5.1	996	99	52192	6506	45686	BE	
9-14-18	0455	6.2	1002	100	52174	6726	45448	BE	
9-14-18	1836	5.7	997	100	52969	6488	46481	BE	di. not use
9-15-18	0454	5.20	1002	100	52614	6957	45657	BE	di. not use
9-16-18	0454	5.0	1001	100	52635	7421	45214	BE	BAT: 5.0
9-17-18	0440	5.0	1001	100	53288	6914	46374	BE	
9-17-18	1907	5.7	997	99	53572	6363	47219	BE	

Reviewed by: Peter K... Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	udlum
Model:	2221
Serial No.:	271438
Cal. Due Date:	03-14-19

DETECTOR	
Manufacturer:	udlum
Model:	44-6
Serial No.:	PR 355810
Cal. Due Date:	03-14-19

Comments:
RAES

Source: CS-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-18-18	0445	5.7	1001	100	52442	7301	45141	BE	
9-18-18	1500	5.6	998	99	52404	6597	45807	BE	

Reviewed by: Peter Hanson

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	7221
Serial No.:	271438
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR355810
Cal. Due Date:	3-14-19

Comments:
RAES

Source: Cs 137 Activity: 4.70 uCi Source Date: 1-22-18 Distance to Source: erg jif  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-25-18	0457	5.7	1003	100	51739	6224	45515	BE	
1-25-18	1838							BE	did not use
9-26-18	0510	5.7	1004	100	52785	6444	46341	BE	
9-26-18	1920	5.4	1000	100	52448	6451	45997	BE	
9-27-18	0508	5.5	1004	100	52160	7080	45080	BE	
9-27-18	1927	5.4	1000	100	52279	6475	45804	BE	
9-28-18	0522	5.4	1005	100	51869	7246	44623	BE	
9-28-18	1925	5.4	998	99	53121	7062	46059	BE	
9-29-18	0529	5.4	1004	100	52171	6822	45349	BE	
9-29-18	1858	5.3	999	100	53664	7330	46334	BE	
9-30-18	0530	5.3	1004	100	54241	7842	46399	BE	did not use BE
0930-18	1830	5.1	1000	99	53726	6566	46760	BE	

Reviewed by: Peter H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Orange  
Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Ludlum
Model:	222L
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR 355781
Cal. Due Date:	3-13-19

Comments: RAES
QC Location: Home 2 suites parking lot (Farmington, NM)

Source: Cs-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: na cpm/emissions

Source Date: 1/22/18

Distance to Source: ERG Tig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
4-24-2018	04:26	5.6	1055	101	55491	7837	47654	TE	
					55632	8003	47629	TE	
					56439	7784	48655	TE	
					56898	7871	49027	TE	
					56036	7770	48266	TE	
					54453	7862	46591	TE	
					56564	7797	48767	TE	
					55764*	7811	47953	TE	*Source counts: 55764
					56054	7819	48235	TE	
					55900	8022	47878	TE	
4-24-2018	19:19	5.5	1048	101	55702	<del>58797</del> TE	6 TE		Background count: 6943
						<del>6493</del> TE	48759	RE	Result from above line hampton in d suites parking lot

Reviewed by: Patricia Johnson

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	27424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR355781
Cal. Due Date:	3-13-19

Comments: RAES project
QC Location: Parking lot of Hampton Inn & Suites

Source: Cs 137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
<del>5-54</del>		5.6	1055	101	54062	5966	48096	BE	hampton inn suites
04-25-2018	05:54								
<del>05-25-2018</del>									Not used this day
05-26-2018	05:55	5.6	1050	100	54825	7066	47759	TE	Parking lot of Home2 suites
	7:02	5.5	1044	99	53660	6044	53660	BE	" "
							47616	BE	
4-27-18	6:06	5.5	1050	99	52763	6586	46177	BE	
4-27-18	18:49	5.4	1043	98	53140	6082	47058	TE	
4-28-18	05:53	5.5	1050	100	53569	7746	45823	TE	
4-28-18	14:10	5.4	1046	99	53708	7283	46425	BE	raining (lightly), windy
4-29-18	06:10	5.5	1051	100	54534	6275	48259	TE	
04/29/18 <sup>TE</sup>	16:23	5.4	1046	99	53930	6006	47924	BE	Sunny, warm

Reviewed by: Peter Hansen

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Inel/um
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Inel/um
Model:	44-10
Serial No.:	FR355701
Cal. Due Date:	3-13-19

Comments:
RAES
Home 2 suites
parking lot

Source: Cs137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
4/30/18	602	5.4	1050	100	51490	6095	45395	BE	
04/30/18 <sup>TE</sup>	1716	5.3	1045	100	51632	6276	45356	BE	slight wind

Reviewed by: Peter Weber

Review Date: 6/6/19



# Single-Channel Function Check Log

Orange  
 Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR 355781
Cal. Due Date:	3-13-19

Comments: Tetratech (RAES) Parking lot of Towne Suite Farmington, NM

Source: C5-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: NA cpm/emissions

Source Date: 1-22-18

Distance to Source: ERG-JIG

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/06/2018	17:07	5.4	1047	99	51832	6258	45580	TE	
					50839	6215	44624	TE	
					51446	6291	45155	TE	
					51658	6294	45364	TE	
					51322	6242	45080	TE	
					52163	6214	45949	TE	
					50869	6153	44716	TE	
					50877	6089	44788	TE	
					50593	6237	44356	TE	
					50607	6306	44303	TE	

Reviewed by: Peter Hester

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2222
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 355781
Cal. Due Date:	3-13-19

Comments: RAES (Tetratedu)
Function checks conducted at Townesuites Hotel (Farmington, NM) in the lower parking lot.

Source: Cs-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/07/18	05:25	6.3	1051	100	52259	7196	45063	QB	change battery
05/07/18	18:37	6.0	1044	99	51451	6572	44879	TE	
05/08/18	05:25	6.0	1051	100	53855	6845	47010	TE	
05/08/18									Didn't use today
05/09/18	06:03	5.6	1050	100	52745	7023	45722	QB	
05/09/18	18:11	5.5	1042	99	51988	7152	44836	QB	
05/10/18	06:06	5.6	1051	100	52819	6632	46187	QB	
05/10/18	19:05	5.5	1043	99	52719	5657	47062	TE	
05/11/18	05:50	5.6	1050	100	52624	6295	46329	TE	
05/11/18	18:46	5.4	1045	99	53457	6745	46712	QB	
05/12/18	06:20	5.5	1050	100	53222	6356	46866	QB	
05/12/18	19:20							TE	Didn't use today

Reviewed by: Peter Harker

Review Date: 6/6/19





# Single-Channel Function Check Log



METER	
Manufacturer:	Ludlum
Model:	2222
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355781
Cal. Due Date:	3-13-19

Comments: RAES (Tetratech)
Function checks conducted at Townesuites Hotel (Farmington, NY) in the lower parking lot.

Source: Cs-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Sig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/13/18	05:43	5.5	1050	100	53148	6542	46606	TE	
05/13/18									Didn't use today
05/14/18	05:59	5.5	1053	100	54851	7769	47082	TE	cold morning
05/14/18	18:03	5.5	1045	99	54186	6575	47611	TE	

Reviewed by: Patricia Kisher

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 355781
Cal. Due Date:	3-19-19

Comments: RAES (Tetratex)
Function checks location: home 2 suites parking lot back of SUV

Source: Cs-137  
Serial No.: 72

Activity: 4-30 uCi  
Emission Rate:          cpm/emissions

Source Date: 1/22/18

Distance to Source: ERG-Jig

13

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
05/21/18	05:32	5.1	1051	100	52579	6244	46335	TE	Charged batteries
05/21/18	18:50	5.8	1046	99	52906	6669	46237	TE	
05/22/18	04:50	5.6	1051	100	52690	6071	46619	TE	
05/22/18	19:25	5.6	1047	99	50587	5955	44632	NW	
05/23/18	05:12	5.7	1054	99	50556	6102	44454		
05/23/18	18:32	5.5	1046	99	51268	6542	44726	BE	
5/24/18	06:03	5.6	1053	100	54039	6910	47123	BE	
5/24/18	18:32	5.5	1044	99	51652	5930 NW	<del>45433</del> NW	NW	6129 BKG NET: 45523
05/25/18	05:55	5.6	1053	99	52767	6267	46500	NW	
05/25/18	<sup>19:36 NW</sup> 07:36	5.4	1044	99	50304	6010	44294	NW	
05/26/18	05:50	5.5	1053	100	52084	6248	45836		
05/26/18	17:59	5.4	1045	99	52253	7196	45057	BE	

05-26-18  
QC check

Reviewed by: Peter H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4234

Orange

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355781
Cal. Due Date:	3-13-19

Comments: RAES (Tetratex)
Function checks location: home 2 suites.
back to Tahoe SUV

Source: Cs-137

Activity: 4.30 uCi

Source Date: 1/22/18

Distance to Source: ERG-Jig

Serial No.: 72

Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	05:41	5.3	1052	100	53374	5746	47628	TE	
06/04/18	18:33	5.4	1043	99	52702	5965	46737	BE	
06/05/18	09:46	5.4	1051	99	53377	6552	46825	BE	
06/05/18	18:29							TE	Didn't use today
06/06/18	05:31	5.3	1049	100	56151	6581	49570	TE	
06/06/18	19:11	5.3	1045	99	54629	5258	49371	BE	
06/08/18	06:04	5.4	1049	99	55001	5297	49704	BE	no field work 6-7-18
06/08/18	18:37	5.2	1044	99	53052	5728	47324	TE	
06/09/18	05:25	5.0	104 <sup>TE</sup> <sub>1049</sub>	100	53300	5842	47458	TE	changed batteries
06/09/18	18:34	5.8	1043	99	53918	4633	49285	BE	
06/10/18	05:54	5.8	1049	99	55397	4601	50796	BE	
06/10/18	18:30	5.7	1044	99	51605	5463	46142	TE	

Reviewed by:

Patricia Walker

Review Date:

6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Orange

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355781
Cal. Due Date:	3-13-19

Comments: RAES (Tetrach)
Function checks location:
home 2 suites
back of Tahoe

Source: CS-137  
 Serial No.: 72

Activity: 4-30 uCi  
 Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG-Jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:09	5.4	1049	100	55188	6036	49152	TE	
06/12/18	07:35	5.6	1051	100	54608	6003	48605	BE	

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355781
Cal. Due Date:	3-13-19

Comments: RAES (Tetratex)
Function checks location:

Source: C5137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG-Jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
6-18-18	0559	5.6	1049	100	54383	5001	49382	BE	
6-18-18	1920	5.5	1045	99	52464	5634	46830	MW	
6-19-18	0543	5.6	1051	100	55049	6107	48942	BE	
6-19-18	1646	5.5	1045	99	52958	5937	47021	BE	
6-20-18	0547	5.5	1051	100	54627	6083	48544	BE	
6-20-18	1840	5.5	1044	99	54938	5380	49558	JH	
6-21-18	0555	5.5	1051	99	53550	6271	47279	BE	col d morning
6-21-18	1824	5.4	1043	99	52000	5394	46606	JH	
6-22-18	0547	5.5	1049	100	54628	6724	47904	BE	
6-22-18	1838	5.3	1043	99	51999	5903	46096	JH	
6-23-18	0545	5.4	1051	100	54107	5583	48524	BE	
6-23-18	1916	5.2	1044	99	53845	5069	47976	JH	

Reviewed by: Patricia Walker

Review Date: 6/16/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355781
Cal. Due Date:	3-13-19

Comments: RAES (Tetrach)
Function checks location:

Source: Cs 137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG-Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06-24-18	0552	5.3	1050	100	54945	5901	49044	BE	
06-24-18	2036	5.2	1044	99	53263	4652	48611	DM	NET: 48611
6-25-18	0551	5.2	1049	99	55990	6104	49886	BE	
6-25-18	1812	5.2	1042	98	54730	5138	49592	BE	

Reviewed by: Patricia Anderson

Review Date: 6/6/19

Rotation  
07/10/2018  
07/17/2018

### Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Orange

Manufacturer:	Ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355781
Cal. Due Date:	3-13-19

Comments: RAES (Tetratech)
Function checks location: home 2 suites parking lot, back of SUV

Source: Cs-137      Activity: 4.30 uCi      Source Date: 1/22/18      Distance to Source: ERG-Jig  
 Serial No.: 72      Emission Rate: \_\_\_\_\_ cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
10 July	0602	6.2	1048	100	52700	5807	46893	39	
10 July	19:20							TE	Did not use today
07/11/18	05:27	6.2	1046	99	48183	5178	43005	TE	
07/11/18								TE	Did not use today
07/12/18	05:30	6.2	1048	100	53492	6156	53422 <sup>TE</sup>	TE	Net: 47336 did not use today
07/13/18	0554	6.1	1048	100	54545	5782	48763	BE	
07/13/18	1432								BE did not use
07/14/18	05:27	6.1	1047	100	55410	5384	50026	TE	
07/14/18	1538	5.7	1046	99	52865	5833	47032	BE	
15 July 2018	0502	5.8	1046	100	53840	5633	48207	39	
07/15/18	1712								BE did not use
07/16/18	04:28	5.6	1048	99	55675	5711	49964	TE	

Reviewed by: Peter Hahn

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 130  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR355781
Cal. Due Date:	3-13-19

Comments: RAES (Tetratech)
Function checks location: home 2 suites parking lot, back of SUV.

Source: CS137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG-Jig  
 Serial No.: 72 Emission Rate:          cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
07/16/18	1701							BE	Signature
17 July	0452	5.7	1047	99	54842	5285	49557	JM	
07/17/18	1726	5.5 BE	<del>1047</del> 1042	99	54132	5622	48560	BE	
		5.5	1042						

Reviewed by: Peter Huber

Review Date: 6/6/19





# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	03-13-19 BE 19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR355781
Cal. Due Date:	03-13-19

Comments:
RAES
Home 2 suites parking lot.
back of SUV

Source: 25-137

Activity: 4.30 uCi

Source Date: 01-22-18

Distance to Source: ERG Jig

Serial No.: 72

Emission Rate: - cpm/emissions

cal = 1050V

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-12-18	0538	5.6	1046	99	51775	6342	45433	BE	did not use today
08-13-18	0447	5.6	1047	99	52563	6532	46031	BE	did not use
08-14-18	0444	5.5	1047	99	52108	6335	45773	BE	
08-14-18	1706	5.3	1041	99	54455	6430	48025	BE	
08-15-18	0446	5.5	1046	99	54140	6340	47800	BE	
08-15-18	1709	5.3	1040	99	54547	6496	48051	BE	adj HV to 1050V
08-16-18	0449	5.4	1054	99	53149	6367	46782	BE	did not use
08-17-18	0451	5.4	1056	99	53820	6421	47399	BE	
08-17-18	1640	5.2	1053	99	54308	6149	48159	BE	
08-18-18	0446	5.3	1051	99	53428	6509	47333	BE	source: 53842
08-18-18	1818	4.9	1046	99	53691	5886	47805	BE	chg batteries (6.2V)
08-19-18	0656	5.2	1053	100	53255	6866	46389	BE	

Reviewed by:

Patricia Hunter

Review Date:

6/16/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271424
Cal. Due Date:	03-13-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PK355781
Cal. Due Date:	03-13-19

Comments:
RAES
home 2 suites parking lot
Back of SUV

Source: Cs-137  
Serial No.: 72

Activity: 4.30 uCi  
Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG/jig/cont BE

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-19-18	1922	5.8	1045	99	54189	6212	47977	BE	
08-20-18	0545	5.8	1053	99	55805	6760	49045	BE	
08-20-18	1835	5.7	1043	99	53160	6764	46396	BE	
08-21-18	0445	5.8	1049	99	52827	6863	45964	BE	
08-21-18	1614	5.6	1049	99	52990	6670	46320	BE	

Reviewed by: Patricia Nelson

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-0224



METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271424
Cal. Due Date:	03-13-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR355781
Cal. Due Date:	03-13-19

Comments:
RAES

Source: CS-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-11-18	0446	5.7	1052	100	53254	6646	46608	BE	
9-11-18	1818	5.5	1047	100	51899	6041	45858	BE	
9-12-18	0452	5.6	1053	100	51259	6744	44515	BE	did not use
9-13-18	0450	5.6	1053	100	52646	6442	46204	BE	did not use
9-14-18	0455	5.6	1053	99	51205	6813	44392	BE	
9-15-18	0454	5.6	1052	100	52542	7816	44726	BE	did not use
9-16-18	0454	5.6	1051	99	52664	8145	44521	BE	did not use
9-17-18	0440	5.6	1052	99	52892	7160	45732	BE	
9-17-18	0908	5.4	1046	99	52646	6351	46295	BE	
9-18-18	0445	5.5	1052	99	52935	6954	45981	BE	
9-18-18	1500	5.4	1046	99	51533	6314	45219	BE	

Reviewed by: Patricia H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	ludlum
Model:	2221
Serial No.:	271424
Cal. Due Date:	03-13-19

DETECTOR	
Manufacturer:	ludlum
Model:	44-10
Serial No.:	PR355781
Cal. Due Date:	03-13-19

Comments:
RAES

Source: Cs-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: - cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG j19

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-25-18	0458	5.5	1053	100	52349	6315	46034	BE	
9-25-18	1839	5.3	1050	99	52271	6715	45526	BE	
9-26-18	0510	5.3	1054	99	52327	6533	45794	BE	
9-26-18	1920	5.4	1054	99	52201	6255	45946	BE	
9-27-18	0909	5.4	1057	99	53028	6941	46087	BE	
9-27-18	1928	5.3	1049	99	52216	6572	45644	BE	
9-28-18	0522	5.3	1056	100	52671	7015	45656	BE	
9-28-18	1925	5.2	1049	99	52410	6893	45517	BE	
9-29-18	0525	5.2	1058	100	53511	7513	45998	BE	
9-29-18	1859	5.2	1050	99	53250	6530	46720	BE	NET = 46720
9-30-18	0530	5.2	1056	99	53534	7280	46254	BE	chg. batteries.
<del>4-30-18</del>	<del>1822</del>	5.8	1055	100	55421	7160	48261	BE	chg. batteries.

11-1-18 0900  
 Reviewed by: Patricia Kunkle

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Inulum
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Inulum
Model:	44-10
Serial No.:	PR355701
Cal. Due Date:	3-13-19

Comments: RAES
QC checks
Home 25mty parking lot.

Source: Cs137 Activity: 4-23 uCi Source Date: 1-22-18 Distance to Source: jig  
 Serial No.: 99 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
12-9-18	1731	5.8	1058	100	60064	6798	53266	BE	
↓	↓	↓	↓	↓	60354	6971	53373	BE	
↓	↓	↓	↓	↓	59640	6988	52652	BE	
↓	↓	↓	↓	↓	59321	6877	52444	BE	
↓	↓	↓	↓	↓	59625	6949	52676	BE	
↓	↓	↓	↓	↓	60184	6853	53331	BE	
↓	↓	↓	↓	↓	59782	6907	52875	BE	
↓	↓	↓	↓	↓	59485	6069	52616	BE	
↓	↓	↓	↓	↓	59520	6815	52705	BE	
↓	↓	↓	↓	↓	59680	6815	52865	BE	

Reviewed by: Peter Wash

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	271424
Cal. Due Date:	3-13-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PA 355781
Cal. Due Date:	3-13-19

Comments: PAES

Source: CS-137 Activity: 4.23 uCi Source Date: 1-22-18 Distance to Source: Jig  
 Serial No.: 99 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
12-10-18	0600	5.2	1067	101	57325	7084	50241	RB	did not use
12-11-18	0600	5.7	1067	100	60468	7385	53083	RB	
12-11-18	1330	5.7	1061	100	58145	7782	50663	RB	

Reviewed by: [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log

Brow.  
 Environmental Restoration Group, Inc.  
 8809 Washington St. NE, Suite 150  
 Albuquerque, NM 87113  
 (505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	222J
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR 303 726
Cal. Due Date:	3-14-19

Comments: RAES
QC Location: Home 2 Suites parking lot (Farmington, NM)

Source: Cs-137      Activity: 4.30 uCi      Source Date: 11/22/18      Distance to Source: ERG Jig  
 Serial No.: 72      Emission Rate: na cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
4-24-2018	04:30	5.8	1050	101	54847	7754	47093	TE	
					54461	7791	46670	TE	
					55942	7885	48057	TE	
					53406	7878	45528	TE	
					54714	7649	47065	TE	
					54081	7763	46318	TE	
					53488	7611	45877	TE	
					54758	7916	46842	TE	
					55203	7681	47522	TE	
					54804	7616	47188	TE	
4-24-18	19:26	5.6	1044	99	53272	6262	47010	BE	Hampton ind suites parking lot

Reviewed by: Patricia Haver

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR 303716
Cal. Due Date:	3-14-19

Comments:
RAE

Source: C5137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: 1/5  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
4/25-18	5:56	5.4	1049	99	54129	5622	48507	BE	Laurel in 2 suites
4/25-18	17:50	5.4	1044	99	52317	6575	45742	TE	Home 2 suites parking lot.
4-26-18	06:07	5.4	1049	99	55707	7466	48241	TE	Home 2 suites parking lot
4-26-18	2005	5.3	1043	99	53892	5870	48022	BE	
4/27/18	606	5.3	1048	99	55201	6367	48834	BE	
4-27-18	18:57							TE	Not used today
4-28-18	05:39	5.3	1050	99	53790	7067	46723	TE	
4-28-18	1413	5.3	1049	99	54622	6897	47725	BE	rain lightly, windy
4-29-18	06:10	5.3	1050	100	54051	6007	48044	TE	
04/29/18 <sup>TE</sup>	1631	5.2	1047	99	52851	5944	46907	BE	sunny, warm
4/30/18	600	5.3	1049	100	52236	6200	47036	BE	
04/30/18 <sup>TE</sup>	1716	5.2	1047	99	52622	6236	46386	BE	slight wind

Reviewed by: Patricia [Signature]

Review Date: 6/6/19





# Single-Channel Function Check Log

METER	
Manufacturer:	Wdloom
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Wdloom
Model:	44-10
Serial No.:	PR 303 716
Cal. Due Date:	3-14-19

Comments: Tetra tech (RAES) Parking lot of Towne Suites Farmington, NM

Source: Cs-137      Activity: 4.30 uCi      Source Date: 1-22-18      Distance to Source: ERG Jij  
 Serial No.: 72      Emission Rate:        cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts <sup>NET</sup>	BKG Counts	Net Counts <sup>gross</sup>	Initials	Note(s):
05/06/18	17:07	5.2	1050	99	47032	6255	53287	TE	
					47043	6257	53300	TE	
					46772	6169	52941	TE	
					47130	6231	53361	TE	
					47132	6311	53443	TE	
					46670	6044	52714	TE	
					46546	6037	52583	TE	
					46855	5947	52802	TE	
					47440	5792	53232	TE	
					<del>4772</del>	<del>TE</del>			TE = Mistake
					46805	6032	52837	TE	
					<del>TE</del>	<del>TE</del>	<del>TE</del>		<del>TE</del>

Reviewed by: Patricia Hecker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

brown

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR303716
Cal. Due Date:	3-14-19

Comments: RAES (Tetratech)
Function checks conducted at Towne Suites hotel, Farmington, NM at Lower parking lot

Source: Cs-137  
Serial No.: 72

Activity: 4-30 uCi  
Emission Rate: NA cpm/emissions

Source Date: 1-22-18

Distance to Source: ERG Trg

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/07/18	05:24	5.7	1050	99	54637	6791	47846	TE	changed batteries
05/07/18	18:38							TE	didn't use today
05/08/18	05:31	5.9	1050	99	54326	6158	48168	TE	
05/08/18	18:48	5.6	1045	99	53665	6272	47493	RW	
05/09/18	05:58	5.6	1050	99	53517	6766	46751	TE	
05/09/18	18:11	5.4	1046	100	51970	6958	45012	TE	
05/10/18	06:04	5.4	1050	99	52774	6365	46409	TE	
05/10/18	19:05	5.3	1048	99	53325	5841	47484	TE	
05/11/18	05:50	5.3	1051	99	52775	6062	46713	TE	
05/11/18	18:46	5.2	1049	99	51653	6264	45389	TE	
05/12/18	06:25	5.2	1051	99	53225	6243	46982	TE	NET: 46982 BE, 08/28/2018
05/12/18	17:20							TE	Didn't use today

Reviewed by: Peter H. [Signature]

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR303716
Cal. Due Date:	3-14-19

Comments: RAES (Tetratech)
Function checks conducted at
Towne Suites hotel, Farmington, NM
at lower parking lot.

Source: Cs-137 Activity: 4-30 uCi Source Date: 1-22-18 Distance to Source: ERG-Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/13/18	05:43	5.3	1050	99	55031	5847	49184	TE	
05/13/18									Didn't use today
05/14/18	06:02	5.3	1051	99	53986	7381	46605	TE	cold morning
05/14/18	18:02							TE	didn't use today

Reviewed by: Patricia Wheeler

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Brown

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 303716
Cal. Due Date:	3-14-19

Comments: RAES (Tetratex)
Function checks location: Parking lot of Home2 Suites hotel in Farmington, NM

Source: Cs-137 Activity: 4.30 uCi Source Date: 1/22/18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
05/21/18	05:35	5.1	1052	100	53764	6073	47691	TE	Changed batteries
05/21/18	18:50	5.5	1049	99	53854	5795	48059	TE	Very windy (gusts)
05/22/18	04:50	5.4	1053	99	54781	6577	48204	TE	
05/22/18	1925				did	NOT USE		NW	
05/23/18	0512	5.6	1051	99	53899	5788	48100	NW	
05/23/18	1835	5.3	1049	100	53300	6416	46884	BE	
5/24/18	2600	5.3	1052	99	54122	6854	47268	BE	47268 NET, 05/20/18 qc check
5/24/18	1832	5.2	1049	99	52035	5930	46105	NW	
05/25/18	0555	5.2	1052	100	51773	6440	45333	NW	
05/25/18	1736	5.2	1047	100	50647	5593	45054	NW	
05/26/18	0550	5.3	1052	99	52330	5933	46397	NW	
05/26/18	1757	5.2	1049	100	52348	6151	46197	BE	

Reviewed by: Peter Hansen

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Brown

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 303716
Cal. Due Date:	3-14-19

Comments: RAES (Tetrattech)
Function checks location:

Source: Cs-137 Activity: 4-30 uCi Source Date: 01/22/18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/04/18	05:43	4.9	1053	99	54288	5380	48908	TE	Changed batteries
06/04/18	18:37	5.5	1047	100	53696	5648	48048	BE	
06/05/18	05:47	5.6	1053	100	54207	6491	47716	BE	
06/05/18	18:22	5.4	1048	100	53381	5387	47994	TE	
06/06/18	05:31	5.2	1053	100	53625	6431	47194	TE	
06/06/18	—	—	—	—	—	—	—	—	BE did not use
06/08/18	05:54	5.4	1050	99	55793	5352	50351	BE	no field work 06-7-18
06/08/18	18:35	5.2	1048	100 <sup>TE</sup>	53034	5179	47855	TE	
06/09/18	05:25	4.7	1050	99	55574	5496	50078	TE	Changed batteries
06/09/18	—	—	—	—	—	—	—	—	— RE did not use
06/10/18	05:59	—	—	—	—	—	—	BE	not operating correctly
06/10/18	18:26	—	—	—	—	—	—	TE	didn't use today

Reviewed by: Patricia Wheeler

Review Date: 6/6/19



# Single-Channel Function Check Log



Brown

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 303716
Cal. Due Date:	3-14-19

Comments:	RAES (Tetra Tech)
Function checks location:	

Source: Cs-137 Activity: 4.30 uCi Source Date: 01/22/18 Distance to Source: ERG Jrg  
 Serial No.: 72 Emission Rate:        cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
06/11/18	05:07	_____						TE	Out of order due to display malfunction

Reviewed by: Patricia Walker

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 303 716
Cal. Due Date:	3-14-19

Comments: RAES (Tetra Tech)
Function checks location:

Source: C-137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-18-18	0557	5.8	1050	98	55740	5064	50676	BE	
6-18-18	1921	5.5	1049	99	53595	5441	48154	M	
6-19-18	0543	5.5	1049	99	54146	5833	48313	BE	
6-19-18	1845	5.3	1049	99	54237	5644	48593	BE	
6-20-18	0547	5.4	1049	99	53863	5968	47895	BE	
6-20-18	1837	5.2	1048	99	54450	5223	49227	JH	
6-21-18	0554	5.3	1048	99	54036	6372	47664	BE	col d morning
6-21-18	1822	5.3	1046	100	53879	5314	48565	JH	
6-22-18	0942	5.4 <sup>71</sup>	1049	100	54321	6765	47556	BE	BAT: 5.3
6-22-18	1845	5.2	1048	100	52307	5400	46827	JH	
6-23-18	0542	5.2	1048	99	55357	5731	49626	BE	
6-23-18	1904	5.1	1047	99	54520	5046	49474	JH	

Reviewed by: Patricia Hansen

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 303716
Cal. Due Date:	3-14-19

Comments: RAES (Tetra Tech)
Function checks location:

Source: C3137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: NA cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6-24-18	0549	5.1	1049	100	54188	6155	48033	BE	
6-24-18	2032	5.1	1049	100	53365	4609	48753	BE	48750 NET BE RC 04-20-18
6-25-18	0550	5.1	1049	100	53158	6263	46895	BE	
6-25-18	1821	5.0	1047	99	53049	4577	48472	37	

Reviewed by: Patricia H...

Review Date: 6/6/19





# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Brown

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 303716
Cal. Due Date:	3-14-19

Comments: RAES (Tetra Tech)
Function checks location:

Source: CS-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
10 July 18	0559	5.1	1051	99	54210	5327	48883	39	
07/10/18	19:20	5.0	1047	99	54085	5481	48604	TE	48604 NET <sup>BE</sup> 08-28-18
07/11/18	05:27	5.0	1050	99	53538	5609	47929	TE	Charged batteries
11 July 18	1907	5.5	1047	98	51909	5741	46168	39	
07/12/18	05:30	5.5	1050	99	55636	5388	50248	TE	
12 July 18	1818	5.4	1048	99	54004	5128	48876	39	
07/13/18	0548	5.3	1049	99	53242	5570	47672	BE	
07/13/18	1435	—	—	—	—	—	—	—	BE did not use
07/14/18	05:27	5.4	1048	99	54153	5460	48693	TE	
07/14/18	1537	—	—	—	—	—	—	—	BE did not use
15 July 18	0505	5.4	1047	98	53898	5285	48613	39	
07/15/18	1713	—	—	—	—	—	—	—	BE did not use

Reviewed by: Patricia Anderson

Review Date: 6/6/19



# Single-Channel Function Check Log



Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

Brown

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	4410
Serial No.:	PR 303716
Cal. Due Date:	3-14-19

Comments: RAES (Tetrattech)
Function checks location:
home 2 suites parking lot,
back of SUV

Source: C5137 Activity: 4.30 uCi Source Date: 1-22-19 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
07/16/18	04:28	5.3	1048	98	55695	5483	50212	TE	
07/16/18	17:02							RG	2-2 not used
17 July 18	09:50	5.4	1047	98	54939	5143	49796	JH	
07/17/18	17:26	5.2	1045	99	52850	5431	47419	RG	

Reviewed by: Patricia Walker Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	03-14-19

DETECTOR	
Manufacturer:	ludlum
Model:	PR 303716
Serial No.:	44-10
Cal. Due Date:	03-14-19

Comments:
RAES
home 2 suits parking lot
back of SUV

Source: CS-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

cal: 1050V

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-12-18	0538	5.5	1050	99	53538	6129	47409	BE	HV was 1040, set at 1050, changed battery.
08-12-18	1059	5.5	1049	99	54452	6008	48441	BE	BG: 6011, windy
08-13-18	0457	5.5	1053	99	53654	6403	47251	BE	
08-13-18	1829	5.3	1049	99	55062	6974	48088	BE	change batteries.
08-14-18	0445	5.5	1053	100	54826	6371	48455	BE	
08-14-18	1706	5.5	1047	98	53068	6099	46970	BE	NET: 46969 → 08-29-18
08-15-18	0447	5.5	1051	99	53547	6209	47338	BE	
08-15-18	1710	5.3	1047	98	54313	6374	47939	BE	
08-16-18	0450	5.4	1051	98		6145		BE	missing source count
08-16-18	1552	5.2	1050	100	54249	5874	48375	BE	
08-17-18	0452	5.2	1052	99	54588	5795	48793	BE	did not use
08-18-18	0446	5.3	1052	99	53063	5563	47500	BE	

Reviewed by: Peter Weber

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Ludlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	03-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PK 303716
Cal. Due Date:	03-14-19

Comments:
RAES
home 2 suites parking lot
back of SUV

Source: Cs-137      Activity: 4.30 uCi      Source Date: 01-22-18      Distance to Source: ERG jig  
 Serial No.: 72      Emission Rate: — cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
08-18-18	1817	5.1	1050	99	55130	6320	48810	BE	chg batteries
08-19-18	0656	5.6	1053	99	12779	4317	8462	BE	— condensation in meter face
08-20-18	0545	5.5	1051	97	53800	7067	46733	BE	dilution
08-21-18	0445	5.5	1048	97	54429	6981	47448	BE	
08-21-18	1613	5.4	1048	97	54753	6311	48442	BE	

Reviewed by: Patricia Harker

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Iudlum
Model:	2221
Serial No.:	149940
Cal. Due Date:	03-14-19

DETECTOR	
Manufacturer:	Iudlum
Model:	44-10
Serial No.:	PR303716
Cal. Due Date:	03-14-19

Comments:
RAES

Source: CS-137  
 Serial No.: 72

Activity: 4.30 uCi  
 Emission Rate: — cpm/emissions

Source Date: 01-22-18

Distance to Source: ERG jig

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
9-11-18	0445	5.4	1050	98	52497	6434	46013	BE	
9-11-18	1017	5.1	1045	98	53202	6051	47151	BE	
09-12-18	0451	5.2	1050	97	54315	6651	47664	BE	chg. batteries
9-12-18	1738	5.4	1047	97	53330	5995	47335	BE	
9-13-18	0450	5.5	1051	98	53981	6590	47391	BE	
9-13-18	1755	5.3	1047	97	52451	6139	46320	BE	
9-14-18	0455	5.3	1051	98	52905	7075	45810	BE	
9-14-18	1838	5.2	1046	98	52563	6331	46232	BE	
9-15-18	0455	5.3	1050	98	53333	7067	46266	BE	
9-15-18	1725	5.1	1046	98	52537	7020	45717	BE	chg. batteries
9-16-18	0454	5.8	1050	98	53029	6654	46375	BE	
9-16-18	1718	5.4	1048	99	53172	6169	47003	BE	

Reviewed by: Peter Weber

Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
3809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224

METER	
Manufacturer:	Indium
Model:	2221
Serial No.:	149940
Cal. Due Date:	03-14-19

DETECTOR	
Manufacturer:	Indium
Model:	44-10
Serial No.:	PR303716
Cal. Due Date:	03-14-16

Comments:
RAES

Source: Cs-137 Activity: 4.30 uCi Source Date: 01-22-18 Distance to Source: ERG site  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts <sup>CPM</sup>	Initials	Note(s)
9-17-18	0440	5.4	1053	100	52893	6759	46134	BE	46134 NET
9-17-18	1732	5.3	1051	101	52359	6920	45439	BE	
9-18-18	0445	5.3	1054	101	53367	7322	46045	BE	

Reviewed by: Peter H. [Signature] Review Date: 6/6/19



# Single-Channel Function Check Log

Environmental Restoration Group, Inc.  
8809 Washington St. NE, Suite 150  
Albuquerque, NM 87113  
(505) 298-4224



METER	
Manufacturer:	Ludlum
Model:	221
Serial No.:	149940
Cal. Due Date:	3-14-19

DETECTOR	
Manufacturer:	Ludlum
Model:	44-10
Serial No.:	PR 303 710
Cal. Due Date:	3-14-19

Comments:
RAES

Source: C5137 Activity: 4.30 uCi Source Date: 1-22-18 Distance to Source: ERG Jig  
 Serial No.: 72 Emission Rate: - cpm/emissions

Date	Time	Battery	High Voltage	Threshold	Source Counts	BKG Counts	Net Counts	Initials	Note(s)
9-25-18	0451	5.4	1046	92	55066	7368	47698	BE	
9-25-18	1838	5.2	1039	92	52302	6591	45711	BE	
9-26-18	0509	5.2	1051	100	53059	6630	46429	BE	adjusted HV, THR
9-26-18	1920	5.1	1047	100	<sup>BE</sup> 51759	6286	<del>45673</del>	BE	SRC: 53048 NET: 47362
9-27-18	0908	5.1	1054	103	53206	6468	46738	BE	chg. batteries → did not use
9-28-18	0822	5.8	1054	104	53418	7731	45687	BE	did not use
9-29-18	0925	5.7	1049	101	52792	6796	46014	BE	did not use
9-30-18	0530	5.4	1050	101	54703	7356	47347	BE	did not use

Reviewed by: Patricia Walker

Review Date: 6/6/19

**ATTACHMENT G2**

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**GAMMA SURVEY DATA EXCLUSION LOGS**

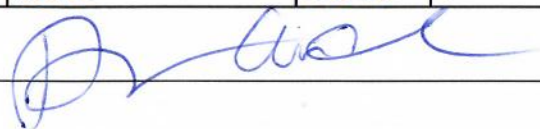


# ERG Data Exclusion Log

- Project: RAES
- Root directory: X:\Project\_Data\Tetrattech\RAES\GPS\Export
- Data Type: Gamma walkover survey data

Date	Affected Dataset	Initial Records	Records Removed	Reason for Exclusion	User
05/04/18	sensor_042418	29606	6279	Detector on system ID 12 indicated PMT starting to go bad.	TA
05/04/18	sensor_042518	38876	9680	Suspected bad meter or detector (system ID 12)	TA
05/04/18	sensor_042618	36766	6017	Suspected bad meter or detector (system ID 12)	TA
05/04/18	sensor_042718	27111	6755	Suspected bad meter or detector (system ID 12)	TA
05/10/18	sensor_050818	22659	<del>22621</del> <sup>38</sup>	High positional variance with low number of satellites	TA
05/15/18	<del>SEA</del> <sup>TA</sup> data_all	305927	1537	Correlation samples exported and removed from total file.	TA
05/15/18	sensor_051418	35947	812	Records contained a zero $\gamma$ reading	TA
05/15/18	data_all	336991	2534	Area was rescanned, old data was removed in data_all dataset	TA
05/23/18	sensor_052218	39042	11	High positional error and did not appear to follow survey path	TA
05/25/18	sensor_052418	40736	4	Records appeared to be collected at a car rally point.	TA
05/25/18	sensor_052518	49538	520	Data appeared to be collected while driving from one site to the next	TA
05/30/18	sensor_052618	27467	247	Data appeared to be collected while driving. $v = > 3$ m/s	TA
06/11/18	sensor_060818	41924	18	Data indicate that cable became disconnected during survey	TA
06/21/18	sensor_061118	24172	13	Bad cable was causing 0 readings from detector	TA
06/21/18	sensor_061118	24159	<del>24190</del> <sup>2400</sup>	Road data with detector in cab	TA
06/21/18	sensor_061118	21459	713	Data was collected while surveyor fell off cliff.	TE
06/21/18	sensor_061118	20746	9	GPS signal reflection causing incorrect positional data	TE
06/22/18	sensor_061018	26923	7254	<del>Ex</del> <sup>TE</sup> Possible cable malfunction or <del>TE</del> malfunction caused outlined data points (very high values in random areas).	TE

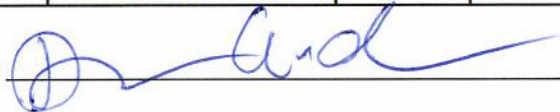
Review: \_\_\_\_\_



# ERG Data Exclusion Log

- Project: RAES
- Root directory: X:\Project\_Data\Tetrattech\RAES\GPS\Export
- Data Type: Gamma walkover survey data

Date	Affected Dataset	Initial Records	Records Removed	Reason for Exclusion	User
06/22/18	sensor_061818	28587	55	GPS signal reflection causing <del>malfunction</del> <sup>TE</sup> incorrect positional data	TE
06/22/18	sensor_061818	28532	54	GPS signal reflection causing incorrect positional data	TE
06/22/18	sensor_061818	28478	18	GPS signal reflection causing incorrect positional data	TE
06/26/18	sensor_062118	31540	50	GPS signal reflection caused incorrect positional data	TE
06/27/18	sensor_062118	31540	58	GPS signal reflection caused incorrect positional data	TE
06/27/18	sensor_062118	31482	36	GPS signal reflection caused incorrect positional data	TE
06/27/18	sensor_062118	31446	136	GPS signal reflection caused incorrect positional data	TE
06/27/18	sensor_062118	31310	242	GPS signal reflection caused incorrect positional data	TE
06/28/18	sensor_062118	31068	114	Data points correspond to the path taken to the site, outside of <sup>survey</sup> area	TE
06/28/18	sensor_062118	30954	1	<del>Data</del> <sup>TE</sup> GPS signal reflection caused incorrect positional data	TE
06/28/18	sensor_050918	1671	782	<sup>Excluded</sup> Data corresponds to correlation scans	TE
06/28/18	sensor_051018	22036	755	Excluded data corresponds to correlation scans	TE
06/28/18	sensor_062218	36957	63	GPS signal reflection caused incorrect positional data	TE
06/28/18	sensor_062218	36894	153	GPS signal reflection caused incorrect positional data	TE
06/29/18	sensor_062218	36741	54	GPS signal reflection caused incorrect positional data	TE
06/29/18	sensor_062318	50166	54	<del>Data points correspond to data collected while motor was in reverse</del> <sup>TE</sup> GPS signal reflection <del>caused</del> incorrect positional data	TE
06/29/18	sensor_062318	50112	106	GPS signal reflection caused incorrect positional data.	TE
06/29/18	sensor_062318	50006	484	GPS signal reflection caused incorrect positional data	TE

Review: 

# ERG Data Exclusion Log

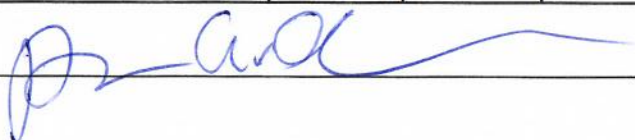
• Project: RAES

• Root directory: X:\Project\_Data\Tetrattech\RAES\GPS\Export

• Data Type: Gamma walkover survey data

Date	Affected Dataset	Initial Records	Records Removed	Reason for Exclusion	User
07/02/18	sensor_062318	49522	29 <sup>TH</sup> 209	GPS signal reflection caused incorrect positional data	TE
07/02/18	sensor_062418	45027	239	GPS signal reflection caused incorrect positional data	TE
07/02/18	sensor_062518	41478	41	GPS signal reflection caused incorrect positional data	TE
07/12/18	sensor_071018	19031	15	Records appear to be reflection of GPS Signal.	TA
07/18/18	sensor_071618	11465	7396	User indicated bad cable throughout day	TA
07/19/18	sensor_071718	34082	3	Records appeared out of place from rest of survey	TA
08/13/18	sensor_081218	7094	16	Records appeared to be collected while away from survey area	TA
08/14/18	sensor_081318	4610	6	Meter turned on while logging, causing ramping up of counts	TA
08/19/18	sensor_081518 <sup>TH</sup> <del>081718</del>	17008	2	Records were collected at rally point during equipment startup	TA
08/19/18	sensor_081618	25671	4	Values indicated spikes in data, most likely due to pulled cable	TA
08/19/18	sensor_081818	37594	399	Values indicated sporadic counts, most likely dust in connector.	TA
08/28/18	sensor_081918	37826	15	Meter turned on while collecting causing ramp up of data	TA
08/29/18	sensor_082018	21409	1215 <sup>TH</sup> <del>1362</del>	Bad cable. Area was resurveyed where spikes occurred.	TA
09/20/18	sensor_082118	15256	782	Bad cable. Areas were resurveyed on 09/11/18	TA
09/20/18	sensor_091318	11829	1641	Collection was not paused during breaks causing data to pile up.	TA
09/20/18	sensor_091518	21980	13	GPS signal reflection	TA
09/20/18	sensor_091718	14572	12	GPS signal reflection	TA
09/27/18	sensor_092518	19085	4	Records contained 0 readings (8). Cable disconnected	

Review: \_\_\_\_\_



# ERG Data Exclusion Log

- Project: RAES
- Root directory: X:\Project\_Data\Tetrattech\RAES\GPS\Export
- Data Type: Gamma walkover survey data

Date	Affected Dataset	Initial Records	Records Removed	Reason for Exclusion	User
9/30/18	sensor_092818	18074	93	GPS Reflection	TA
9/30/18	sensor_092918	34590	162	Cable improperly connected causing 0 values in records	TA
9/30/18	sensor_093018	3976	54	GPS Signal loss causing incorrect placement of records	TA

Review: 

**ATTACHMENT G3**

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**CHAIN-OF-CUSTODY FORMS FOR SOIL, SEDIMENT, AND WATER  
SAMPLES**

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD1, MET1

**CHAIN OF CUSTODY RECORD**

RAES\_TO1  
 Contact Name: Aaron Orechwa  
 Contact Phone: 970-420-9395

**No: RAES1-0001**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B5-SB1-01-042418	Bkgd Study Long	Soil	4/24/2018	12:20	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B5-SB9-01-042418	Bkgd Study Short	Soil	4/24/2018	14:46	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS10-01-042418	Bkgd Study Short	Soil	4/24/2018	14:57	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS1-01-042418	Bkgd Study Long	Soil	4/24/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B5-SS1-02-042418	Bkgd Study Short	Soil	4/24/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS11-01-042418	Bkgd Study Short	Soil	4/24/2018	15:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS12-01-042418	Bkgd Study Short	Soil	4/24/2018	15:16	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS13-01-042418	Bkgd Study Short	Soil	4/24/2018	15:21	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS14-01-042418	Bkgd Study Short	Soil	4/24/2018	15:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS15-01-042418	Bkgd Study Short	Soil	4/24/2018	15:33	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS16-01-042418	Bkgd Study Short	Soil	4/24/2018	15:39	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS2-01-042418	Bkgd Study Short	Soil	4/24/2018	12:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS3-01-042418	Bkgd Study Short	Soil	4/24/2018	14:06	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS4-01-042418	Bkgd Study Short	Soil	4/24/2018	14:18	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B5-SS5-01-042418	Bkgd Study Short	Soil	4/24/2018	14:27	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS6-01-042418	Bkgd Study Short	Soil	4/24/2018	14:31	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS7-01-042418	Bkgd Study Short	Soil	4/24/2018	14:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS8-01-042418	Bkgd Study Short	Soil	4/24/2018	14:39	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS9-01-042418	Bkgd Study Short	Soil	4/24/2018	14:43	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS9-02-042418	Bkgd Study Short	Soil	4/24/2018	14:43	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD2, MET2

**CHAIN OF CUSTODY RECORD**

RAES\_TO1  
 Contact Name: Aaron Orechwa  
 Contact Phone: 970-420-9395

**No: RAES1-0002**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B5-SB23-01-042418	Bkgd Study Short	Soil	4/24/2018	16:09	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B5-SS17-01-042418	Bkgd Study Short	Soil	4/24/2018	15:43	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS18-01-042418	Bkgd Study Short	Soil	4/24/2018	15:48	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS19-01-042418	Bkgd Study Short	Soil	4/24/2018	15:53	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS20-01-042418	Bkgd Study Short	Soil	4/24/2018	15:57	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS21-01-042418	Bkgd Study Short	Soil	4/24/2018	16:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS22-01-042418	Bkgd Study Short	Soil	4/24/2018	16:03	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS23-01-042418	Bkgd Study Long	Soil	4/24/2018	16:07	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B5-SS24-01-042418	Bkgd Study Short	Soil	4/24/2018	16:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS25-01-042418	Bkgd Study Short	Soil	4/24/2018	16:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS26-01-042418	Bkgd Study Short	Soil	4/24/2018	16:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS27-01-042418	Bkgd Study Short	Soil	4/24/2018	16:51	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS28-01-042418	Bkgd Study Short	Soil	4/24/2018	16:53	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS29-01-042418	Bkgd Study Short	Soil	4/24/2018	16:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	B5-SS30-01-042418	Bkgd Study Short	Soil	4/24/2018	16:58	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD3, MET3

**CHAIN OF CUSTODY RECORD**

RAES\_TO1  
 Contact Name: Aaron Orechwa  
 Contact Phone: 970-420-9395

**No: RAES1-0003**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T10-XS1-01-042518	XRF Conf Short	Soil	4/25/2018	11:07	2	Quart + Gallon bags	6020, 901.1	
	T10-XS20-01-042518	XRF Conf Long	Soil	4/25/2018	12:05	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T10-XS33-01-042518	XRF Conf Short	Soil	4/25/2018	14:15	2	Quart + Gallon bags	6020, 901.1	
	T10-XS56-01-042518	XRF Conf Short	Soil	4/25/2018	15:20	2	Quart + Gallon bags	6020, 901.1	
	T10-XS78-01-042518	XRF Conf Short	Soil	4/25/2018	15:55	2	Quart + Gallon bags	6020, 901.1	Y
	T11-XS1-01-042518	XRF Conf Short	Soil	4/25/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	T11-XS20-01-042518	XRF Conf Short	Soil	4/25/2018	11:46	2	Quart + Gallon bags	6020, 901.1	
	T11-XS60-01-042518	XRF Conf Short	Soil	4/25/2018	13:45	2	Quart + Gallon bags	6020, 901.1	
	T7-XS11-01-042418	XRF Conf Short	Soil	4/24/2018	16:29	2	Quart + Gallon bags	6020, 901.1	
	T7-XS5-01-042418	XRF Conf Short	Soil	4/24/2018	16:36	2	Quart + Gallon bags	6020, 901.1	
	T7-XS58-01-042418	XRF Conf Short	Soil	4/24/2018	16:15	2	Quart + Gallon bags	6020, 901.1	
	T7-XS7-01-042418	XRF Conf Short	Soil	4/24/2018	16:55	2	Quart + Gallon bags	6020, 901.1	
	T7-XS9-01-042418	XRF Conf Short	Soil	4/24/2018	16:51	2	Quart + Gallon bags	6020, 901.1	
	T8-XS15-01-042418	XRF Conf Short	Soil	4/24/2018	15:16	2	Quart + Gallon bags	6020, 901.1	
	T8-XS23-01-042418	XRF Conf Short	Soil	4/24/2018	15:28	2	Quart + Gallon bags	6020, 901.1	
	T8-XS6-01-042418	XRF Conf Short	Soil	4/24/2018	15:01	2	Quart + Gallon bags	6020, 901.1	
	T9-XS217-01-042518	XRF Conf Long	Soil	4/25/2018	14:57	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T9-XS61-01-042518	XRF Conf Short	Soil	4/25/2018	12:05	2	Quart + Gallon bags	6020, 901.1	
	T9-XS86-01-042518	XRF Conf Short	Soil	4/25/2018	13:00	2	Quart + Gallon bags	6020, 901.1	
	T9-XS93-01-042518	XRF Conf Short	Soil	4/25/2018	14:55	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD4, MET4

**CHAIN OF CUSTODY RECORD**

RAES\_TO1  
 Contact Name: Aaron Orechwa  
 Contact Phone: 970-420-9395

**No: RAES1-0004**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M6-XS159-01-042618	XRF Conf Short	Soil	4/26/2018	14:52	2	Quart + Gallon bags	6020, 901.1	
	M6-XS251-01-042718	XRF Conf Short	Soil	4/27/2018	11:20	2	Quart + Gallon bags	6020, 901.1	
	M6-XS269-01-042618	XRF Conf Long	Soil	4/26/2018	12:20	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M6-XS269-02-042618	XRF Conf Short	Soil	4/26/2018	12:20	2	Quart + Gallon bags	6020, 901.1	
	M6-XS285-01-042718	XRF Conf Short	Soil	4/27/2018	10:50	2	Quart + Gallon bags	6020, 901.1	
	T17-XS1-01-042618	XRF Conf Short	Soil	4/26/2018	12:14	2	Quart + Gallon bags	6020, 901.1	
	T17-XS1-02-042618	XRF Conf Short	Soil	4/26/2018	12:14	2	Quart + Gallon bags	6020, 901.1	
	T17-XS143-01-042618	XRF Conf Long	Soil	4/26/2018	15:58	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T17-XS144-01-042618	XRF Conf Short	Soil	4/26/2018	16:07	2	Quart + Gallon bags	6020, 901.1	
	T17-XS194-01-042718	XRF Conf Short	Soil	4/27/2018	10:54	2	Quart + Gallon bags	6020, 901.1	
	T17-XS194-02-042718	XRF Conf Short	Soil	4/27/2018	10:54	2	Quart + Gallon bags	6020, 901.1	
	T17-XS20-01-042618	XRF Conf Short	Soil	4/26/2018	13:30	2	Quart + Gallon bags	6020, 901.1	
	T17-XS251-01-042718	XRF Conf Short	Soil	4/27/2018	14:12	2	Quart + Gallon bags	6020, 901.1	
	T17-XS257-01-042718	XRF Conf Short	Soil	4/27/2018	11:51	2	Quart + Gallon bags	6020, 901.1	
	T17-XS287-01-042718	XRF Conf Short	Soil	4/27/2018	14:52	2	Quart + Gallon bags	6020, 901.1	
	T17-XS317-01-042718	XRF Conf Short	Soil	4/27/2018	15:54	2	Quart + Gallon bags	6020, 901.1	
	T17-XS328-01-042718	XRF Conf Short	Soil	4/27/2018	14:10	2	Quart + Gallon bags	6020, 901.1	
	T17-XS417-01-042718	XRF Conf Short	Soil	4/27/2018	15:19	2	Quart + Gallon bags	6020, 901.1	Y
	T17-XS44-01-042618	XRF Conf Short	Soil	4/26/2018	14:41	2	Quart + Gallon bags	6020, 901.1	
	T17-XS442-01-042718	XRF Conf Short	Soil	4/27/2018	15:47	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD5, MET5

**CHAIN OF CUSTODY RECORD**

RAES\_TO1  
 Contact Name: Aaron Orechwa  
 Contact Phone: 970-420-9395

**No: RAES1-0005**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M2-XS15-01-042418	XRF Conf Short	Soil	4/24/2018	10:54	2	Quart + Gallon bags	6020, 901.1	
	M2-XS15-02-042418	XRF Conf Short	Soil	4/24/2018	10:54	2	Quart + Gallon bags	6020, 901.1	
	M2-XS32-01-042418	XRF Conf Short	Soil	4/24/2018	11:45	2	Quart + Gallon bags	6020, 901.1	
	M2-XS59-01-042418	XRF Conf Short	Soil	4/24/2018	14:11	2	Quart + Gallon bags	6020, 901.1	
	M2-XS73-01-042418	XRF Conf Short	Soil	4/24/2018	14:47	2	Quart + Gallon bags	6020, 901.1	
	M6-XS140-01-042818	XRF Conf Short	Soil	4/28/2018	10:30	2	Quart + Gallon bags	6020, 901.1	
	T17-XS208-01-042818	XRF Conf Short	Soil	4/28/2018	14:52	2	Quart + Gallon bags	6020, 901.1	
	T17-XS273-01-042818	XRF Conf Short	Soil	4/28/2018	12:58	2	Quart + Gallon bags	6020, 901.1	Y
	T17-XS304-01-042818	XRF Conf Short	Soil	4/28/2018	14:18	2	Quart + Gallon bags	6020, 901.1	
	T17-XS377-01-042818	XRF Conf Long	Soil	4/28/2018	11:15	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T17-XS438-01-042818	XRF Conf Short	Soil	4/28/2018	11:54	2	Quart + Gallon bags	6020, 901.1	
	T17-XS46-01-042618	XRF Conf Short	Soil	4/26/2018	15:26	2	Quart + Gallon bags	6020, 901.1	
	T17-XS473-01-042818	XRF Conf Short	Soil	4/28/2018	11:30	2	Quart + Gallon bags	6020, 901.1	
	T17-XS479-01-042818	XRF Conf Short	Soil	4/28/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	T17-XS479-02-042818	XRF Conf Short	Soil	4/28/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	T17-XS603-01-042818	XRF Conf Short	Soil	4/28/2018	14:28	2	Quart + Gallon bags	6020, 901.1	
	T9-XS61-02-042518	XRF Conf Short	Soil	4/25/2018	12:05	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD6, MET6

**CHAIN OF CUSTODY RECORD**

RAES\_TO1  
 Contact Name: Aaron Orechwa  
 Contact Phone: 970-420-9395

**No: RAES1-0006**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M3-XS34-01-043018	XRF Conf Long	Soil	4/30/2018	14:22	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M3-XS36-01-043018	XRF Conf Long	Soil	4/30/2018	14:15	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T17-EB-01-043018	Equip Blank	Water	4/30/2018	14:41	3	(1)L Poly + (1)250ml Poly + (1)	6020, 7470, 901.1, 903.1, 904.0, D3972 (U, Th)	
	T17-XS369-01-043018	XRF Conf Short	Soil	4/30/2018	11:56	2	Quart + Gallon bags	6020, 901.1	
	T17-XS393-01-043018	XRF Conf Short	Soil	4/30/2018	13:37	2	Quart + Gallon bags	6020, 901.1	Y
	T17-XS659-01-043018	XRF Conf Short	Soil	4/30/2018	14:09	2	Quart + Gallon bags	6020, 901.1	
	T17-XS679-01-043018	XRF Conf Short	Soil	4/30/2018	13:28	2	Quart + Gallon bags	6020, 901.1	
	T17-XS704-01-043018	XRF Conf Short	Soil	4/30/2018	13:51	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD3, MET3

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0007**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M4-XS136-01-050918	XRF Conf Short	Soil	5/9/2018	11:17	2	Quart + Gallon bags	6020, 901.1	
	M4-XS18-01-050718	XRF Conf Short	Soil	5/7/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M4-XS219-01-051018	XRF Conf Short	Soil	5/10/2018	11:54	2	Quart + Gallon bags	6020, 901.1	
	M4-XS238-01-051018	XRF Conf Long	Soil	5/10/2018	14:07	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M4-XS4-01-050718	XRF Conf Short	Soil	5/7/2018	11:22	2	Quart + Gallon bags	6020, 901.1	
	M4-XS45-01-050718	XRF Conf Short	Soil	5/7/2018	14:11	2	Quart + Gallon bags	6020, 901.1	
	M4-XS63-01-050718	XRF Conf Short	Soil	5/7/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	M4-XS63-02-050718	XRF Conf Short	Soil	5/7/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	M4-XS78-01-051018	XRF Conf Short	Soil	5/10/2018	15:50	2	Quart + Gallon bags	6020, 901.1	Y
	M5-XS115-01-051118	XRF Conf Short	Soil	5/11/2018	12:30	2	Quart + Gallon bags	6020, 901.1	
	M5-XS385-01-051118	XRF Conf Short	Soil	5/11/2018	10:40	2	Quart + Gallon bags	6020, 901.1	
	M5-XS69-01-051118	XRF Conf Short	Soil	5/11/2018	14:10	2	Quart + Gallon bags	6020, 901.1	
	M6-XS41-01-051118	XRF Conf Short	Soil	5/11/2018	11:48	2	Quart + Gallon bags	6020, 901.1	
	M6-XS44-01-051018	XRF Conf Short	Soil	5/10/2018	16:32	2	Quart + Gallon bags	6020, 901.1	
	M6-XS81-01-051018	XRF Conf Short	Soil	5/10/2018	15:37	2	Quart + Gallon bags	6020, 901.1	
	M7-XS181-01-051018	XRF Conf Long	Soil	5/10/2018	10:40	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M7-XS181-02-051018	XRF Conf Long	Soil	5/10/2018	10:40	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M7-XS39-01-051018	XRF Conf Short	Soil	5/10/2018	15:20	2	Quart + Gallon bags	6020, 901.1	
	M7-XS74-01-051018	XRF Conf Short	Soil	5/10/2018	13:35	2	Quart + Gallon bags	6020, 901.1	
	M7-XS77-01-051018	XRF Conf Short	Soil	5/10/2018	16:05	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD3, MET3

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0007**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T13-XS12-01-050818	XRF Conf Short	Soil	5/8/2018	14:14	2	Quart + Gallon bags	6020, 901.1	
	T13-XS24-01-050818	XRF Conf Short	Soil	5/8/2018	14:15	2	Quart + Gallon bags	6020, 901.1	
	T14-XS12-01-050818	XRF Conf Short	Soil	5/8/2018	16:04	2	Quart + Gallon bags	6020, 901.1	
	T14-XS27-01-050818	XRF Conf Long	Soil	5/8/2018	15:55	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T15-XS2-01-050818	XRF Conf Short	Soil	5/8/2018	11:18	2	Quart + Gallon bags	6020, 901.1	
	T15-XS45-01-050818	XRF Conf Short	Soil	5/8/2018	11:28	2	Quart + Gallon bags	6020, 901.1	Y
	T17-XS122-01-050718	XRF Conf Short	Soil	5/7/2018	12:36	2	Quart + Gallon bags	6020, 901.1	
	T17-XS176-01-050718	XRF Conf Short	Soil	5/7/2018	11:51	2	Quart + Gallon bags	6020, 901.1	
	T17-XS178-01-050718	XRF Conf Short	Soil	5/7/2018	11:30	2	Quart + Gallon bags	6020, 901.1	
	T17-XS619-01-050718	XRF Conf Short	Soil	5/7/2018	13:48	2	Quart + Gallon bags	6020, 901.1	
	T17-XS619-02-050718	XRF Conf Short	Soil	5/7/2018	13:48	2	Quart + Gallon bags	6020, 901.1	
	T17-XS645-01-050718	XRF Conf Short	Soil	5/7/2018	15:15	2	Quart + Gallon bags	6020, 901.1	
	T17-XS669-01-050718	XRF Conf Short	Soil	5/7/2018	14:40	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD2, MET2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0008**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B9-SB01-01-050718	Bkgd Study Short	Soil	5/7/2018	10:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SB11-01-050718	Bkgd Study Short	Soil	5/7/2018	11:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SB21-01-050718	Bkgd Study Long	Soil	5/7/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B9-SS01-01-050718	Bkgd Study Short	Soil	5/7/2018	10:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS01-02-050718	Bkgd Study Short	Soil	5/7/2018	10:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS02-01-050718	Bkgd Study Short	Soil	5/7/2018	10:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS03-01-050718	Bkgd Study Long	Soil	5/7/2018	11:00	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B9-SS04-01-050718	Bkgd Study Short	Soil	5/7/2018	11:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS05-01-050718	Bkgd Study Short	Soil	5/7/2018	11:10	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B9-SS06-01-050718	Bkgd Study Short	Soil	5/7/2018	11:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS07-01-050718	Bkgd Study Short	Soil	5/7/2018	11:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS08-01-050718	Bkgd Study Short	Soil	5/7/2018	11:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS09-01-050718	Bkgd Study Short	Soil	5/7/2018	11:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS10-01-050718	Bkgd Study Short	Soil	5/7/2018	11:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS11-01-050718	Bkgd Study Short	Soil	5/7/2018	11:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS12-01-050718	Bkgd Study Short	Soil	5/7/2018	11:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS13-01-050718	Bkgd Study Short	Soil	5/7/2018	11:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS14-01-050718	Bkgd Study Short	Soil	5/7/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS15-01-050718	Bkgd Study Short	Soil	5/7/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS16-01-050718	Bkgd Study Short	Soil	5/7/2018	12:30	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD2, MET2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0008**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B9-SS17-01-050718	Bkgd Study Short	Soil	5/7/2018	12:25	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B9-SS18-01-050718	Bkgd Study Short	Soil	5/7/2018	12:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS19-01-050718	Bkgd Study Short	Soil	5/7/2018	12:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS20-01-050718	Bkgd Study Short	Soil	5/7/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS21-01-050718	Bkgd Study Long	Soil	5/7/2018	12:40	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B9-SS21-02-050718	Bkgd Study Short	Soil	5/7/2018	12:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS22-01-050718	Bkgd Study Short	Soil	5/7/2018	12:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS23-01-050718	Bkgd Study Short	Soil	5/7/2018	12:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS24-01-050718	Bkgd Study Short	Soil	5/7/2018	12:58	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS25-01-050718	Bkgd Study Short	Soil	5/7/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS26-01-050718	Bkgd Study Short	Soil	5/7/2018	13:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS27-01-050718	Bkgd Study Short	Soil	5/7/2018	13:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS28-01-050718	Bkgd Study Short	Soil	5/7/2018	13:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS29-01-050718	Bkgd Study Short	Soil	5/7/2018	13:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B9-SS30-01-050718	Bkgd Study Short	Soil	5/7/2018	13:08	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD1, MET1

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0009**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B10-SB03-01-050718	Bkgd Study Short	Soil	5/7/2018	15:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SB11-01-050818	Bkgd Study Short	Soil	5/8/2018	12:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SB21-01-050818	Bkgd Study Long	Soil	5/8/2018	11:25	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B10-SS01-01-050718	Bkgd Study Short	Soil	5/7/2018	15:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS02-01-050718	Bkgd Study Short	Soil	5/7/2018	15:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS03-01-050718	Bkgd Study Short	Soil	5/7/2018	15:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS03-02-050718	Bkgd Study Short	Soil	5/7/2018	15:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS04-01-050818	Bkgd Study Long	Soil	5/8/2018	12:02	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B10-SS05-01-050818	Bkgd Study Short	Soil	5/8/2018	12:06	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS06-01-050818	Bkgd Study Short	Soil	5/8/2018	12:18	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B10-SS07-01-050818	Bkgd Study Short	Soil	5/8/2018	12:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS08-01-050818	Bkgd Study Short	Soil	5/8/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS09-01-050818	Bkgd Study Short	Soil	5/8/2018	12:14	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS10-01-050818	Bkgd Study Short	Soil	5/8/2018	12:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS11-01-050818	Bkgd Study Short	Soil	5/8/2018	12:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS12-01-050818	Bkgd Study Short	Soil	5/8/2018	12:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS13-01-050818	Bkgd Study Short	Soil	5/8/2018	13:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS14-01-050818	Bkgd Study Short	Soil	5/8/2018	11:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS15-01-050818	Bkgd Study Short	Soil	5/8/2018	11:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS16-01-050818	Bkgd Study Short	Soil	5/8/2018	11:50	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD1, MET1

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0009**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B10-SS17-01-050818	Bkgd Study Short	Soil	5/8/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS18-01-050818	Bkgd Study Short	Soil	5/8/2018	12:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS19-01-050818	Bkgd Study Short	Soil	5/8/2018	12:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS20-01-050818	Bkgd Study Short	Soil	5/8/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS21-01-050818	Bkgd Study Long	Soil	5/8/2018	11:20	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B10-SS21-02-050818	Bkgd Study Short	Soil	5/8/2018	11:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS22-01-050818	Bkgd Study Short	Soil	5/8/2018	11:12	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS23-01-050818	Bkgd Study Short	Soil	5/8/2018	11:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS24-01-050818	Bkgd Study Short	Soil	5/8/2018	11:04	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B10-SS25-01-050818	Bkgd Study Short	Soil	5/8/2018	13:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS26-01-050818	Bkgd Study Short	Soil	5/8/2018	13:16	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS27-01-050818	Bkgd Study Short	Soil	5/8/2018	10:48	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS28-01-050818	Bkgd Study Short	Soil	5/8/2018	10:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS29-01-050818	Bkgd Study Short	Soil	5/8/2018	10:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	B10-SS30-01-050818	Bkgd Study Short	Soil	5/8/2018	13:20	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD4, MET4

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0010**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B12-SB01-01-050818	Bkgd Study Short	Soil	5/8/2018	15:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SB11-01-050818	Bkgd Study Long	Soil	5/8/2018	15:35	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B12-SB26-01-050818	Bkgd Study Short	Soil	5/8/2018	15:15	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B12-SS01-01-050818	Bkgd Study Long	Soil	5/8/2018	15:50	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B12-SS01-02-050818	Bkgd Study Short	Soil	5/8/2018	15:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS02-01-050818	Bkgd Study Short	Soil	5/8/2018	16:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS03-01-050918	Bkgd Study Short	Soil	5/9/2018	10:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS04-01-050918	Bkgd Study Short	Soil	5/9/2018	10:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS05-01-050918	Bkgd Study Short	Soil	5/9/2018	10:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS06-01-050818	Bkgd Study Short	Soil	5/8/2018	15:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS07-01-050818	Bkgd Study Short	Soil	5/8/2018	16:12	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS08-01-050918	Bkgd Study Short	Soil	5/9/2018	10:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS09-01-050918	Bkgd Study Short	Soil	5/9/2018	10:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS10-01-050918	Bkgd Study Short	Soil	5/9/2018	10:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS11-01-050818	Bkgd Study Long	Soil	5/8/2018	15:30	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B12-SS12-01-050818	Bkgd Study Short	Soil	5/8/2018	16:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS13-01-050918	Bkgd Study Short	Soil	5/9/2018	10:46	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS14-01-050918	Bkgd Study Short	Soil	5/9/2018	10:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS15-01-050918	Bkgd Study Short	Soil	5/9/2018	10:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS16-01-050818	Bkgd Study Short	Soil	5/8/2018	15:26	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD4, MET4

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0010**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B12-SS17-01-050818	Bkgd Study Short	Soil	5/8/2018	16:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS18-01-050918	Bkgd Study Short	Soil	5/9/2018	10:48	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS19-01-050918	Bkgd Study Short	Soil	5/9/2018	10:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS20-01-050918	Bkgd Study Short	Soil	5/9/2018	10:12	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS21-01-050818	Bkgd Study Short	Soil	5/8/2018	15:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS22-01-050918	Bkgd Study Short	Soil	5/9/2018	11:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS23-01-050918	Bkgd Study Short	Soil	5/9/2018	10:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS24-01-050918	Bkgd Study Short	Soil	5/9/2018	10:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS25-01-050918	Bkgd Study Short	Soil	5/9/2018	10:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS26-01-050818	Bkgd Study Short	Soil	5/8/2018	15:12	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B12-SS26-02-050818	Bkgd Study Short	Soil	5/8/2018	15:12	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS27-01-050918	Bkgd Study Short	Soil	5/9/2018	11:02	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS28-01-050918	Bkgd Study Short	Soil	5/9/2018	10:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS29-01-050918	Bkgd Study Short	Soil	5/9/2018	10:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B12-SS30-01-050918	Bkgd Study Short	Soil	5/9/2018	10:18	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD9, MET9

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0011**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B11-SB05-01-051118	Bkgd Study Short	Soil	5/11/2018	14:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SB15-01-051118	Bkgd Study Long	Soil	5/11/2018	14:30	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B11-SB25-01-051118	Bkgd Study Short	Soil	5/11/2018	12:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS01-01-051118	Bkgd Study Short	Soil	5/11/2018	13:39	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS02-01-051118	Bkgd Study Short	Soil	5/11/2018	13:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS03-01-051118	Bkgd Study Short	Soil	5/11/2018	13:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS04-01-051118	Bkgd Study Short	Soil	5/11/2018	14:01	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B11-SS05-01-051118	Bkgd Study Short	Soil	5/11/2018	14:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS06-01-051118	Bkgd Study Short	Soil	5/11/2018	14:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS07-01-051118	Bkgd Study Short	Soil	5/11/2018	14:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS08-01-051118	Bkgd Study Short	Soil	5/11/2018	15:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS09-01-051118	Bkgd Study Short	Soil	5/11/2018	15:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS09-02-051118	Bkgd Study Short	Soil	5/11/2018	15:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS10-01-051118	Bkgd Study Short	Soil	5/11/2018	15:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS11-01-051118	Bkgd Study Short	Soil	5/11/2018	14:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS12-01-051118	Bkgd Study Short	Soil	5/11/2018	14:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS13-01-051118	Bkgd Study Short	Soil	5/11/2018	14:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS14-01-051118	Bkgd Study Short	Soil	5/11/2018	14:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS15-01-051118	Bkgd Study Long	Soil	5/11/2018	14:25	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B11-SS16-01-051118	Bkgd Study Short	Soil	5/11/2018	12:55	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD9, MET9

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0011**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B11-SS17-01-051118	Bkgd Study Short	Soil	5/11/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS18-01-051118	Bkgd Study Short	Soil	5/11/2018	13:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS19-01-051118	Bkgd Study Short	Soil	5/11/2018	13:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS20-01-051118	Bkgd Study Short	Soil	5/11/2018	13:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS21-01-051118	Bkgd Study Short	Soil	5/11/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS21-02-051118	Bkgd Study Short	Soil	5/11/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS22-01-051118	Bkgd Study Short	Soil	5/11/2018	12:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS23-01-051118	Bkgd Study Short	Soil	5/11/2018	12:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS24-01-051118	Bkgd Study Long	Soil	5/11/2018	12:30	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B11-SS25-01-051118	Bkgd Study Short	Soil	5/11/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS26-01-051118	Bkgd Study Short	Soil	5/11/2018	11:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS27-01-051118	Bkgd Study Short	Soil	5/11/2018	11:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS28-01-051118	Bkgd Study Short	Soil	5/11/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B11-SS29-01-051118	Bkgd Study Short	Soil	5/11/2018	12:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B11-SS30-01-051118	Bkgd Study Short	Soil	5/11/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD10, MET10

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0012**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B1-SB12-01-051218	Bkgd Study Short	Soil	5/12/2018	11:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SB19-01-051218	Bkgd Study Short	Soil	5/12/2018	12:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SB24-01-051218	Bkgd Study Long	Soil	5/12/2018	11:56	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B1-SS01-01-051218	Bkgd Study Short	Soil	5/12/2018	11:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS02-01-051218	Bkgd Study Short	Soil	5/12/2018	11:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS03-01-051218	Bkgd Study Short	Soil	5/12/2018	12:14	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS04-01-051218	Bkgd Study Long	Soil	5/12/2018	12:12	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B1-SS05-01-051218	Bkgd Study Short	Soil	5/12/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B1-SS06-01-051218	Bkgd Study Short	Soil	5/12/2018	11:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS07-01-051218	Bkgd Study Short	Soil	5/12/2018	11:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS08-01-051218	Bkgd Study Short	Soil	5/12/2018	12:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS09-01-051218	Bkgd Study Short	Soil	5/12/2018	12:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS10-01-051218	Bkgd Study Short	Soil	5/12/2018	12:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS11-01-051218	Bkgd Study Short	Soil	5/12/2018	11:29	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS12-01-051218	Bkgd Study Short	Soil	5/12/2018	11:41	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS13-01-051218	Bkgd Study Short	Soil	5/12/2018	12:19	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS14-01-051218	Bkgd Study Short	Soil	5/12/2018	12:29	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS15-01-051218	Bkgd Study Short	Soil	5/12/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS15-02-051218	Bkgd Study Short	Soil	5/12/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS16-01-051218	Bkgd Study Short	Soil	5/12/2018	11:27	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD10, MET10

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0012**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B1-SS17-01-051218	Bkgd Study Short	Soil	5/12/2018	11:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS18-01-051218	Bkgd Study Short	Soil	5/12/2018	12:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS19-01-051218	Bkgd Study Short	Soil	5/12/2018	12:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS20-01-051218	Bkgd Study Short	Soil	5/12/2018	12:01	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS21-01-051218	Bkgd Study Short	Soil	5/12/2018	11:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS22-01-051218	Bkgd Study Short	Soil	5/12/2018	11:49	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS23-01-051218	Bkgd Study Short	Soil	5/12/2018	11:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS24-01-051218	Bkgd Study Long	Soil	5/12/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B1-SS25-01-051218	Bkgd Study Short	Soil	5/12/2018	12:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS26-01-051218	Bkgd Study Short	Soil	5/12/2018	11:21	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS27-01-051218	Bkgd Study Short	Soil	5/12/2018	11:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS28-01-051218	Bkgd Study Short	Soil	5/12/2018	11:13	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B1-SS29-01-051218	Bkgd Study Short	Soil	5/12/2018	11:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B1-SS30-01-051218	Bkgd Study Short	Soil	5/12/2018	11:07	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD5-1, RAD5-2, MET5

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0013**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B2-SB05-01-051218	Bkgd Study Short	Soil	5/12/2018	13:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SB26-01-051218	Bkgd Study Short	Soil	5/12/2018	14:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SB29-01-051218	Bkgd Study Long	Soil	5/12/2018	13:55	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B2-SS01-01-051218	Bkgd Study Long	Soil	5/12/2018	14:35	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B2-SS02-01-051218	Bkgd Study Short	Soil	5/12/2018	14:11	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS03-01-051218	Bkgd Study Short	Soil	5/12/2018	14:09	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS04-01-051218	Bkgd Study Short	Soil	5/12/2018	13:41	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS05-01-051218	Bkgd Study Short	Soil	5/12/2018	13:37	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS06-01-051218	Bkgd Study Short	Soil	5/12/2018	14:33	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS07-01-051218	Bkgd Study Short	Soil	5/12/2018	14:13	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS08-01-051218	Bkgd Study Short	Soil	5/12/2018	14:07	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS09-01-051218	Bkgd Study Short	Soil	5/12/2018	13:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS09-02-051218	Bkgd Study Short	Soil	5/12/2018	13:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS10-01-051218	Bkgd Study Short	Soil	5/12/2018	13:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS11-01-051218	Bkgd Study Short	Soil	5/12/2018	14:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS12-01-051218	Bkgd Study Short	Soil	5/12/2018	14:14	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS13-01-051218	Bkgd Study Short	Soil	5/12/2018	14:04	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS14-01-051218	Bkgd Study Short	Soil	5/12/2018	13:47	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B2-SS15-01-051218	Bkgd Study Short	Soil	5/12/2018	13:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS16-01-051218	Bkgd Study Short	Soil	5/12/2018	14:28	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD5-1, RAD5-2, MET5

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0013**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B2-SS17-01-051218	Bkgd Study Short	Soil	5/12/2018	14:16	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS18-01-051218	Bkgd Study Short	Soil	5/12/2018	14:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS19-01-051218	Bkgd Study Short	Soil	5/12/2018	13:49	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS20-01-051218	Bkgd Study Short	Soil	5/12/2018	13:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS21-01-051218	Bkgd Study Short	Soil	5/12/2018	14:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS22-01-051218	Bkgd Study Short	Soil	5/12/2018	14:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS23-01-051218	Bkgd Study Short	Soil	5/12/2018	13:58	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS24-01-051218	Bkgd Study Short	Soil	5/12/2018	13:51	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS25-01-051218	Bkgd Study Short	Soil	5/12/2018	13:29	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS26-01-051218	Bkgd Study Short	Soil	5/12/2018	14:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS27-01-051218	Bkgd Study Short	Soil	5/12/2018	14:20	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B2-SS28-01-051218	Bkgd Study Short	Soil	5/12/2018	13:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	B2-SS29-01-051218	Bkgd Study Long	Soil	5/12/2018	13:53	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B2-SS30-01-051218	Bkgd Study Short	Soil	5/12/2018	13:27	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD8, MET8

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0014**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B3-SB08-01-051218	Bkgd Study Short	Soil	5/12/2018	14:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SB17-01-051218	Bkgd Study Long	Soil	5/12/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B3-SB25-01-051218	Bkgd Study Short	Soil	5/12/2018	12:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS01-01-051218	Bkgd Study Short	Soil	5/12/2018	14:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS02-01-051218	Bkgd Study Short	Soil	5/12/2018	14:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS03-01-051218	Bkgd Study Short	Soil	5/12/2018	14:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS04-01-051218	Bkgd Study Short	Soil	5/12/2018	14:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS04-02-051218	Bkgd Study Short	Soil	5/12/2018	14:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS05-01-051218	Bkgd Study Short	Soil	5/12/2018	14:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS06-01-051218	Bkgd Study Short	Soil	5/12/2018	14:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS07-01-051218	Bkgd Study Short	Soil	5/12/2018	14:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS08-01-051218	Bkgd Study Short	Soil	5/12/2018	13:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS09-01-051218	Bkgd Study Short	Soil	5/12/2018	13:50	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B3-SS10-01-051218	Bkgd Study Long	Soil	5/12/2018	13:45	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B3-SS11-01-051218	Bkgd Study Short	Soil	5/12/2018	13:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS12-01-051218	Bkgd Study Short	Soil	5/12/2018	13:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS13-01-051218	Bkgd Study Short	Soil	5/12/2018	13:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS14-01-051218	Bkgd Study Short	Soil	5/12/2018	13:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS15-01-051218	Bkgd Study Short	Soil	5/12/2018	13:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS16-01-051218	Bkgd Study Short	Soil	5/12/2018	13:15	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD8, MET8

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0014**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B3-SS17-01-051218	Bkgd Study Long	Soil	5/12/2018	13:00	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B3-SS18-01-051218	Bkgd Study Short	Soil	5/12/2018	12:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS19-01-051218	Bkgd Study Short	Soil	5/12/2018	12:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS19-02-051218	Bkgd Study Short	Soil	5/12/2018	12:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS20-01-051218	Bkgd Study Short	Soil	5/12/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS21-01-051218	Bkgd Study Short	Soil	5/12/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS22-01-051218	Bkgd Study Short	Soil	5/12/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS23-01-051218	Bkgd Study Short	Soil	5/12/2018	12:20	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B3-SS24-01-051218	Bkgd Study Short	Soil	5/12/2018	12:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS25-01-051218	Bkgd Study Short	Soil	5/12/2018	12:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS26-01-051218	Bkgd Study Short	Soil	5/12/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS27-01-051218	Bkgd Study Short	Soil	5/12/2018	12:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS28-01-051218	Bkgd Study Short	Soil	5/12/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS29-01-051218	Bkgd Study Short	Soil	5/12/2018	11:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B3-SS30-01-051218	Bkgd Study Short	Soil	5/12/2018	11:45	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD6, MET6

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0015**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M1-XS31-01-051218	XRF Conf Short	Soil	5/12/2018	12:02	2	Quart + Gallon bags	6020, 901.1	
	M1-XS32-01-051218	XRF Conf Short	Soil	5/12/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	M8-XS100-01-050918	XRF Conf Short	Soil	5/9/2018	10:42	2	Quart + Gallon bags	6020, 901.1	
	M8-XS102-01-050918	XRF Conf Long	Soil	5/9/2018	11:45	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M8-XS102-02-050918	XRF Conf Short	Soil	5/9/2018	11:45	2	Quart + Gallon bags	6020, 901.1	
	M8-XS110-01-050918	XRF Conf Short	Soil	5/9/2018	13:00	2	Quart + Gallon bags	6020, 901.1	
	M8-XS19-01-051018	XRF Conf Short	Soil	5/10/2018	12:12	2	Quart + Gallon bags	6020, 901.1	
	M8-XS32-01-051018	XRF Conf Short	Soil	5/10/2018	12:27	2	Quart + Gallon bags	6020, 901.1	
	M8-XS94-01-050918	XRF Conf Short	Soil	5/9/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	T1-XS104-01-051318	XRF Conf Short	Soil	5/13/2018	14:25	2	Quart + Gallon bags	6020, 901.1	
	T1-XS20-01-051318	XRF Conf Short	Soil	5/13/2018	10:46	2	Quart + Gallon bags	6020, 901.1	
	T1-XS54-01-051318	XRF Conf Short	Soil	5/13/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	T1-XS54-02-051318	XRF Conf Short	Soil	5/13/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	T1-XS69-01-051318	XRF Conf Short	Soil	5/13/2018	13:25	2	Quart + Gallon bags	6020, 901.1	
	T3-XS10-01-051218	XRF Conf Short	Soil	5/12/2018	13:51	2	Quart + Gallon bags	6020, 901.1	
	T3-XS5-01-051218	XRF Conf Short	Soil	5/12/2018	13:57	2	Quart + Gallon bags	6020, 901.1	Y
	T4-XS23-01-051218	XRF Conf Short	Soil	5/12/2018	14:46	2	Quart + Gallon bags	6020, 901.1	
	T4-XS32-01-051218	XRF Conf Short	Soil	5/12/2018	14:31	2	Quart + Gallon bags	6020, 901.1	
	T4-XS43-01-051218	XRF Conf Short	Soil	5/12/2018	14:22	2	Quart + Gallon bags	6020, 901.1	
	T5-XS18-01-051418	XRF Conf Short	Soil	5/14/2018	10:43	2	Quart + Gallon bags	6020, 901.1	



Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
Fort Collins, CO 80525  
Cooler #: RAD6, MET6

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
Contact Name: Aaron Orechwa, 970-420-9395  
Project Code: 103G5440001.06.01

**No: RAES1-0015**

Lab: ALS Laboratory Group - Fort Collins  
Lab Phone: 970-490-1511  
Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T6-XS2-01-051218	XRF Conf Short	Soil	5/12/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	T6-XS25-01-051218	XRF Conf Short	Soil	5/12/2018	12:30	2	Quart + Gallon bags	6020, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD7, MET7

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0016**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B4-SB06-01-051318	Bkgd Study Long	Soil	5/13/2018	10:17	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B4-SB16-01-051318	Bkgd Study Short	Soil	5/13/2018	11:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SB27-01-051318	Bkgd Study Short	Soil	5/13/2018	13:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SB27-02-051318	Bkgd Study Short	Soil	5/13/2018	13:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS01-01-051218	Bkgd Study Short	Soil	5/12/2018	14:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS02-01-051218	Bkgd Study Short	Soil	5/12/2018	14:37	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B4-SS03-01-051218	Bkgd Study Short	Soil	5/12/2018	14:41	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS04-01-051218	Bkgd Study Short	Soil	5/12/2018	14:46	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS05-01-051218	Bkgd Study Short	Soil	5/12/2018	14:51	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS06-01-051318	Bkgd Study Long	Soil	5/13/2018	10:15	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B4-SS07-01-051318	Bkgd Study Short	Soil	5/13/2018	10:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS08-01-051318	Bkgd Study Short	Soil	5/13/2018	10:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS09-01-051318	Bkgd Study Short	Soil	5/13/2018	10:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS10-01-051218	Bkgd Study Short	Soil	5/12/2018	14:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS11-01-051318	Bkgd Study Short	Soil	5/13/2018	11:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS12-01-051318	Bkgd Study Short	Soil	5/13/2018	11:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS12-02-051318	Bkgd Study Short	Soil	5/13/2018	11:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS13-01-051318	Bkgd Study Short	Soil	5/13/2018	11:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS14-01-051318	Bkgd Study Short	Soil	5/13/2018	11:01	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS15-01-051318	Bkgd Study Short	Soil	5/13/2018	10:54	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD7, MET7

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0016**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B4-SS16-01-051318	Bkgd Study Short	Soil	5/13/2018	11:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS17-01-051318	Bkgd Study Short	Soil	5/13/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS18-01-051318	Bkgd Study Short	Soil	5/13/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS19-01-051318	Bkgd Study Short	Soil	5/13/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS20-01-051318	Bkgd Study Short	Soil	5/13/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS21-01-051318	Bkgd Study Short	Soil	5/13/2018	13:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS22-01-051318	Bkgd Study Short	Soil	5/13/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS23-01-051318	Bkgd Study Short	Soil	5/13/2018	13:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS24-01-051318	Bkgd Study Short	Soil	5/13/2018	12:55	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B4-SS25-01-051318	Bkgd Study Long	Soil	5/13/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B4-SS26-01-051318	Bkgd Study Short	Soil	5/13/2018	13:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS27-01-051318	Bkgd Study Short	Soil	5/13/2018	13:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS28-01-051318	Bkgd Study Short	Soil	5/13/2018	13:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS29-01-051318	Bkgd Study Short	Soil	5/13/2018	13:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B4-SS30-01-051318	Bkgd Study Short	Soil	5/13/2018	13:55	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD11, MET11

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0017**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M3-Corr1-01-051018	Gamma Corr	Soil	5/10/2018	11:00	1	Gallon bag	6020, 901.1	Y
	M4-Corr1-01-050918	Gamma Corr	Soil	5/9/2018	13:07	1	Gallon bag	6020, 901.1	
	M4-Corr2-01-050918	Gamma Corr	Soil	5/9/2018	13:21	1	Gallon bag	6020, 901.1	
	M5-Corr1-01-050918	Gamma Corr	Soil	5/9/2018	13:32	1	Gallon bag	6020, 901.1	
	M6-Corr1-01-051018	Gamma Corr	Soil	5/10/2018	11:55	1	Gallon bag	6020, 901.1	
	M6-Corr2-01-050918	Gamma Corr	Soil	5/9/2018	15:00	1	Gallon bag	6020, 901.1	
	M7-Corr1-01-051018	Gamma Corr	Soil	5/10/2018	13:25	1	Gallon bag	6020, 901.1	
	M7-Corr2-01-051018	Gamma Corr	Soil	5/10/2018	13:45	1	Gallon bag	6020, 901.1	
	M7-Corr3-01-051018	Gamma Corr	Soil	5/10/2018	14:15	1	Gallon bag	6020, 901.1	
	M8-Corr1-01-050918	Gamma Corr	Soil	5/9/2018	14:07	1	Gallon bag	6020, 901.1	
	M8-Corr1-02-050918	Gamma Corr	Soil	5/9/2018	15:22	1	Gallon bag	6020, 901.1	
	M8-Corr2-01-050918	Gamma Corr	Soil	5/9/2018	15:22	1	Gallon bag	6020, 901.1	
	T17-Corr1-01-050918	Gamma Corr	Soil	5/9/2018	15:30	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
Fort Collins, CO 80525  
Cooler #: 12

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
Contact Name: Aaron Orechwa, 970-420-9395  
Project Code: 103G5440001.06.01

**No: RAES1-0018**

Lab: ALS Laboratory Group - Fort Collins  
Lab Phone: 970-490-1511  
Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T5-EB-01-051418	Equip Blank	Water	5/14/2018	11:40	3	(1)L Poly + (1)250ml Poly + (1)	6020, 7470, 901.1, 903.1, 904.0, D3972 (U, Th)	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b> <b>CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-A, MET-A

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0019**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B6-SS01-01-052218	Bkgd Study Short	Soil	5/22/2018	11:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS01-02-052218	Bkgd Study Short	Soil	5/22/2018	11:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS02-01-052218	Bkgd Study Short	Soil	5/22/2018	11:49	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS03-01-052218	Bkgd Study Short	Soil	5/22/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B6-SS04-01-052218	Bkgd Study Short	Soil	5/22/2018	11:58	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS05-01-052218	Bkgd Study Short	Soil	5/22/2018	12:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS06-01-052218	Bkgd Study Short	Soil	5/22/2018	12:13	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS07-01-052218	Bkgd Study Short	Soil	5/22/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS09-01-052218	Bkgd Study Short	Soil	5/22/2018	12:07	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS10-01-052218	Bkgd Study Short	Soil	5/22/2018	12:03	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS11-01-052218	Bkgd Study Long	Soil	5/22/2018	12:19	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B6-SS13-01-052218	Bkgd Study Short	Soil	5/22/2018	12:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS14-01-052218	Bkgd Study Short	Soil	5/22/2018	12:27	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS15-01-052218	Bkgd Study Short	Soil	5/22/2018	12:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS16-01-052218	Bkgd Study Short	Soil	5/22/2018	12:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS17-01-052218	Bkgd Study Short	Soil	5/22/2018	12:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS18-01-052218	Bkgd Study Short	Soil	5/22/2018	12:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS19-01-052218	Bkgd Study Short	Soil	5/22/2018	12:43	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS20-01-052218	Bkgd Study Short	Soil	5/22/2018	12:33	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-B, MET-B

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0020**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B6-SB01-01-052218	Bkgd Study Short	Soil	5/22/2018	11:52	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B6-SB11-01-052218	Bkgd Study Long	Soil	5/22/2018	12:21	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B6-SB16-01-052218	Bkgd Study Short	Soil	5/22/2018	13:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SB16-02-052218	Bkgd Study Short	Soil	5/22/2018	13:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS24-01-052218	Bkgd Study Short	Soil	5/22/2018	12:41	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS25-01-052218	Bkgd Study Short	Soil	5/22/2018	12:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B6-SS30-01-052218	Bkgd Study Short	Soil	5/22/2018	12:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS01-01-052218	Bkgd Study Short	Soil	5/22/2018	08:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS01-02-052218	Bkgd Study Short	Soil	5/22/2018	08:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS02-01-052218	Bkgd Study Short	Soil	5/22/2018	08:29	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS03-01-052218	Bkgd Study Long	Soil	5/22/2018	08:32	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B7-SS04-01-052218	Bkgd Study Short	Soil	5/22/2018	08:37	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS05-01-052218	Bkgd Study Short	Soil	5/22/2018	08:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS06-01-052218	Bkgd Study Short	Soil	5/22/2018	09:02	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS07-01-052218	Bkgd Study Short	Soil	5/22/2018	08:59	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS08-01-052218	Bkgd Study Short	Soil	5/22/2018	08:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS09-01-052218	Bkgd Study Short	Soil	5/22/2018	08:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS10-01-052218	Bkgd Study Short	Soil	5/22/2018	08:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS11-01-052218	Bkgd Study Short	Soil	5/22/2018	09:07	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS12-01-052218	Bkgd Study Short	Soil	5/22/2018	09:15	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-C, MET-C

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0021**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B7-SS13-01-052218	Bkgd Study Short	Soil	5/22/2018	09:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS14-01-052218	Bkgd Study Short	Soil	5/22/2018	09:21	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS15-01-052218	Bkgd Study Short	Soil	5/22/2018	09:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS16-01-052218	Bkgd Study Short	Soil	5/22/2018	09:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS17-01-052218	Bkgd Study Short	Soil	5/22/2018	09:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS18-01-052218	Bkgd Study Short	Soil	5/22/2018	09:41	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS19-01-052218	Bkgd Study Short	Soil	5/22/2018	09:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS20-01-052218	Bkgd Study Short	Soil	5/22/2018	09:33	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS21-01-052218	Bkgd Study Long	Soil	5/22/2018	09:56	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B7-SS21-02-052218	Bkgd Study Short	Soil	5/22/2018	09:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS22-01-052218	Bkgd Study Short	Soil	5/22/2018	10:03	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS23-01-052218	Bkgd Study Short	Soil	5/22/2018	10:11	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS24-01-052218	Bkgd Study Short	Soil	5/22/2018	10:14	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS25-01-052218	Bkgd Study Short	Soil	5/22/2018	10:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS26-01-052218	Bkgd Study Short	Soil	5/22/2018	10:39	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B7-SS27-01-052218	Bkgd Study Short	Soil	5/22/2018	10:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS28-01-052218	Bkgd Study Short	Soil	5/22/2018	10:31	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS29-01-052218	Bkgd Study Short	Soil	5/22/2018	10:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SS30-01-052218	Bkgd Study Short	Soil	5/22/2018	10:20	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-D, MET-D

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0022**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B7-SB01-01-052218	Bkgd Study Short	Soil	5/22/2018	08:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B7-SB11-01-052218	Bkgd Study Short	Soil	5/22/2018	09:10	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B7-SB21-01-052218	Bkgd Study Long	Soil	5/22/2018	10:00	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B8-SS01-01-052218	Bkgd Study Short	Soil	5/22/2018	13:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS01-02-052218	Bkgd Study Short	Soil	5/22/2018	13:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS02-01-052218	Bkgd Study Short	Soil	5/22/2018	13:37	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS03-01-052218	Bkgd Study Short	Soil	5/22/2018	13:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS04-01-052218	Bkgd Study Short	Soil	5/22/2018	13:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS05-01-052218	Bkgd Study Short	Soil	5/22/2018	13:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS06-01-052218	Bkgd Study Short	Soil	5/22/2018	13:57	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS07-01-052218	Bkgd Study Short	Soil	5/22/2018	13:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS08-01-052218	Bkgd Study Short	Soil	5/22/2018	13:53	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS09-01-052218	Bkgd Study Short	Soil	5/22/2018	13:51	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS10-01-052218	Bkgd Study Short	Soil	5/22/2018	13:49	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS11-01-052218	Bkgd Study Short	Soil	5/22/2018	14:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS11-02-052218	Bkgd Study Short	Soil	5/22/2018	14:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS12-01-052218	Bkgd Study Short	Soil	5/22/2018	14:06	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS13-01-052218	Bkgd Study Short	Soil	5/22/2018	14:07	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS14-01-052218	Bkgd Study Long	Soil	5/22/2018	14:09	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-E, MET-E

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0023**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B8-SB01-01-052218	Bkgd Study Short	Soil	5/22/2018	13:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SB11-01-052218	Bkgd Study Short	Soil	5/22/2018	14:04	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SB21-01-052218	Bkgd Study Long	Soil	5/22/2018	14:26	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B8-SS15-01-052218	Bkgd Study Short	Soil	5/22/2018	14:11	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS16-01-052218	Bkgd Study Short	Soil	5/22/2018	14:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS17-01-052218	Bkgd Study Short	Soil	5/22/2018	14:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS18-01-052218	Bkgd Study Short	Soil	5/22/2018	14:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS19-01-052218	Bkgd Study Short	Soil	5/22/2018	14:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS20-01-052218	Bkgd Study Short	Soil	5/22/2018	14:13	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS21-01-052218	Bkgd Study Long	Soil	5/22/2018	14:24	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B8-SS22-01-052218	Bkgd Study Short	Soil	5/22/2018	14:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS23-01-052218	Bkgd Study Short	Soil	5/22/2018	14:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS24-01-052218	Bkgd Study Short	Soil	5/22/2018	14:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS25-01-052218	Bkgd Study Short	Soil	5/22/2018	14:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS26-01-052218	Bkgd Study Short	Soil	5/22/2018	14:36	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B8-SS27-01-052218	Bkgd Study Short	Soil	5/22/2018	14:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS28-01-052218	Bkgd Study Short	Soil	5/22/2018	14:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS29-01-052218	Bkgd Study Short	Soil	5/22/2018	14:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B8-SS30-01-052218	Bkgd Study Short	Soil	5/22/2018	14:44	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-F, MET-F

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0024**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M15-XS22-01-052118	XRF Conf Long	Soil	5/21/2018	11:48	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M15-XS3-01-052118	XRF Conf Long	Soil	5/21/2018	10:41	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M15-XS46-01-052118	XRF Conf Short	Soil	5/21/2018	13:10	2	Quart + Gallon bags	6020, 901.1	
	M15-XS46-02-052118	XRF Conf Short	Soil	5/21/2018	13:10	2	Quart + Gallon bags	6020, 901.1	
	M15-XS73-01-052118	XRF Conf Short	Soil	5/21/2018	11:00	2	Quart + Gallon bags	6020, 901.1	
	M15-XS82-01-052118	XRF Conf Short	Soil	5/21/2018	13:10	2	Quart + Gallon bags	6020, 901.1	
	M15-XS93-01-052118	XRF Conf Short	Soil	5/21/2018	12:20	2	Quart + Gallon bags	6020, 901.1	
	M16-XS128-01-052118	XRF Conf Short	Soil	5/21/2018	12:16	2	Quart + Gallon bags	6020, 901.1	
	M16-XS166-01-052118	XRF Conf Short	Soil	5/21/2018	11:10	2	Quart + Gallon bags	6020, 901.1	
	M16-XS30-01-052118	XRF Conf Short	Soil	5/21/2018	12:16	2	Quart + Gallon bags	6020, 901.1	
	M16-XS31-01-052118	XRF Conf Short	Soil	5/21/2018	12:04	2	Quart + Gallon bags	6020, 901.1	
	M16-XS4-01-052118	XRF Conf Short	Soil	5/21/2018	10:58	2	Quart + Gallon bags	6020, 901.1	
	M16-XS45-01-052118	XRF Conf Short	Soil	5/21/2018	13:22	2	Quart + Gallon bags	6020, 901.1	
	T21-XS35-01-052118	XRF Conf Short	Soil	5/21/2018	15:46	2	Quart + Gallon bags	6020, 901.1	
	T21-XS55-01-052118	XRF Conf Short	Soil	5/21/2018	14:52	2	Quart + Gallon bags	6020, 901.1	
	T21-XS55-02-052118	XRF Conf Short	Soil	5/21/2018	14:52	2	Quart + Gallon bags	6020, 901.1	Y
	T21-XS6-01-052118	XRF Conf Short	Soil	5/21/2018	16:50	2	Quart + Gallon bags	6020, 901.1	
	T22-XS17-01-052118	XRF Conf Short	Soil	5/21/2018	15:19	2	Quart + Gallon bags	6020, 901.1	
	T23-XS23-01-052118	XRF Conf Short	Soil	5/21/2018	15:20	2	Quart + Gallon bags	6020, 901.1	
	T23-XS40-01-052118	XRF Conf Short	Soil	5/21/2018	16:28	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-G, MET-G

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0025**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B17-SB01-01-052418	Bkgd Study Short	Soil	5/24/2018	12:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SB11-01-052418	Bkgd Study Short	Soil	5/24/2018	12:14	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SB21-01-052418	Bkgd Study Long	Soil	5/24/2018	11:38	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B17-SS01-01-052418	Bkgd Study Short	Soil	5/24/2018	12:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS02-01-052418	Bkgd Study Short	Soil	5/24/2018	12:36	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B17-SS03-01-052418	Bkgd Study Short	Soil	5/24/2018	12:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS04-01-052418	Bkgd Study Short	Soil	5/24/2018	12:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS05-01-052418	Bkgd Study Short	Soil	5/24/2018	12:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS06-01-052418	Bkgd Study Long	Soil	5/24/2018	12:25	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B17-SS07-01-052418	Bkgd Study Short	Soil	5/24/2018	12:01	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS08-01-052418	Bkgd Study Short	Soil	5/24/2018	12:04	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS09-01-052418	Bkgd Study Short	Soil	5/24/2018	12:06	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS10-01-052418	Bkgd Study Short	Soil	5/24/2018	12:09	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS11-01-052418	Bkgd Study Short	Soil	5/24/2018	12:12	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS11-02-052418	Bkgd Study Short	Soil	5/24/2018	12:12	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS12-01-052418	Bkgd Study Short	Soil	5/24/2018	12:14	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS13-01-052418	Bkgd Study Short	Soil	5/24/2018	11:59	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS14-01-052418	Bkgd Study Short	Soil	5/24/2018	11:57	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-G, MET-G

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0025**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B17-SS15-01-052418	Bkgd Study Short	Soil	5/24/2018	11:54	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS16-01-052418	Bkgd Study Short	Soil	5/24/2018	11:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS17-01-052418	Bkgd Study Short	Soil	5/24/2018	11:49	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS18-01-052418	Bkgd Study Short	Soil	5/24/2018	11:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS19-01-052418	Bkgd Study Short	Soil	5/24/2018	11:31	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS20-01-052418	Bkgd Study Short	Soil	5/24/2018	11:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS21-01-052418	Bkgd Study Long	Soil	5/24/2018	11:36	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B17-SS21-02-052418	Bkgd Study Long	Soil	5/24/2018	11:36	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B17-SS22-01-052418	Bkgd Study Short	Soil	5/24/2018	11:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS23-01-052418	Bkgd Study Short	Soil	5/24/2018	11:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS24-01-052418	Bkgd Study Short	Soil	5/24/2018	11:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS25-01-052418	Bkgd Study Short	Soil	5/24/2018	11:29	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B17-SS26-01-052418	Bkgd Study Short	Soil	5/24/2018	11:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS27-01-052418	Bkgd Study Short	Soil	5/24/2018	11:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS28-01-052418	Bkgd Study Short	Soil	5/24/2018	11:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS29-01-052418	Bkgd Study Short	Soil	5/24/2018	11:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B17-SS30-01-052418	Bkgd Study Short	Soil	5/24/2018	11:20	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-H, MET-H

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0026**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B22-SB22-01-052418	Bkgd Study Short	Soil	5/24/2018	10:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SBS16-01-052418	Bkgd Study Short	Soil	5/24/2018	10:25	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B22-SBS17-01-052418	Bkgd Study Short	Soil	5/24/2018	10:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS01-01-052418	Bkgd Study Short	Soil	5/24/2018	11:02	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS02-01-052418	Bkgd Study Short	Soil	5/24/2018	11:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS03-01-052418	Bkgd Study Short	Soil	5/24/2018	10:59	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS04-01-052418	Bkgd Study Long	Soil	5/24/2018	10:57	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B22-SS05-01-052418	Bkgd Study Short	Soil	5/24/2018	10:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS06-01-052418	Bkgd Study Short	Soil	5/24/2018	10:54	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS07-01-052418	Bkgd Study Short	Soil	5/24/2018	10:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS08-01-052418	Bkgd Study Short	Soil	5/24/2018	10:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS09-01-052418	Bkgd Study Short	Soil	5/24/2018	10:46	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS10-01-052418	Bkgd Study Short	Soil	5/24/2018	10:48	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS11-01-052418	Bkgd Study Short	Soil	5/24/2018	10:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS12-01-052418	Bkgd Study Short	Soil	5/24/2018	10:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS13-01-052418	Bkgd Study Short	Soil	5/24/2018	10:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS14-01-052418	Bkgd Study Short	Soil	5/24/2018	10:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS15-01-052418	Bkgd Study Short	Soil	5/24/2018	10:36	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-H, MET-H

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0026**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B22-SS16-01-052418	Bkgd Study Long	Soil	5/24/2018	10:20	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B22-SS16-02-052418	Bkgd Study Long	Soil	5/24/2018	10:20	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B22-SS17-01-052418	Bkgd Study Short	Soil	5/24/2018	10:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS18-01-052418	Bkgd Study Short	Soil	5/24/2018	10:33	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS19-01-052318	Bkgd Study Short	Soil	5/23/2018	15:21	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS20-01-052318	Bkgd Study Short	Soil	5/23/2018	15:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS21-01-052318	Bkgd Study Short	Soil	5/23/2018	15:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS22-01-052418	Bkgd Study Short	Soil	5/24/2018	10:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS22-02-052418	Bkgd Study Short	Soil	5/24/2018	10:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS23-01-052318	Bkgd Study Short	Soil	5/23/2018	14:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS24-01-052318	Bkgd Study Short	Soil	5/23/2018	14:50	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B22-SS25-01-052318	Bkgd Study Short	Soil	5/23/2018	15:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS26-01-052318	Bkgd Study Short	Soil	5/23/2018	15:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS27-01-052318	Bkgd Study Short	Soil	5/23/2018	15:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS28-01-052318	Bkgd Study Short	Soil	5/23/2018	15:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS29-01-052318	Bkgd Study Short	Soil	5/23/2018	15:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B22-SS30-01-052318	Bkgd Study Short	Soil	5/23/2018	14:45	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-I, MET-I

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0027**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B20-SB01-01-052318	Bkgd Study Long	Soil	5/23/2018	13:00	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B20-SB20-01-052318	Bkgd Study Short	Soil	5/23/2018	11:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SB26-01-052318	Bkgd Study Short	Soil	5/23/2018	10:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS01-01-052318	Bkgd Study Long	Soil	5/23/2018	13:00	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B20-SS02-01-052318	Bkgd Study Short	Soil	5/23/2018	13:06	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B20-SS03-01-052318	Bkgd Study Short	Soil	5/23/2018	13:13	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS04-01-052318	Bkgd Study Short	Soil	5/23/2018	13:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS05-01-052318	Bkgd Study Short	Soil	5/23/2018	13:23	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS06-01-052318	Bkgd Study Short	Soil	5/23/2018	13:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS07-01-052318	Bkgd Study Short	Soil	5/23/2018	12:58	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS08-01-052318	Bkgd Study Short	Soil	5/23/2018	12:46	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS09-01-052318	Bkgd Study Short	Soil	5/23/2018	12:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS10-01-052318	Bkgd Study Short	Soil	5/23/2018	12:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS11-01-052318	Bkgd Study Short	Soil	5/23/2018	12:37	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS12-01-052318	Bkgd Study Long	Soil	5/23/2018	12:42	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B20-SS13-01-052318	Bkgd Study Short	Soil	5/23/2018	12:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS14-01-052318	Bkgd Study Short	Soil	5/23/2018	12:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS15-01-052318	Bkgd Study Short	Soil	5/23/2018	12:13	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-I, MET-I

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0027**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B20-SS16-01-052318	Bkgd Study Short	Soil	5/23/2018	12:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS17-01-052318	Bkgd Study Short	Soil	5/23/2018	12:02	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS18-01-052318	Bkgd Study Short	Soil	5/23/2018	12:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS19-01-052318	Bkgd Study Short	Soil	5/23/2018	11:48	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS20-01-052318	Bkgd Study Short	Soil	5/23/2018	11:37	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS21-01-052318	Bkgd Study Short	Soil	5/23/2018	11:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS21-02-052318	Bkgd Study Short	Soil	5/23/2018	11:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS22-01-052318	Bkgd Study Short	Soil	5/23/2018	10:51	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS22-02-052318	Bkgd Study Short	Soil	5/23/2018	10:51	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS23-01-052318	Bkgd Study Short	Soil	5/23/2018	11:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS24-01-052318	Bkgd Study Short	Soil	5/23/2018	11:15	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B20-SS25-01-052318	Bkgd Study Short	Soil	5/23/2018	10:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS26-01-052318	Bkgd Study Short	Soil	5/23/2018	10:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS27-01-052318	Bkgd Study Short	Soil	5/23/2018	10:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS28-01-052318	Bkgd Study Short	Soil	5/23/2018	11:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS29-01-052318	Bkgd Study Short	Soil	5/23/2018	11:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B20-SS30-01-052318	Bkgd Study Short	Soil	5/23/2018	11:11	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-J, MET-J

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0028**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B18-SB01-01-052518	Bkgd Study Short	Soil	5/25/2018	10:16	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SB11-01-052518	Bkgd Study Long	Soil	5/25/2018	10:36	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B18-SB21-01-052518	Bkgd Study Short	Soil	5/25/2018	11:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS01-01-052518	Bkgd Study Short	Soil	5/25/2018	10:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS01-02-052518	Bkgd Study Short	Soil	5/25/2018	10:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS02-01-052518	Bkgd Study Short	Soil	5/25/2018	10:13	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B18-SS03-01-052518	Bkgd Study Short	Soil	5/25/2018	10:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS04-01-052518	Bkgd Study Short	Soil	5/25/2018	10:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS05-01-052518	Bkgd Study Short	Soil	5/25/2018	10:03	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS06-01-052518	Bkgd Study Short	Soil	5/25/2018	10:19	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS07-01-052518	Bkgd Study Short	Soil	5/25/2018	10:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS08-01-052518	Bkgd Study Short	Soil	5/25/2018	10:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS09-01-052518	Bkgd Study Short	Soil	5/25/2018	10:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS10-01-052518	Bkgd Study Short	Soil	5/25/2018	10:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS11-01-052518	Bkgd Study Long	Soil	5/25/2018	10:34	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B18-SS12-01-052518	Bkgd Study Short	Soil	5/25/2018	10:33	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS13-01-052518	Bkgd Study Short	Soil	5/25/2018	10:31	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS14-01-052518	Bkgd Study Short	Soil	5/25/2018	10:30	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-J, MET-J

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0028**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B18-SS15-01-052518	Bkgd Study Short	Soil	5/25/2018	10:27	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS16-01-052518	Bkgd Study Short	Soil	5/25/2018	10:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS17-01-052518	Bkgd Study Short	Soil	5/25/2018	10:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS18-01-052518	Bkgd Study Short	Soil	5/25/2018	10:54	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS19-01-052518	Bkgd Study Short	Soil	5/25/2018	10:59	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS20-01-052518	Bkgd Study Short	Soil	5/25/2018	11:03	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS21-01-052518	Bkgd Study Short	Soil	5/25/2018	11:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS21-02-052518	Bkgd Study Short	Soil	5/25/2018	11:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS22-01-052518	Bkgd Study Short	Soil	5/25/2018	11:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS23-01-052518	Bkgd Study Long	Soil	5/25/2018	11:14	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B18-SS24-01-052518	Bkgd Study Short	Soil	5/25/2018	11:12	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B18-SS25-01-052518	Bkgd Study Short	Soil	5/25/2018	11:09	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS26-01-052518	Bkgd Study Short	Soil	5/25/2018	11:29	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS27-01-052518	Bkgd Study Short	Soil	5/25/2018	11:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS28-01-052518	Bkgd Study Short	Soil	5/25/2018	11:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS29-01-052518	Bkgd Study Short	Soil	5/25/2018	11:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B18-SS30-01-052518	Bkgd Study Short	Soil	5/25/2018	11:41	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-K, MET-K

**CHAIN OF CUSTODY RECORD**

Site #: RAES  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0029**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B8-SB11-01-052218	Bkgd Study Short - Metal	Soil	5/22/2018	14:04	1	Quart bag	6020, 7471	
	M14-XS36-01-052418	XRF Conf Short	Soil	5/24/2018	13:45	2	Quart + Gallon bags	6020, 901.1	
	M14-XS40-01-052418	XRF Conf Short	Soil	5/24/2018	13:40	2	Quart + Gallon bags	6020, 901.1	
	M14-XS64-01-052418	XRF Conf Short	Soil	5/24/2018	12:45	2	Quart + Gallon bags	6020, 901.1	Y
	M14-XS67-01-052418	XRF Conf Short	Soil	5/24/2018	13:05	2	Quart + Gallon bags	6020, 901.1	
	M18-XS155-01-052518	XRF Conf Short	Soil	5/25/2018	11:24	2	Quart + Gallon bags	6020, 901.1	
	M18-XS161-01-052518	XRF Conf Short	Soil	5/25/2018	11:52	2	Quart + Gallon bags	6020, 901.1	
	M19-XS22-01-052318	XRF Conf Short	Soil	5/23/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M19-XS22-02-052318	XRF Conf Short	Soil	5/23/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M19-XS43-01-052318	XRF Conf Short	Soil	5/23/2018	14:34	2	Quart + Gallon bags	6020, 901.1	
	T20-XS14-01-052218	XRF Conf Short	Soil	5/22/2018	15:40	2	Quart + Gallon bags	6020, 901.1	
	T22-XS64-01-052218	XRF Conf Short	Soil	5/22/2018	11:53	2	Quart + Gallon bags	6020, 901.1	
	T24-XS48-01-052418	XRF Conf Short	Soil	5/24/2018	12:29	2	Quart + Gallon bags	6020, 901.1	

Special Instructions: B8-SB11-01-052218 has metal bag in cooler MET-K (Rad bag was delivered on 5/26/18 on RAES1-0023)	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-L, MET-L

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0030**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B19-SS01-01-052618	Bkgd Study Short	Soil	5/26/2018	11:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS01-02-052618	Bkgd Study Short	Soil	5/26/2018	11:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS02-01-052618	Bkgd Study Long	Soil	5/26/2018	11:21	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B19-SS03-01-052618	Bkgd Study Short	Soil	5/26/2018	11:56	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B19-SS04-01-052618	Bkgd Study Short	Soil	5/26/2018	11:59	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS05-01-052618	Bkgd Study Short	Soil	5/26/2018	12:02	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS06-01-052618	Bkgd Study Short	Soil	5/26/2018	11:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS07-01-052618	Bkgd Study Short	Soil	5/26/2018	11:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS08-01-052618	Bkgd Study Short	Soil	5/26/2018	11:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS09-01-052618	Bkgd Study Short	Soil	5/26/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS10-01-052618	Bkgd Study Short	Soil	5/26/2018	12:04	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS11-01-052618	Bkgd Study Long	Soil	5/26/2018	11:11	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B19-SS11-02-052618	Bkgd Study Short	Soil	5/26/2018	11:11	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS12-01-052618	Bkgd Study Short	Soil	5/26/2018	11:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS13-01-052618	Bkgd Study Short	Soil	5/26/2018	11:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS14-01-052618	Bkgd Study Short	Soil	5/26/2018	12:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS15-01-052618	Bkgd Study Short	Soil	5/26/2018	12:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS16-01-052618	Bkgd Study Short	Soil	5/26/2018	11:06	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-M, MET-M

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0031**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B19-SB01-01-052618	Bkgd Study Short	Soil	5/26/2018	11:19	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SB10-01-052618	Bkgd Study Short	Soil	5/26/2018	12:06	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SB11-01-052618	Bkgd Study Long	Soil	5/26/2018	11:13	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B19-SS17-01-052618	Bkgd Study Short	Soil	5/26/2018	11:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS18-01-052618	Bkgd Study Short	Soil	5/26/2018	11:48	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS19-01-052618	Bkgd Study Short	Soil	5/26/2018	12:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS20-01-052618	Bkgd Study Short	Soil	5/26/2018	12:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS21-01-052618	Bkgd Study Short	Soil	5/26/2018	11:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS22-01-052618	Bkgd Study Short	Soil	5/26/2018	11:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS23-01-052618	Bkgd Study Short	Soil	5/26/2018	11:43	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS24-01-052618	Bkgd Study Short	Soil	5/26/2018	12:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS25-01-052618	Bkgd Study Short	Soil	5/26/2018	12:38	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B19-SS26-01-052618	Bkgd Study Short	Soil	5/26/2018	10:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS27-01-052618	Bkgd Study Short	Soil	5/26/2018	11:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS28-01-052618	Bkgd Study Short	Soil	5/26/2018	11:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS29-01-052618	Bkgd Study Short	Soil	5/26/2018	12:53	2	Quart + Gallon bags	6020, 7471, 901.1	
	B19-SS30-01-052618	Bkgd Study Short	Soil	5/26/2018	12:47	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-N, MET-N

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0032**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B25-SS01-01-060418	Bkgd Study Short	Soil	6/4/2018	10:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS01-02-060418	Bkgd Study Short	Soil	6/4/2018	10:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS02-01-060418	Bkgd Study Short	Soil	6/4/2018	11:00	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B25-SS03-01-060418	Bkgd Study Short	Soil	6/4/2018	11:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS04-01-060418	Bkgd Study Long	Soil	6/4/2018	11:40	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B25-SS05-01-060418	Bkgd Study Short	Soil	6/4/2018	11:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS06-01-060418	Bkgd Study Short	Soil	6/4/2018	11:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS07-01-060418	Bkgd Study Short	Soil	6/4/2018	11:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS08-01-060418	Bkgd Study Short	Soil	6/4/2018	11:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS09-01-060418	Bkgd Study Short	Soil	6/4/2018	13:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS10-01-060418	Bkgd Study Short	Soil	6/4/2018	13:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS11-01-060418	Bkgd Study Short	Soil	6/4/2018	11:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS12-01-060418	Bkgd Study Long	Soil	6/4/2018	14:10	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B25-SS13-01-060418	Bkgd Study Short	Soil	6/4/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS14-01-060418	Bkgd Study Short	Soil	6/4/2018	13:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS15-01-060418	Bkgd Study Short	Soil	6/4/2018	13:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B25-SS16-01-060418	Bkgd Study Short	Soil	6/4/2018	14:05	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-O, MET-O

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

1806159

**No: RAES1-0033**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
1	B25-SB01-01-060418	Bkgd Study Short	Soil	6/4/2018	10:50	2	Quart + Gallon bags	6020, 7471, 901.1	
2	B25-SB10-01-060418	Bkgd Study Short	Soil	6/4/2018	13:30	2	Quart + Gallon bags	6020, 7471, 901.1	
3	B25-SB12-01-060418	Bkgd Study Long	Soil	6/4/2018	14:15	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
4	B25-SS17-01-060418	Bkgd Study Short	Soil	6/4/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1	
5	B25-SS18-01-060418	Bkgd Study Short	Soil	6/4/2018	13:00	2	Quart + Gallon bags	6020, 7471, 901.1	
6	B25-SS19-01-060418	Bkgd Study Short	Soil	6/4/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1	
7	B25-SS20-01-060418	Bkgd Study Short	Soil	6/4/2018	14:00	2	Quart + Gallon bags	6020, 7471, 901.1	
SC 8	B25-SS21-02-060418	Bkgd Study Short	Soil	6/4/2018	14:00 12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
9	B25-SS21-01-060418	Bkgd Study Short	Soil	6/4/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
10	B25-SS22-01-060418	Bkgd Study Short	Soil	6/4/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1	
11	B25-SS23-01-060418	Bkgd Study Short	Soil	6/4/2018	12:50	2	Quart + Gallon bags	6020, 7471, 901.1	
12	B25-SS24-01-060418	Bkgd Study Short	Soil	6/4/2018	13:50	2	Quart + Gallon bags	6020, 7471, 901.1	Y
13	B25-SS25-01-060418	Bkgd Study Short	Soil	6/4/2018	12:20	2	Quart + Gallon bags	6020, 7471, 901.1	
14	B25-SS26-01-060418	Bkgd Study Short	Soil	6/4/2018	12:40	2	Quart + Gallon bags	6020, 7471, 901.1	
15	B25-SS27-01-060418	Bkgd Study Short	Soil	6/4/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1	
16	B25-SS28-01-060418	Bkgd Study Short	Soil	6/4/2018	13:45	2	Quart + Gallon bags	6020, 7471, 901.1	
17	B25-SS29-01-060418	Bkgd Study Short	Soil	6/4/2018	12:25	2	Quart + Gallon bags	6020, 7471, 901.1	
18	B25-SS30-01-060418	Bkgd Study Short	Soil	6/4/2018	12:35	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	<i>S. Call</i>	6/7/18	<i>Emily Lyons</i>	6-8-18 1033	



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-P, MET-P

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0034**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B26-SS01-01-060518	Bkgd Study Short	Soil	6/5/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS02-01-060518	Bkgd Study Short	Soil	6/5/2018	12:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS03-01-060518	Bkgd Study Short	Soil	6/5/2018	13:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS04-01-060518	Bkgd Study Short	Soil	6/5/2018	14:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS05-01-060518	Bkgd Study Short	Soil	6/5/2018	15:00	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B26-SS06-01-060518	Bkgd Study Short	Soil	6/5/2018	11:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS07-01-060518	Bkgd Study Short	Soil	6/5/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS08-01-060518	Bkgd Study Short	Soil	6/5/2018	13:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS09-01-060518	Bkgd Study Long	Soil	6/5/2018	14:05	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B26-SS10-01-060518	Bkgd Study Short	Soil	6/5/2018	14:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS11-01-060518	Bkgd Study Short	Soil	6/5/2018	11:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS12-01-060518	Bkgd Study Short	Soil	6/5/2018	12:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS13-01-060518	Bkgd Study Short	Soil	6/5/2018	13:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS14-01-060518	Bkgd Study Short	Soil	6/5/2018	14:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS15-01-060518	Bkgd Study Short	Soil	6/5/2018	15:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS16-01-060518	Bkgd Study Short	Soil	6/5/2018	11:05	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-Q, MET-Q

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0035**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B26-SB11-01-060518	Bkgd Study Short	Soil	6/5/2018	11:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SB13-01-060518	Bkgd Study Short	Soil	6/5/2018	13:35	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B26-SB29-01-060518	Bkgd Study Long	Soil	6/5/2018	14:35	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B26-SS17-01-060518	Bkgd Study Short	Soil	6/5/2018	12:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS17-02-060518	Bkgd Study Short	Soil	6/5/2018	12:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS18-01-060518	Bkgd Study Short	Soil	6/5/2018	13:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS19-01-060518	Bkgd Study Short	Soil	6/5/2018	14:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS20-01-060518	Bkgd Study Short	Soil	6/5/2018	15:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS20-02-060518	Bkgd Study Short	Soil	6/5/2018	15:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS21-01-060518	Bkgd Study Short	Soil	6/5/2018	10:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS22-01-060518	Bkgd Study Short	Soil	6/5/2018	12:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS23-01-060518	Bkgd Study Short	Soil	6/5/2018	13:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS24-01-060518	Bkgd Study Short	Soil	6/5/2018	14:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS25-01-060518	Bkgd Study Short	Soil	6/5/2018	15:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS26-01-060518	Bkgd Study Short	Soil	6/5/2018	10:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS27-01-060518	Bkgd Study Short	Soil	6/5/2018	12:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS28-01-060518	Bkgd Study Short	Soil	6/5/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B26-SS29-01-060518	Bkgd Study Long	Soil	6/5/2018	14:30	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B26-SS30-01-060518	Bkgd Study Short	Soil	6/5/2018	15:40	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-R, MET-R

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0036**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B23-SB15-01-060618	Bkgd Study Short	Soil	6/6/2018	11:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SB15-02-060618	Bkgd Study Short	Soil	6/6/2018	11:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SB18-01-060618	Bkgd Study Long	Soil	6/6/2018	12:00	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B23-SB23-01-060618	Bkgd Study Short	Soil	6/6/2018	11:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS01-01-060618	Bkgd Study Short	Soil	6/6/2018	11:31	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B23-SS02-01-060618	Bkgd Study Short	Soil	6/6/2018	11:28	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS03-01-060618	Bkgd Study Short	Soil	6/6/2018	11:24	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS04-01-060618	Bkgd Study Short	Soil	6/6/2018	10:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS05-01-060618	Bkgd Study Short	Soil	6/6/2018	11:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS06-01-060618	Bkgd Study Short	Soil	6/6/2018	11:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS07-01-060618	Bkgd Study Short	Soil	6/6/2018	11:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS08-01-060618	Bkgd Study Long	Soil	6/6/2018	12:20	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B23-SS09-01-060618	Bkgd Study Short	Soil	6/6/2018	10:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS10-01-060618	Bkgd Study Short	Soil	6/6/2018	10:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS11-01-060618	Bkgd Study Short	Soil	6/6/2018	12:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS12-01-060618	Bkgd Study Short	Soil	6/6/2018	12:13	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS13-01-060618	Bkgd Study Short	Soil	6/6/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS14-01-060618	Bkgd Study Short	Soil	6/6/2018	11:03	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-R, MET-R

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0036**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B23-SS15-01-060618	Bkgd Study Short	Soil	6/6/2018	10:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS16-01-060618	Bkgd Study Short	Soil	6/6/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS17-01-060618	Bkgd Study Short	Soil	6/6/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS18-01-060618	Bkgd Study Long	Soil	6/6/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B23-SS19-01-060618	Bkgd Study Short	Soil	6/6/2018	11:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS20-01-060618	Bkgd Study Short	Soil	6/6/2018	11:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS21-01-060618	Bkgd Study Short	Soil	6/6/2018	12:48	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS22-01-060618	Bkgd Study Short	Soil	6/6/2018	11:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS23-01-060618	Bkgd Study Short	Soil	6/6/2018	11:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS24-01-060618	Bkgd Study Short	Soil	6/6/2018	11:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS25-01-060618	Bkgd Study Short	Soil	6/6/2018	11:20	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B23-SS26-01-060618	Bkgd Study Short	Soil	6/6/2018	12:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS27-01-060618	Bkgd Study Short	Soil	6/6/2018	11:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS28-01-060618	Bkgd Study Short	Soil	6/6/2018	11:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS29-01-060618	Bkgd Study Short	Soil	6/6/2018	11:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B23-SS30-01-060618	Bkgd Study Short	Soil	6/6/2018	11:28	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-S, MET-S

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0037**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M13-XS72-01-060618	XRF Conf Short	Soil	6/6/2018	12:20	2	Quart + Gallon bags	6020, 901.1	Y
	M16-XS154-01-052618	XRF Conf Short	Soil	5/26/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M16-XS177-01-052618	XRF Conf Long	Soil	5/26/2018	10:35	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M16-XS191-01-052618	XRF Conf Short	Soil	5/26/2018	14:20	2	Quart + Gallon bags	6020, 901.1	
	M16-XS191-02-052618	XRF Conf Short	Soil	5/26/2018	14:22	2	Quart + Gallon bags	6020, 901.1	
	M17-XS55-01-052618	XRF Conf Short	Soil	5/26/2018	13:01	2	Quart + Gallon bags	6020, 901.1	
	M17-XS83-01-052618	XRF Conf Short	Soil	5/26/2018	10:46	2	Quart + Gallon bags	6020, 901.1	
	M17-XS83-02-052618	XRF Conf Short	Soil	5/26/2018	10:46	2	Quart + Gallon bags	6020, 901.1	
	M20-XS11-01-060618	XRF Conf Short	Soil	6/6/2018	10:25	2	Quart + Gallon bags	6020, 901.1	
	M20-XS130-01-060418	XRF Conf Short	Soil	6/4/2018	11:20	2	Quart + Gallon bags	6020, 901.1	
	M20-XS166-01-060518	XRF Conf Short	Soil	6/5/2018	12:39	2	Quart + Gallon bags	6020, 901.1	
	M20-XS18-01-060618	XRF Conf Short	Soil	6/6/2018	10:47	2	Quart + Gallon bags	6020, 901.1	
	M20-XS185-01-060418	XRF Conf Short	Soil	6/4/2018	12:18	2	Quart + Gallon bags	6020, 901.1	
	M20-XS231-01-060418	XRF Conf Short	Soil	6/4/2018	14:20	2	Quart + Gallon bags	6020, 901.1	
	M20-XS278-01-060418	XRF Conf Short	Soil	6/4/2018	15:18	2	Quart + Gallon bags	6020, 901.1	
	M20-XS306-01-060518	XRF Conf Short	Soil	6/5/2018	11:02	2	Quart + Gallon bags	6020, 901.1	
	M20-XS312-01-060518	XRF Conf Short	Soil	6/5/2018	11:52	2	Quart + Gallon bags	6020, 901.1	
	M20-XS365-01-060618	XRF Conf Long	Soil	6/6/2018	10:50	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-S, MET-S

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0037**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M20-XS365-02-060618	XRF Conf Short	Soil	6/6/2018	10:50	2	Quart + Gallon bags	6020, 901.1	
	M20-XS5-01-060518	XRF Conf Short	Soil	6/5/2018	14:36	2	Quart + Gallon bags	6020, 901.1	
	M20-XS86-01-060618	XRF Conf Short	Soil	6/6/2018	12:27	2	Quart + Gallon bags	6020, 901.1	
	M21-XS225-01-060518	XRF Conf Short	Soil	6/5/2018	15:30	2	Quart + Gallon bags	6020, 901.1	
	M21-XS292-01-060518	XRF Conf Short	Soil	6/5/2018	15:05	2	Quart + Gallon bags	6020, 901.1	
	M21-XS596-01-060518	XRF Conf Short	Soil	6/5/2018	14:20	2	Quart + Gallon bags	6020, 901.1	
	M21-XS615-01-060518	XRF Conf Short	Soil	6/5/2018	12:30	2	Quart + Gallon bags	6020, 901.1	
	M21-XS619-01-060618	XRF Conf Short	Soil	6/6/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	M22-XS14-01-060418	XRF Conf Short	Soil	6/4/2018	15:14	2	Quart + Gallon bags	6020, 901.1	
	M22-XS30-01-060418	XRF Conf Short	Soil	6/4/2018	12:35	2	Quart + Gallon bags	6020, 901.1	
	M22-XS40-01-060518	XRF Conf Short	Soil	6/5/2018	11:18	2	Quart + Gallon bags	6020, 901.1	Y
	M22-XS60-01-060418	XRF Conf Short	Soil	6/4/2018	11:31	2	Quart + Gallon bags	6020, 901.1	
	M22-XS87-01-060418	XRF Conf Long	Soil	6/4/2018	14:04	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T25-XS2-01-060618	XRF Conf Short	Soil	6/6/2018	15:15	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: T

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0038**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M15-Corr1-01-060418	Gamma Corr	Soil	6/4/2018	13:00	1	Gallon bag	6020, 901.1	
	M16-Corr1-01-060418	Gamma Corr	Soil	6/4/2018	14:30	1	Gallon bag	6020, 901.1	Y
	M16-Corr2-01-060418	Gamma Corr	Soil	6/4/2018	15:00	1	Gallon bag	6020, 901.1	
	M16-Corr3-01-060518	Gamma Corr	Soil	6/5/2018	10:42	1	Gallon bag	6020, 901.1	
	M16-Corr4-01-060518	Gamma Corr	Soil	6/5/2018	11:25	1	Gallon bag	6020, 901.1	
	M16-Corr5-01-060518	Gamma Corr	Soil	6/5/2018	12:30	1	Gallon bag	6020, 901.1	
	M16-Corr5-02-060518	Gamma Corr	Soil	6/5/2018	12:30	1	Gallon bag	6020, 901.1	
	M16-Corr6-01-060518	Gamma Corr	Soil	6/5/2018	12:53	1	Gallon bag	6020, 901.1	
	M17-Corr1-01-060518	Gamma Corr	Soil	6/5/2018	13:57	1	Gallon bag	6020, 901.1	
	M18-Corr1-01-060418	Gamma Corr	Soil	6/4/2018	11:00	1	Gallon bag	6020, 901.1	
	M19-Corr1-01-060418	Gamma Corr	Soil	6/4/2018	10:20	1	Gallon bag	6020, 901.1	
	T23-Corr1-01-060418	Gamma Corr	Soil	6/4/2018	12:00	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-U, MET-U

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0039**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B16-SB01-01-060918	Bkgd Study Long	Soil	6/9/2018	10:40	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B16-SB19-01-060918	Bkgd Study Short	Soil	6/9/2018	12:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SB23-01-060918	Bkgd Study Short	Soil	6/9/2018	11:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS01-01-060918	Bkgd Study Long	Soil	6/9/2018	10:35	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B16-SS02-01-060918	Bkgd Study Short	Soil	6/9/2018	10:50	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B16-SS03-01-060918	Bkgd Study Short	Soil	6/9/2018	12:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS04-01-060918	Bkgd Study Short	Soil	6/9/2018	12:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS05-01-060918	Bkgd Study Short	Soil	6/9/2018	13:27	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS06-01-060918	Bkgd Study Short	Soil	6/9/2018	10:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS07-01-060918	Bkgd Study Long	Soil	6/9/2018	10:55	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B16-SS08-01-060918	Bkgd Study Short	Soil	6/9/2018	12:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS09-01-060918	Bkgd Study Short	Soil	6/9/2018	12:31	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS10-01-060918	Bkgd Study Short	Soil	6/9/2018	13:22	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS11-01-060918	Bkgd Study Short	Soil	6/9/2018	10:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS12-01-060918	Bkgd Study Short	Soil	6/9/2018	11:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS13-01-060918	Bkgd Study Short	Soil	6/9/2018	12:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS14-01-060918	Bkgd Study Short	Soil	6/9/2018	12:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS15-01-060918	Bkgd Study Short	Soil	6/9/2018	13:17	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-U, MET-U

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0039**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B16-SS16-01-060918	Bkgd Study Short	Soil	6/9/2018	10:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS17-01-060918	Bkgd Study Short	Soil	6/9/2018	11:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS18-01-060918	Bkgd Study Short	Soil	6/9/2018	11:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS19-01-060918	Bkgd Study Short	Soil	6/9/2018	12:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS20-01-060918	Bkgd Study Short	Soil	6/9/2018	13:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS21-01-060918	Bkgd Study Short	Soil	6/9/2018	10:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS22-01-060918	Bkgd Study Short	Soil	6/9/2018	11:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS23-01-060918	Bkgd Study Short	Soil	6/9/2018	11:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS23-02-060918	Bkgd Study Short	Soil	6/9/2018	11:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS24-01-060918	Bkgd Study Short	Soil	6/9/2018	12:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS25-01-060918	Bkgd Study Short	Soil	6/9/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS25-02-060918	Bkgd Study Short	Soil	6/9/2018	13:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS26-01-060918	Bkgd Study Short	Soil	6/9/2018	09:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS27-01-060918	Bkgd Study Short	Soil	6/9/2018	11:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS28-01-060918	Bkgd Study Short	Soil	6/9/2018	11:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS29-01-060918	Bkgd Study Short	Soil	6/9/2018	12:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B16-SS30-01-060918	Bkgd Study Short	Soil	6/9/2018	12:57	2	Quart + Gallon bags	6020, 7471, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-V, MET-V

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0040**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M21-XS122-01-060818	XRF Conf Short	Soil	6/8/2018	14:20	2	Quart + Gallon bags	6020, 901.1	
	M21-XS126-01-060818	XRF Conf Short	Soil	6/8/2018	14:45	2	Quart + Gallon bags	6020, 901.1	
	M21-XS14-01-060818	XRF Conf Short	Soil	6/8/2018	11:03	2	Quart + Gallon bags	6020, 901.1	
	M21-XS175-01-060818	XRF Conf Short	Soil	6/8/2018	15:30	2	Quart + Gallon bags	6020, 901.1	
	M21-XS259-01-060918	XRF Conf Short	Soil	6/9/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M21-XS260-01-060918	XRF Conf Short	Soil	6/9/2018	14:25	2	Quart + Gallon bags	6020, 901.1	
	M21-XS27-01-060818	XRF Conf Short	Soil	6/8/2018	10:45	2	Quart + Gallon bags	6020, 901.1	Y
	M21-XS27-02-060818	XRF Conf Short	Soil	6/8/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	M21-XS282-01-060918	XRF Conf Short	Soil	6/9/2018	14:35	2	Quart + Gallon bags	6020, 901.1	
	M21-XS290-01-060918	XRF Conf Short	Soil	6/9/2018	14:35	2	Quart + Gallon bags	6020, 901.1	
	M21-XS302-01-060918	XRF Conf Short	Soil	6/9/2018	10:35	2	Quart + Gallon bags	6020, 901.1	
	M21-XS302-02-060918	XRF Conf Long	Soil	6/9/2018	10:35	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M21-XS334-01-060918	XRF Conf Short	Soil	6/9/2018	15:15	2	Quart + Gallon bags	6020, 901.1	
	M21-XS377-01-060918	XRF Conf Short	Soil	6/9/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M21-XS40-01-060818	XRF Conf Short	Soil	6/8/2018	11:47	2	Quart + Gallon bags	6020, 901.1	
	M21-XS403-01-060818	XRF Conf Short	Soil	6/8/2018	12:15	2	Quart + Gallon bags	6020, 901.1	
	M21-XS419-01-060818	XRF Conf Short	Soil	6/8/2018	15:35	2	Quart + Gallon bags	6020, 901.1	
	M21-XS46-01-060818	XRF Conf Long	Soil	6/8/2018	12:23	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M21-XS477-01-060818	XRF Conf Short	Soil	6/8/2018	11:35	2	Quart + Gallon bags	6020, 901.1	
	M21-XS541-01-060818	XRF Conf Short	Soil	6/8/2018	15:00	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-W, MET-W

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0041**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B27-SB07-01-061018	Bkgd Study Long	Soil	6/10/2018	15:46	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B27-SB18-01-061018	Bkgd Study Short	Soil	6/10/2018	15:06	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SB18-02-061018	Bkgd Study Short	Soil	6/10/2018	15:06	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SB23-01-061018	Bkgd Study Short	Soil	6/10/2018	14:55	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS01-01-061018	Bkgd Study Short	Soil	6/10/2018	15:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS02-01-061018	Bkgd Study Short	Soil	6/10/2018	15:59	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B27-SS03-01-061018	Bkgd Study Short	Soil	6/10/2018	16:01	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS04-01-061018	Bkgd Study Short	Soil	6/10/2018	16:03	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS05-01-061018	Bkgd Study Short	Soil	6/10/2018	16:06	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS06-01-061018	Bkgd Study Short	Soil	6/10/2018	15:48	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS07-01-061018	Bkgd Study Long	Soil	6/10/2018	15:45	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B27-SS08-01-061018	Bkgd Study Short	Soil	6/10/2018	15:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS09-01-061018	Bkgd Study Short	Soil	6/10/2018	15:39	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS10-01-061018	Bkgd Study Short	Soil	6/10/2018	15:34	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS11-01-061018	Bkgd Study Short	Soil	6/10/2018	15:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS12-01-061018	Bkgd Study Short	Soil	6/10/2018	15:23	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS13-01-061018	Bkgd Study Short	Soil	6/10/2018	15:27	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS14-01-061018	Bkgd Study Short	Soil	6/10/2018	15:30	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-W, MET-W

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0041**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B27-SS15-01-061018	Bkgd Study Short	Soil	6/10/2018	15:31	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS16-01-061018	Bkgd Study Long	Soil	6/10/2018	15:10	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B27-SS17-01-061018	Bkgd Study Short	Soil	6/10/2018	15:07	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS18-01-061018	Bkgd Study Short	Soil	6/10/2018	15:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS19-01-061018	Bkgd Study Short	Soil	6/10/2018	15:01	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS20-01-061018	Bkgd Study Short	Soil	6/10/2018	14:59	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS21-01-061018	Bkgd Study Short	Soil	6/10/2018	14:45	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS22-01-061018	Bkgd Study Short	Soil	6/10/2018	14:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS23-01-061018	Bkgd Study Short	Soil	6/10/2018	14:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS24-01-061018	Bkgd Study Short	Soil	6/10/2018	14:57	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS25-01-061018	Bkgd Study Short	Soil	6/10/2018	14:58	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS26-01-061018	Bkgd Study Short	Soil	6/10/2018	14:41	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS27-01-061018	Bkgd Study Short	Soil	6/10/2018	14:39	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B27-SS28-01-061018	Bkgd Study Short	Soil	6/10/2018	14:37	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS29-01-061018	Bkgd Study Short	Soil	6/10/2018	14:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	B27-SS30-01-061018	Bkgd Study Short	Soil	6/10/2018	14:32	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-X, MET-X

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0042**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Metho d	Lab QC
	M23-XS102-01-061018	XRF Conf Short	Soil	6/10/2018	11:53	2	Quart + Gallon bags	6020, 901.1	
	M23-XS123-01-061018	XRF Conf Short	Soil	6/10/2018	11:05	2	Quart + Gallon bags	6020, 901.1	
	M23-XS20-01-061018	XRF Conf Short	Soil	6/10/2018	12:42	2	Quart + Gallon bags	6020, 901.1	
	M23-XS48-01-061018	XRF Conf Short	Soil	6/10/2018	13:09	2	Quart + Gallon bags	6020, 901.1	
	M23-XS64-01-061018	XRF Conf Short	Soil	6/10/2018	12:42	2	Quart + Gallon bags	6020, 901.1	
	M23-XS70-01-061018	XRF Conf Short	Soil	6/10/2018	13:08	2	Quart + Gallon bags	6020, 901.1	Y
	M23-XS79-01-061018	XRF Conf Short	Soil	6/10/2018	10:17	2	Quart + Gallon bags	6020, 901.1	
	T26-XS1-01-061018	XRF Conf Short	Soil	6/10/2018	10:17	2	Quart + Gallon bags	6020, 901.1	
	T26-XS8-01-061018	XRF Conf Short	Soil	6/10/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	T27-XS19-01-061018	XRF Conf Short	Soil	6/10/2018	15:11	2	Quart + Gallon bags	6020, 901.1	
	T27-XS6-01-061018	XRF Conf Short	Soil	6/10/2018	15:36	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Y

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0043**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M16-EB-01-052618	Equip Blank	Water	5/26/2018	14:45	3	(1)L Poly + (1)250ml Poly + (1	6020, 7470, 901.1, 903.1, 904.0, D3972 (U, Th)	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
Fort Collins, CO 80525  
Cooler #:

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
Contact Name: Aaron Orechwa, 970-420-9395  
Project Code: 103G5440001.06.01

**No: RAES1-0044**

Lab: ALS Laboratory Group - Fort Collins  
Lab Phone: 970-490-1511  
Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M23-XS54-01-061118	XRF Conf Short	Soil	6/11/2018	10:55	2	Quart + Gallon bags	6020, 901.1	Y
	M24-EB-01-061118	Equip Blank	Water	6/11/2018	14:48	3	(1)L Poly + (1)250ml Poly + (1	6020, 7470, 901.1, 903.1, 904.0, D3972 (U, Th)	
	M24-XS100-01-061118	XRF Conf Short	Soil	6/11/2018	13:38	2	Quart + Gallon bags	6020, 901.1	
	M24-XS128-01-061118	XRF Conf Short	Soil	6/11/2018	13:55	2	Quart + Gallon bags	6020, 901.1	
	T18-XS14-01-061118	XRF Conf Short	Soil	6/11/2018	15:10	2	Quart + Gallon bags	6020, 901.1	
	T18-XS27-01-061118	XRF Conf Short	Soil	6/11/2018	14:50	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-Z, MET-Z

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0045**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M26-XS13-01-061818	XRF Conf Short	Soil	6/18/2018	15:10	2	Quart + Gallon bags	6020, 901.1	
	M26-XS25-01-061818	XRF Conf Long	Soil	6/18/2018	11:30	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M27-XS108-01-061918	XRF Conf Short	Soil	6/19/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	M27-XS109-01-061918	XRF Conf Short	Soil	6/19/2018	14:50	2	Quart + Gallon bags	6020, 901.1	Y
	M27-XS123-01-061818	XRF Conf Short	Soil	6/18/2018	12:10	2	Quart + Gallon bags	6020, 901.1	
	M27-XS188-01-061918	XRF Conf Short	Soil	6/19/2018	13:00	2	Quart + Gallon bags	6020, 901.1	
	M27-XS197-01-061918	XRF Conf Short	Soil	6/19/2018	11:02	2	Quart + Gallon bags	6020, 901.1	
	M27-XS210-01-061818	XRF Conf Short	Soil	6/18/2018	14:35	2	Quart + Gallon bags	6020, 901.1	
	M27-XS210-02-061818	XRF Conf Short	Soil	6/18/2018	14:35	2	Quart + Gallon bags	6020, 901.1	
	M27-XS21-01-061918	XRF Conf Short	Soil	6/19/2018	12:45	2	Quart + Gallon bags	6020, 901.1	
	M27-XS239-01-061818	XRF Conf Short	Soil	6/18/2018	15:18	2	Quart + Gallon bags	6020, 901.1	
	M27-XS275-01-061918	XRF Conf Long	Soil	6/19/2018	13:15	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M27-XS283-01-061818	XRF Conf Long	Soil	6/18/2018	12:35	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M27-XS29-01-061818	XRF Conf Short	Soil	6/18/2018	15:40	2	Quart + Gallon bags	6020, 901.1	
	M27-XS38-01-061918	XRF Conf Long	Soil	6/19/2018	10:54	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M28-XS105-01-062018	XRF Conf Short	Soil	6/20/2018	12:10	2	Quart + Gallon bags	6020, 901.1	
	M28-XS148-01-062018	XRF Conf Long	Soil	6/20/2018	11:49	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M28-XS155-01-062018	XRF Conf Short	Soil	6/20/2018	11:18	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: RAD-Z, MET-Z

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0045**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M28-XS170-01-062018	XRF Conf Short	Soil	6/20/2018	14:23	2	Quart + Gallon bags	6020, 901.1	
	M28-XS43-01-062018	XRF Conf Short	Soil	6/20/2018	10:46	2	Quart + Gallon bags	6020, 901.1	
	M28-XS8-01-062018	XRF Conf Short	Soil	6/20/2018	14:14	2	Quart + Gallon bags	6020, 901.1	Y
	T32-XS5-01-062018	XRF Conf Short	Soil	6/20/2018	11:32	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: A

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0046**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3A-SD10-01-061818	Surf Sed Short	Sed	6/18/2018	11:50	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD11-01-061818	Surf Sed Short	Sed	6/18/2018	12:00	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD12-01-061818	Surf Sed Short	Sed	6/18/2018	12:10	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD13-01-061818	Surf Sed Short	Sed	6/18/2018	12:20	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD14-01-061818	Surf Sed Short	Sed	6/18/2018	12:30	1	Gallon bag	6020, 7471, 901.1	Y
	DC3A-SD15-01-061818	Surf Sed Short	Sed	6/18/2018	12:35	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD16-01-061818	Surf Sed Short	Sed	6/18/2018	12:40	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD17-01-061818	Surf Sed Short	Sed	6/18/2018	13:00	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD9-01-061818	Surf Sed Short	Sed	6/18/2018	11:40	1	Gallon bag	6020, 7471, 901.1	
	DC3C-SD1-01-061818	Surf Sed Short	Sed	6/18/2018	13:10	1	Gallon bag	6020, 7471, 901.1	
	DC3C-SD2-01-061818	Surf Sed Short	Sed	6/18/2018	13:25	1	Gallon bag	6020, 7471, 901.1	
	DC3C-SD3-01-061818	Surf Sed Short	Sed	6/18/2018	13:45	1	Gallon bag	6020, 7471, 901.1	
	DC3C-SD3A-01-061818	Surf Sed Short	Sed	6/18/2018	14:15	1	Gallon bag	6020, 7471, 901.1	
	DC3C-SD4-01-061818	Surf Sed Short	Sed	6/18/2018	13:50	1	Gallon bag	6020, 7471, 901.1	
	DC3C-SD5-01-061818	Surf Sed Short	Sed	6/18/2018	14:00	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: B

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0047**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B27-Corr1-01-061918	Gamma Corr	Soil	6/19/2018	15:30	1	Gallon bag	6020, 901.1	
	M20-Corr1-01-061818	Gamma Corr	Soil	6/18/2018	15:30	1	Gallon bag	6020, 901.1	
	M20-Corr2-01-061818	Gamma Corr	Soil	6/18/2018	16:00	1	Gallon bag	6020, 901.1	
	M20-Corr3-01-061918	Gamma Corr	Soil	6/19/2018	11:00	1	Gallon bag	6020, 901.1	
	M20-Corr4-01-061918	Gamma Corr	Soil	6/19/2018	12:30	1	Gallon bag	6020, 901.1	
	M21-Corr1-01-061818	Gamma Corr	Soil	6/18/2018	10:30	1	Gallon bag	6020, 901.1	
	M21-Corr2-01-061818	Gamma Corr	Soil	6/18/2018	12:00	1	Gallon bag	6020, 901.1	
	M21-Corr2-02-061818	Gamma Corr	Soil	6/18/2018	12:00	1	Gallon bag	6020, 901.1	
	M21-Corr3-01-061818	Gamma Corr	Soil	6/18/2018	12:30	1	Gallon bag	6020, 901.1	
	M21-Corr4-01-061818	Gamma Corr	Soil	6/18/2018	13:00	1	Gallon bag	6020, 901.1	
	M22-Corr1-01-061818	Gamma Corr	Soil	6/18/2018	14:30	1	Gallon bag	6020, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: C

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0048**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC1A-SD1-01-062018	Surf Sed Short	Sed	6/20/2018	13:30	1	Gallon bag	6020, 7471, 901.1	
	DC1A-SD2-01-062018	Surf Sed Short	Sed	6/20/2018	13:35	1	Gallon bag	6020, 7471, 901.1	Y
	DC1A-SD2-02-062018	Surf Sed Short	Sed	6/20/2018	13:35	1	Gallon bag	6020, 7471, 901.1	
	DC1A-SD3-01-062018	Surf Sed Long	Sed	6/20/2018	13:45	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC1A-SD4-01-062018	Surf Sed Short	Sed	6/20/2018	13:52	1	Gallon bag	6020, 7471, 901.1	
	DC1A-SD5-01-062018	Surf Sed Short	Sed	6/20/2018	14:05	1	Gallon bag	6020, 7471, 901.1	
	DC1A-SD6-01-062018	Surf Sed Short	Sed	6/20/2018	14:10	1	Gallon bag	6020, 7471, 901.1	
	DC1A-SD7-01-062018	Surf Sed Short	Sed	6/20/2018	14:25	1	Gallon bag	6020, 7471, 901.1	
	DC1A-SD7A-01-062018	Surf Sed Long	Sed	6/20/2018	14:50	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC1A-SD7A-0612-01-062018	Surf Sed Long	Sed	6/20/2018	14:55	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC3B-SD1-01-061918	Surf Sed Short	Sed	6/19/2018	11:50	1	Gallon bag	6020, 7471, 901.1	
	DC3B-SD2-01-061918	Surf Sed Short	Sed	6/19/2018	12:00	1	Gallon bag	6020, 7471, 901.1	
	DC3B-SD3-01-061918	Surf Sed Short	Sed	6/19/2018	12:15	1	Gallon bag	6020, 7471, 901.1	
	DC3B-SD4-01-061918	Surf Sed Short	Sed	6/19/2018	12:25	1	Gallon bag	6020, 7471, 901.1	
	DC3B-SD5-01-061918	Surf Sed Long	Sed	6/19/2018	12:35	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC3B-SD5-02-061918	Surf Sed Short	Sed	6/19/2018	12:35	1	Gallon bag	6020, 7471, 901.1	
	DC3B-SD6-01-061918	Surf Sed Short	Sed	6/19/2018	12:50	1	Gallon bag	6020, 7471, 901.1	
	DC3D-SD1-01-061918	Surf Sed Short	Sed	6/19/2018	10:50	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: C

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0048**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3D-SD1A-01-061918	Surf Sed Short	Sed	6/19/2018	11:35	1	Gallon bag	6020, 7471, 901.1	
	DC3D-SD2-01-061918	Surf Sed Short	Sed	6/19/2018	11:00	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: D

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0049**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	HS1-SB8-0612-01-062018	XRF Conf Short	Soil	6/20/2018	14:23	1	Gallon bag	6020, 901.1	Y
	HS1-SB8-1215-01-062018	XRF Conf Long	Soil	6/20/2018	14:29	1	Gallon bag	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	HS1-SS10-01-062018	XRF Conf Short	Soil	6/20/2018	14:46	1	Gallon bag	6020, 901.1	
	HS1-SS1-01-062018	XRF Conf Short	Soil	6/20/2018	14:09	1	Gallon bag	6020, 901.1	
	HS1-SS11-01-062018	XRF Conf Short	Soil	6/20/2018	14:48	1	Gallon bag	6020, 901.1	
	HS1-SS12-01-062018	XRF Conf Short	Soil	6/20/2018	14:52	1	Gallon bag	6020, 901.1	
	HS1-SS12-02-062018	XRF Conf Short	Soil	6/20/2018	14:52	1	Gallon bag	6020, 901.1	
	HS1-SS2-01-062018	XRF Conf Short	Soil	6/20/2018	14:12	1	Gallon bag	6020, 901.1	
	HS1-SS3-01-062018	XRF Conf Long	Soil	6/20/2018	14:18	1	Gallon bag	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	HS1-SS4-01-062018	XRF Conf Short	Soil	6/20/2018	14:16	1	Gallon bag	6020, 901.1	
	HS1-SS5-01-062018	XRF Conf Short	Soil	6/20/2018	14:14	1	Gallon bag	6020, 901.1	
	HS1-SS6-01-062018	XRF Conf Short	Soil	6/20/2018	14:33	1	Gallon bag	6020, 901.1	
	HS1-SS7-01-062018	XRF Conf Short	Soil	6/20/2018	14:31	1	Gallon bag	6020, 901.1	
	HS1-SS8-01-062018	XRF Conf Short	Soil	6/20/2018	14:21	1	Gallon bag	6020, 901.1	
	HS1-SS9-01-062018	XRF Conf Short	Soil	6/20/2018	14:44	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-E, RAD-E

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0050**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B21-SB04-01-062118	Bkgd Study Long	Soil	6/21/2018	10:30	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B21-SB14-01-062118	Bkgd Study Long	Soil	6/21/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B21-SB26-01-062118	Bkgd Study Long	Soil	6/21/2018	13:40	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B21-SS01-01-062118	Bkgd Study Short	Soil	6/21/2018	10:55	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B21-SS02-01-062118	Bkgd Study Short	Soil	6/21/2018	10:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS03-01-062118	Bkgd Study Short	Soil	6/21/2018	10:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS04-01-062118	Bkgd Study Short	Soil	6/21/2018	10:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS04-02-062118	Bkgd Study Long	Soil	6/21/2018	10:30	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B21-SS05-01-062118	Bkgd Study Short	Soil	6/21/2018	10:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS06-01-062118	Bkgd Study Short	Soil	6/21/2018	10:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS07-01-062118	Bkgd Study Short	Soil	6/21/2018	11:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS08-01-062118	Bkgd Study Short	Soil	6/21/2018	11:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS09-01-062118	Bkgd Study Short	Soil	6/21/2018	11:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS10-01-062118	Bkgd Study Short	Soil	6/21/2018	11:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS11-01-062118	Bkgd Study Short	Soil	6/21/2018	11:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS12-01-062118	Bkgd Study Short	Soil	6/21/2018	11:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS13-01-062118	Bkgd Study Long	Soil	6/21/2018	12:20	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B21-SS14-01-062118	Bkgd Study Short	Soil	6/21/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-E, RAD-E

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0050**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B21-SS14-02-062118	Bkgd Study Long	Soil	6/21/2018	12:05	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B21-SS15-01-062118	Bkgd Study Short	Soil	6/21/2018	11:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS16-01-062118	Bkgd Study Short	Soil	6/21/2018	11:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS17-01-062118	Bkgd Study Short	Soil	6/21/2018	11:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS18-01-062118	Bkgd Study Short	Soil	6/21/2018	11:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS19-01-062118	Bkgd Study Short	Soil	6/21/2018	13:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS20-01-062118	Bkgd Study Short	Soil	6/21/2018	14:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS21-01-062118	Bkgd Study Short	Soil	6/21/2018	14:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS22-01-062118	Bkgd Study Short	Soil	6/21/2018	14:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS23-01-062118	Bkgd Study Short	Soil	6/21/2018	13:55	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	B21-SS24-01-062118	Bkgd Study Short	Soil	6/21/2018	14:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS25-01-062118	Bkgd Study Short	Soil	6/21/2018	13:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS26-01-062118	Bkgd Study Short	Soil	6/21/2018	13:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	B21-SS27-01-062118	Bkgd Study Short	Soil	6/21/2018	13:45	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-F, RAD-F

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0051**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DB34-SB14-01-062218	Bkgd Study Long	Sed	6/22/2018	14:58	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DB34-SB5-01-062118	Bkgd Study Short	Sed	6/21/2018	16:07	1	Gallon bag	6020, 7471, 901.1	Y
	DB34-SB7-01-062218	Bkgd Study Short	Sed	6/22/2018	14:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD10-01-062218	Bkgd Study Short	Sed	6/22/2018	14:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD1-01-062118	Bkgd Study Short	Sed	6/21/2018	15:45	1	Gallon bag	6020, 7471, 901.1	
	DB34-SD11-01-062218	Bkgd Study Short	Sed	6/22/2018	14:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD12-01-062218	Bkgd Study Short	Sed	6/22/2018	14:52	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD13-01-062218	Bkgd Study Short	Sed	6/22/2018	14:54	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD14-01-062218	Bkgd Study Long	Sed	6/22/2018	14:58	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DB34-SD15-01-062218	Bkgd Study Short	Sed	6/22/2018	15:08	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD16-01-062218	Bkgd Study Short	Sed	6/22/2018	15:04	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD17-01-062218	Bkgd Study Short	Sed	6/22/2018	15:11	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD18-01-062218	Bkgd Study Short	Sed	6/22/2018	15:14	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD19-01-062218	Bkgd Study Short	Sed	6/22/2018	15:17	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD20-01-062218	Bkgd Study Short	Sed	6/22/2018	15:19	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD2-01-062118	Bkgd Study Short	Sed	6/21/2018	15:50	1	Gallon bag	6020, 7471, 901.1	
	DB34-SD21-01-062218	Bkgd Study Short	Sed	6/22/2018	15:29	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD22-01-062218	Bkgd Study Short	Sed	6/22/2018	15:33	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions: Samples for 6/21/18 have RAD and METALS in a single bag.	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-F, RAD-F

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0051**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DB34-SD23-01-062218	Bkgd Study Short	Sed	6/22/2018	15:35	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD24-01-062218	Bkgd Study Short	Sed	6/22/2018	15:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD25-01-062218	Bkgd Study Short	Sed	6/22/2018	15:38	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD26-01-062218	Bkgd Study Short	Sed	6/22/2018	15:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD27-01-062218	Bkgd Study Short	Sed	6/22/2018	15:43	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD28-01-062218	Bkgd Study Short	Sed	6/22/2018	15:46	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD29-01-062218	Bkgd Study Short	Sed	6/22/2018	15:48	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	DB34-SD30-01-062218	Bkgd Study Short	Sed	6/22/2018	15:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD3-01-062118	Bkgd Study Short	Sed	6/21/2018	15:53	1	Gallon bag	6020, 7471, 901.1	
	DB34-SD4-01-062118	Bkgd Study Short	Sed	6/21/2018	15:55	1	Gallon bag	6020, 7471, 901.1	
	DB34-SD5-01-062118	Bkgd Study Long	Sed	6/21/2018	15:57	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DB34-SD5-02-062118	Bkgd Study Short	Sed	6/21/2018	15:57	1	Gallon bag	6020, 7471, 901.1	
	DB34-SD6-01-062218	Bkgd Study Short	Sed	6/22/2018	14:25	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD7-01-062218	Bkgd Study Short	Sed	6/22/2018	14:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD7-02-062218	Bkgd Study Short	Sed	6/22/2018	14:32	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD8-01-062218	Bkgd Study Short	Sed	6/22/2018	14:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB34-SD9-01-062218	Bkgd Study Short	Sed	6/22/2018	14:45	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions: Samples for 6/21/18 have RAD and METALS in a single bag.	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: G

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0052**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC1B-SD1-01-062118	Surf Sed Short	Sed	6/21/2018	14:15	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD2-01-062118	Surf Sed Short	Sed	6/21/2018	14:25	1	Gallon bag	6020, 7471, 901.1	Y
	DC1B-SD3-01-062118	Surf Sed Long	Sed	6/21/2018	14:30	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC1G-SD1-01-062118	Surf Sed Short	Sed	6/21/2018	12:05	1	Gallon bag	6020, 7471, 901.1	
	DC1G-SD2-01-062118	Surf Sed Short	Sed	6/21/2018	12:15	1	Gallon bag	6020, 7471, 901.1	
	DC1G-SD3-01-062118	Surf Sed Long	Sed	6/21/2018	12:25	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC2A-SD19-01-062118	Surf Sed Short	Sed	6/21/2018	12:20	1	Gallon bag	6020, 7471, 901.1	
	DC2A-SD20-01-062118	Surf Sed Short	Sed	6/21/2018	12:26	1	Gallon bag	6020, 7471, 901.1	
	DC2A-SD21-01-062118	Surf Sed Short	Sed	6/21/2018	12:30	1	Gallon bag	6020, 7471, 901.1	
	DC2A-SD22-01-062118	Surf Sed Long	Sed	6/21/2018	12:37	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC2A-SD23-01-062118	Surf Sed Short	Sed	6/21/2018	12:42	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: H1, H2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0053**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC1-SD10-01-062118	Surf Sed Short	Sed	6/21/2018	11:20	1	Gallon bag	6020, 7471, 901.1	Y
	DC1-SD1-01-062118	Surf Sed Short	Sed	6/21/2018	10:08	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD11-01-062118	Surf Sed Short	Sed	6/21/2018	11:30	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD12-01-062118	Surf Sed Short	Sed	6/21/2018	11:35	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD13-01-062118	Surf Sed Short	Sed	6/21/2018	11:40	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD14-01-062118	Surf Sed Short	Sed	6/21/2018	11:45	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD15-01-062118	Surf Sed Short	Sed	6/21/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD16-01-062118	Surf Sed Short	Sed	6/21/2018	13:25	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD17-01-062118	Surf Sed Short	Sed	6/21/2018	13:30	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD17-02-062118	Surf Sed Short	Sed	6/21/2018	13:30	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD18-01-062118	Surf Sed Short	Sed	6/21/2018	13:40	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD19-01-062118	Surf Sed Short	Sed	6/21/2018	13:45	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD20-01-062118	Surf Sed Short	Sed	6/21/2018	13:55	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD2-01-062118	Surf Sed Short	Sed	6/21/2018	10:15	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD21-01-062118	Surf Sed Short	Sed	6/21/2018	13:55	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD22-01-062118	Surf Sed Short	Sed	6/21/2018	14:05	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD3-01-062118	Surf Sed Short	Sed	6/21/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD4-01-062118	Surf Sed Short	Sed	6/21/2018	10:30	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt







**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: I

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0054**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC2-SD10-01-062118	Surf Sed Short	Sed	6/21/2018	10:55	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD1-01-062118	Surf Sed Short	Sed	6/21/2018	10:05	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD11-01-062118	Surf Sed Short	Sed	6/21/2018	11:00	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD12-01-062118	Surf Sed Short	Sed	6/21/2018	11:04	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD13-01-062118	Surf Sed Long	Sed	6/21/2018	11:30	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC2-SD14-01-062118	Surf Sed Short	Sed	6/21/2018	11:36	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD15-01-062118	Surf Sed Short	Sed	6/21/2018	11:42	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD16-01-062118	Surf Sed Short	Sed	6/21/2018	11:48	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD16-02-062118	Surf Sed Short	Sed	6/21/2018	11:48	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD17-01-062118	Surf Sed Short	Sed	6/21/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD18-01-062118	Surf Sed Short	Sed	6/21/2018	12:02	1	Gallon bag	6020, 7471, 901.1	Y
	DC2-SD2-01-062118	Surf Sed Short	Sed	6/21/2018	10:15	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD3-01-062118	Surf Sed Short	Sed	6/21/2018	10:22	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD4-01-062118	Surf Sed Short	Sed	6/21/2018	10:26	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD5-01-062118	Surf Sed Short	Sed	6/21/2018	10:32	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD6-01-062118	Surf Sed Short	Sed	6/21/2018	10:36	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD7-01-062118	Surf Sed Short	Sed	6/21/2018	10:41	1	Gallon bag	6020, 7471, 901.1	
	DC2-SD8-01-062118	Surf Sed Long	Sed	6/21/2018	10:46	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC2-SD9-01-062118	Surf Sed Short	Sed	6/21/2018	10:50	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: J

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0055**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC1B-SD4-01-062218	Surf Sed Short	Sed	6/22/2018	11:10	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD4-02-062218	Surf Sed Short	Sed	6/22/2018	11:10	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD5-01-062218	Surf Sed Short	Sed	6/22/2018	11:00	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD5A-01-062218	Surf Sed Short	Sed	6/22/2018	10:55	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD6-01-062218	Surf Sed Short	Sed	6/22/2018	10:45	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD7-01-062218	Surf Sed Short	Sed	6/22/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD7A-01-062218	Surf Sed Short	Sed	6/22/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD8-01-062218	Surf Sed Short	Sed	6/22/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	DC1B-SD8A-01-062218	Surf Sed Short	Sed	6/22/2018	10:05	1	Gallon bag	6020, 7471, 901.1	Y
	DC1B-SD9-01-062218	Surf Sed Short	Sed	6/22/2018	09:52	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD2-01-062218	Surf Sed Short	Sed	6/22/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD3-01-062218	Surf Sed Short	Sed	6/22/2018	12:05	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD4-01-062218	Surf Sed Short	Sed	6/22/2018	12:12	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD5-01-062218	Surf Sed Short	Sed	6/22/2018	12:18	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD6-01-062218	Surf Sed Short	Sed	6/22/2018	12:25	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD7-01-062218	Surf Sed Short	Sed	6/22/2018	12:35	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD8-01-062218	Surf Sed Long	Sed	6/22/2018	12:40	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC2B-SD8A-01-062218	Surf Sed Short	Sed	6/22/2018	12:45	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD9-01-062218	Surf Sed Short	Sed	6/22/2018	12:57	1	Gallon bag	6020, 7471, 901.1	
	DC2B-SD9-02-062218	Surf Sed Short	Sed	6/22/2018	12:57	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-L, RAD-L

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0057**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DB35-SB1-01-062318	Bkgd Study Long	Sed	6/23/2018	14:55	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	Y
	DB35-SB11-01-062318	Bkgd Study Short	Sed	6/23/2018	15:33	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SB24-01-062318	Bkgd Study Short	Sed	6/23/2018	16:21	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD10-01-062318	Bkgd Study Short	Sed	6/23/2018	15:27	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD1-01-062318	Bkgd Study Long	Sed	6/23/2018	14:50	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DB35-SD1-02-062318	Bkgd Study Short	Sed	6/23/2018	14:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD11-01-062318	Bkgd Study Short	Sed	6/23/2018	15:30	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD12-01-062318	Bkgd Study Short	Sed	6/23/2018	15:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD13-01-062318	Bkgd Study Short	Sed	6/23/2018	15:40	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD14-01-062318	Bkgd Study Short	Sed	6/23/2018	15:44	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD15-01-062318	Bkgd Study Short	Sed	6/23/2018	15:47	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD16-01-062318	Bkgd Study Short	Sed	6/23/2018	15:50	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD17-01-062318	Bkgd Study Short	Sed	6/23/2018	15:53	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD18-01-062318	Bkgd Study Short	Sed	6/23/2018	15:56	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD19-01-062318	Bkgd Study Short	Sed	6/23/2018	16:00	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD20-01-062318	Bkgd Study Short	Sed	6/23/2018	16:02	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD2-01-062318	Bkgd Study Short	Sed	6/23/2018	15:01	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD21-01-062318	Bkgd Study Long	Sed	6/23/2018	16:05	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-L, RAD-L

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0057**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DB35-SD21-02-062318	Bkgd Study Short	Sed	6/23/2018	16:05	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD22-01-062318	Bkgd Study Short	Sed	6/23/2018	16:11	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD23-01-062318	Bkgd Study Short	Sed	6/23/2018	16:15	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD24-01-062318	Bkgd Study Short	Sed	6/23/2018	16:18	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD25-01-062318	Bkgd Study Short	Sed	6/23/2018	16:26	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD26-01-062318	Bkgd Study Short	Sed	6/23/2018	16:29	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD27-01-062318	Bkgd Study Long	Sed	6/23/2018	16:33	2	Quart + Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DB35-SD28-01-062318	Bkgd Study Short	Sed	6/23/2018	16:36	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD29-01-062318	Bkgd Study Short	Sed	6/23/2018	16:39	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD30-01-062318	Bkgd Study Short	Sed	6/23/2018	16:42	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD3-01-062318	Bkgd Study Short	Sed	6/23/2018	15:04	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD4-01-062318	Bkgd Study Short	Sed	6/23/2018	15:07	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD5-01-062318	Bkgd Study Short	Sed	6/23/2018	15:10	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD6-01-062318	Bkgd Study Short	Sed	6/23/2018	15:13	2	Quart + Gallon bags	6020, 7471, 901.1	Y
	DB35-SD7-01-062318	Bkgd Study Short	Sed	6/23/2018	15:16	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD8-01-062318	Bkgd Study Short	Sed	6/23/2018	15:20	2	Quart + Gallon bags	6020, 7471, 901.1	
	DB35-SD9-01-062318	Bkgd Study Short	Sed	6/23/2018	15:23	2	Quart + Gallon bags	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: M

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0058**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC1-SD23-01-062318	Surf Sed Short	Sed	6/23/2018	11:25	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD24-01-062318	Surf Sed Long	Sed	6/23/2018	11:40	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC1-SD25-01-062318	Surf Sed Short	Sed	6/23/2018	11:50	1	Gallon bag	6020, 7471, 901.1	Y
	DC1-SD26-01-062318	Surf Sed Short	Sed	6/23/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD27-01-062318	Surf Sed Short	Sed	6/23/2018	12:05	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD28-01-062318	Surf Sed Short	Sed	6/23/2018	12:20	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD29-01-062318	Surf Sed Short	Sed	6/23/2018	12:40	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD30-01-062318	Surf Sed Short	Sed	6/23/2018	12:50	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD31-01-062318	Surf Sed Short	Sed	6/23/2018	12:55	1	Gallon bag	6020, 7471, 901.1	
	DC1-SD32-01-062318	Surf Sed Short	Sed	6/23/2018	13:10	1	Gallon bag	6020, 7471, 901.1	
	DC3F-SD10-01-062318	Surf Sed Short	Sed	6/23/2018	11:12	1	Gallon bag	6020, 7471, 901.1	
	DC3F-SD1-01-062318	Surf Sed Short	Sed	6/23/2018	09:45	1	Gallon bag	6020, 7471, 901.1	
	DC3F-SD2-01-062318	Surf Sed Long	Sed	6/23/2018	09:53	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC3F-SD3-01-062318	Surf Sed Short	Sed	6/23/2018	10:00	1	Gallon bag	6020, 7471, 901.1	
	DC3F-SD4-01-062318	Surf Sed Short	Sed	6/23/2018	10:07	1	Gallon bag	6020, 7471, 901.1	
	DC3F-SD5-01-062318	Surf Sed Short	Sed	6/23/2018	10:16	1	Gallon bag	6020, 7471, 901.1	
	DC3F-SD6-01-062318	Surf Sed Short	Sed	6/23/2018	10:29	1	Gallon bag	6020, 7471, 901.1	
	DC3F-SD7-01-062318	Surf Sed Short	Sed	6/23/2018	10:40	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt







**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: N

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0059**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3A-SD1-01-062318	Surf Sed Short	Sed	6/23/2018	12:30	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD2-01-062318	Surf Sed Short	Sed	6/23/2018	13:20	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD3-01-062318	Surf Sed Short	Sed	6/23/2018	13:25	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD4-01-062318	Surf Sed Short	Sed	6/23/2018	13:30	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD5-01-062318	Surf Sed Short	Sed	6/23/2018	13:35	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD6-01-062318	Surf Sed Short	Sed	6/23/2018	13:40	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD7-01-062318	Surf Sed Short	Sed	6/23/2018	13:45	1	Gallon bag	6020, 7471, 901.1	
	DC3A-SD8-01-062318	Surf Sed Short	Sed	6/23/2018	13:50	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD10-01-062318	Surf Sed Short	Sed	6/23/2018	10:50	1	Gallon bag	6020, 7471, 901.1	Y
	DC3-SD1-01-062318	Surf Sed Short	Sed	6/23/2018	10:00	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD11-01-062318	Surf Sed Short	Sed	6/23/2018	11:05	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD12-01-062318	Surf Sed Short	Sed	6/23/2018	11:10	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD13-01-062318	Surf Sed Short	Sed	6/23/2018	11:25	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD14-01-062318	Surf Sed Short	Sed	6/23/2018	11:40	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD15-01-062318	Surf Sed Short	Sed	6/23/2018	11:45	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD16-01-062318	Surf Sed Long	Sed	6/23/2018	11:50	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC3-SD17-01-062318	Surf Sed Short	Sed	6/23/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD18-01-062318	Surf Sed Short	Sed	6/23/2018	12:00	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: N

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0059**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3-SD2-01-062318	Surf Sed Short	Sed	6/23/2018	10:05	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD3-01-062318	Surf Sed Short	Sed	6/23/2018	10:10	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD4-01-062318	Surf Sed Short	Sed	6/23/2018	10:15	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD5-01-062318	Surf Sed Short	Sed	6/23/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD6-01-062318	Surf Sed Short	Sed	6/23/2018	10:30	1	Gallon bag	6020, 7471, 901.1	Y
	DC3-SD7-01-062318	Surf Sed Short	Sed	6/23/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD8-01-062318	Surf Sed Short	Sed	6/23/2018	10:40	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD9-01-062318	Surf Sed Short	Sed	6/23/2018	10:45	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: O

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0060**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3E-SD1-01-062318	Surf Sed Short	Sed	6/23/2018	14:30	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD2-01-062318	Surf Sed Short	Sed	6/23/2018	14:35	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD3-01-062318	Surf Sed Short	Sed	6/23/2018	14:40	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD4-01-062318	Surf Sed Long	Sed	6/23/2018	14:50	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC3E-SD5-01-062318	Surf Sed Short	Sed	6/23/2018	14:55	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD5A-01-062318	Surf Sed Short	Sed	6/23/2018	15:00	1	Gallon bag	6020, 7471, 901.1	
	DC3G-SD1-01-062318	Surf Sed Short	Sed	6/23/2018	13:23	1	Gallon bag	6020, 7471, 901.1	
	DC3G-SD1-02-062318	Surf Sed Short	Sed	6/23/2018	13:23	1	Gallon bag	6020, 7471, 901.1	
	DC3G-SD2-01-062318	Surf Sed Long	Sed	6/23/2018	13:35	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DC3G-SD3-01-062318	Surf Sed Short	Sed	6/23/2018	13:41	1	Gallon bag	6020, 7471, 901.1	
	DC3G-SD4-01-062318	Surf Sed Short	Sed	6/23/2018	13:47	1	Gallon bag	6020, 7471, 901.1	
	DC3G-SD5-01-062318	Surf Sed Short	Sed	6/23/2018	13:52	1	Gallon bag	6020, 7471, 901.1	Y
	DC3G-SD6-01-062318	Surf Sed Short	Sed	6/23/2018	14:01	1	Gallon bag	6020, 7471, 901.1	
	M5-SD1-01-062318	Surf Sed Long	Sed	6/23/2018	12:20	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	M7-SD1-01-062318	Surf Sed Short	Sed	6/23/2018	15:10	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: P1, P2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0061**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DT9-SD10-01-062418	Surf Sed Short	Sed	6/24/2018	10:47	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD1-01-062418	Surf Sed Short	Sed	6/24/2018	10:00	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD1-02-062418	Surf Sed Short	Sed	6/24/2018	10:00	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD11-01-062418	Surf Sed Short	Sed	6/24/2018	10:56	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD11-02-062418	Surf Sed Short	Sed	6/24/2018	10:56	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD12-01-062418	Surf Sed Short	Sed	6/24/2018	11:04	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD13-01-062418	Surf Sed Short	Sed	6/24/2018	11:10	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD14-01-062418	Surf Sed Short	Sed	6/24/2018	11:16	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD15-01-062418	Surf Sed Short	Sed	6/24/2018	11:21	1	Gallon bag	6020, 7471, 901.1	Y
	DT9-SD16-01-062418	Surf Sed Short	Sed	6/24/2018	11:27	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD17-01-062418	Surf Sed Short	Sed	6/24/2018	11:35	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD18-01-062418	Surf Sed Short	Sed	6/24/2018	11:41	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD19-01-062418	Surf Sed Short	Sed	6/24/2018	11:46	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD20-01-062418	Surf Sed Short	Sed	6/24/2018	11:53	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD2-01-062418	Surf Sed Short	Sed	6/24/2018	10:08	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD21-01-062418	Surf Sed Short	Sed	6/24/2018	12:00	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD3-01-062418	Surf Sed Long	Sed	6/24/2018	10:12	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DT9-SD4-01-062418	Surf Sed Short	Sed	6/24/2018	10:15	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: P1, P2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0061**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DT9-SD5-01-062418	Surf Sed Short	Sed	6/24/2018	10:18	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD6-01-062418	Surf Sed Short	Sed	6/24/2018	10:25	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD7-01-062418	Surf Sed Short	Sed	6/24/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	DT9-SD8-01-062418	Surf Sed Short	Sed	6/24/2018	10:37	1	Gallon bag	6020, 7471, 901.1	Y
	DT9-SD9-01-062418	Surf Sed Short	Sed	6/24/2018	10:41	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Q1, Q2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0062**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DCWN-SD10-01-062418	Surf Sed Short	Sed	6/24/2018	10:50	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD1-01-062418	Surf Sed Short	Sed	6/24/2018	10:00	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD11-01-062418	Surf Sed Short	Sed	6/24/2018	10:55	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD11-02-062418	Surf Sed Short	Sed	6/24/2018	10:55	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD12-01-062418	Surf Sed Short	Sed	6/24/2018	11:05	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD13-01-062418	Surf Sed Short	Sed	6/24/2018	11:10	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD14-01-062418	Surf Sed Short	Sed	6/24/2018	11:15	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD15-01-062418	Surf Sed Short	Sed	6/24/2018	11:20	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD16-01-062418	Surf Sed Short	Sed	6/24/2018	11:25	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD17-01-062418	Surf Sed Short	Sed	6/24/2018	11:30	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD18-01-062418	Surf Sed Short	Sed	6/24/2018	11:40	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD19-01-062418	Surf Sed Short	Sed	6/24/2018	11:50	1	Gallon bag	6020, 7471, 901.1	Y
	DCWN-SD20-01-062418	Surf Sed Short	Sed	6/24/2018	13:30	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD2-01-062418	Surf Sed Short	Sed	6/24/2018	10:05	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD21-01-062418	Surf Sed Short	Sed	6/24/2018	13:35	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD21-02-062418	Surf Sed Short	Sed	6/24/2018	13:35	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD22-01-062418	Surf Sed Short	Sed	6/24/2018	13:40	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD23-01-062418	Surf Sed Short	Sed	6/24/2018	13:45	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Q1, Q2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0062**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DCWN-SD24-01-062418	Surf Sed Short	Sed	6/24/2018	13:50	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD25-01-062418	Surf Sed Short	Sed	6/24/2018	13:55	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD26-01-062418	Surf Sed Short	Sed	6/24/2018	14:00	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD27-01-062418	Surf Sed Short	Sed	6/24/2018	14:05	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD28-01-062418	Surf Sed Long	Sed	6/24/2018	14:10	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DCWN-SD28A-01-062418	Surf Sed Long	Sed	6/24/2018	14:12	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DCWN-SD28B-01-062418	Surf Sed Short	Sed	6/24/2018	14:35	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD29-01-062418	Surf Sed Short	Sed	6/24/2018	14:15	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD30-01-062418	Surf Sed Short	Sed	6/24/2018	14:20	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD3-01-062418	Surf Sed Short	Sed	6/24/2018	10:10	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD4-01-062418	Surf Sed Short	Sed	6/24/2018	10:15	1	Gallon bag	6020, 7471, 901.1	Y
	DCWN-SD5-01-062418	Surf Sed Short	Sed	6/24/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD6-01-062418	Surf Sed Short	Sed	6/24/2018	10:25	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD7-01-062418	Surf Sed Short	Sed	6/24/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD8-01-062418	Surf Sed Short	Sed	6/24/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	DCWN-SD9-01-062418	Surf Sed Short	Sed	6/24/2018	10:40	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: R

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0063**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M30-EB-01-062418	Equip Blank	Water	6/24/2018	12:00	3	(1)L + (1)250ml + (1)500 Poly	6020, 7470, 901.1, 903.1, 904.0, D3972 (U, Th)	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





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 Fort Collins, CO 80525  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0064**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M10-XS10A-01-071118	XRF Conf Short	Soil	7/11/2018	13:01	2	Quart + Gallon bags	6020, 901.1	
	M10-XS31-01-071118	XRF Conf Short	Soil	7/11/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M10-XS31-02-071118	XRF Conf Short	Soil	7/11/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M11-XS11-01-071118	XRF Conf Long	Soil	7/11/2018	12:45	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M11-XS7-01-071118	XRF Conf Short	Soil	7/11/2018	12:25	2	Quart + Gallon bags	6020, 901.1	
	M12-XS27-01-071518	XRF Conf Short	Soil	7/15/2018	10:58	2	Quart + Gallon bags	6020, 901.1	
	M24-XS115-01-071418	XRF Conf Short	Soil	7/14/2018	11:35	2	Quart + Gallon bags	6020, 901.1	
	M30-EB-01-071618	Equip Blank	Water	7/16/2018	13:10	3	(1)L Poly + (1)250ml Poly + (1)	6020, 7470, 901.1, 903.1, 904.0, D3972 (U, Th)	
	M30-XS127-01-071618	XRF Conf Short	Soil	7/16/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	M30-XS170-01-071618	XRF Conf Short	Soil	7/16/2018	09:20	2	Quart + Gallon bags	6020, 901.1	
	M30-XS95-01-071618	XRF Conf Short	Soil	7/16/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M31-XS9-01-071018	XRF Conf Short	Soil	7/10/2018	11:10	2	Quart + Gallon bags	6020, 901.1	
	M32-XS58-01-071018	XRF Conf Short	Soil	7/10/2018	15:15	2	Quart + Gallon bags	6020, 901.1	
	M32-XS89-01-071018	XRF Conf Short	Soil	7/10/2018	14:15	2	Quart + Gallon bags	6020, 901.1	Y
	M33-XS22-01-071218	XRF Conf Short	Soil	7/12/2018	13:05	2	Quart + Gallon bags	6020, 901.1	
	M33-XS85-01-071218	XRF Conf Short	Soil	7/12/2018	12:15	2	Quart + Gallon bags	6020, 901.1	
	M33-XS93-01-071218	XRF Conf Short	Soil	7/12/2018	13:20	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: T1, T2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0065**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B30-SB02-01-071018	Bkgd Study Short	Soil	7/10/2018	12:05	1	Gallon bag	6020, 7471, 901.1	
	B30-SB09-01-071018	Bkgd Study Short	Soil	7/10/2018	12:59	1	Gallon bag	6020, 7471, 901.1	
	B30-SB21-01-071018	Bkgd Study Long	Soil	7/10/2018	11:40	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B30-SS01-01-071018	Bkgd Study Short	Soil	7/10/2018	11:18	1	Gallon bag	6020, 7471, 901.1	Y
	B30-SS02-01-071018	Bkgd Study Short	Soil	7/10/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	B30-SS03-01-071018	Bkgd Study Short	Soil	7/10/2018	12:05	1	Gallon bag	6020, 7471, 901.1	
	B30-SS04-01-071018	Bkgd Study Short	Soil	7/10/2018	13:00	1	Gallon bag	6020, 7471, 901.1	
	B30-SS05-01-071018	Bkgd Study Short	Soil	7/10/2018	13:03	1	Gallon bag	6020, 7471, 901.1	
	B30-SS06-01-071018	Bkgd Study Short	Soil	7/10/2018	11:22	1	Gallon bag	6020, 7471, 901.1	
	B30-SS07-01-071018	Bkgd Study Short	Soil	7/10/2018	12:00	1	Gallon bag	6020, 7471, 901.1	
	B30-SS08-01-071018	Bkgd Study Short	Soil	7/10/2018	12:10	1	Gallon bag	6020, 7471, 901.1	
	B30-SS09-01-071018	Bkgd Study Short	Soil	7/10/2018	12:53	1	Gallon bag	6020, 7471, 901.1	
	B30-SS10-01-071018	Bkgd Study Short	Soil	7/10/2018	13:05	1	Gallon bag	6020, 7471, 901.1	
	B30-SS11-01-071018	Bkgd Study Long	Soil	7/10/2018	11:25	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B30-SS12-01-071018	Bkgd Study Short	Soil	7/10/2018	11:52	1	Gallon bag	6020, 7471, 901.1	
	B30-SS13-01-071018	Bkgd Study Short	Soil	7/10/2018	12:15	1	Gallon bag	6020, 7471, 901.1	
	B30-SS14-01-071018	Bkgd Study Short	Soil	7/10/2018	12:52	1	Gallon bag	6020, 7471, 901.1	
	B30-SS15-01-071018	Bkgd Study Short	Soil	7/10/2018	13:06	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: T1, T2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0065**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B30-SS16-01-071018	Bkgd Study Short	Soil	7/10/2018	11:28	1	Gallon bag	6020, 7471, 901.1	
	B30-SS17-01-071018	Bkgd Study Short	Soil	7/10/2018	11:45	1	Gallon bag	6020, 7471, 901.1	
	B30-SS18-01-071018	Bkgd Study Short	Soil	7/10/2018	12:20	1	Gallon bag	6020, 7471, 901.1	
	B30-SS19-01-071018	Bkgd Study Short	Soil	7/10/2018	12:50	1	Gallon bag	6020, 7471, 901.1	
	B30-SS20-01-071018	Bkgd Study Short	Soil	7/10/2018	13:10	1	Gallon bag	6020, 7471, 901.1	
	B30-SS21-01-071018	Bkgd Study Long	Soil	7/10/2018	11:33	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B30-SS21-02-071018	Bkgd Study Long	Soil	7/10/2018	11:33	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B30-SS22-01-071018	Bkgd Study Short	Soil	7/10/2018	11:49	1	Gallon bag	6020, 7471, 901.1	
	B30-SS23-01-071018	Bkgd Study Short	Soil	7/10/2018	12:28	1	Gallon bag	6020, 7471, 901.1	
	B30-SS24-01-071018	Bkgd Study Short	Soil	7/10/2018	12:45	1	Gallon bag	6020, 7471, 901.1	
	B30-SS25-01-071018	Bkgd Study Short	Soil	7/10/2018	13:12	1	Gallon bag	6020, 7471, 901.1	
	B30-SS26-01-071018	Bkgd Study Short	Soil	7/10/2018	11:35	1	Gallon bag	6020, 7471, 901.1	
	B30-SS27-01-071018	Bkgd Study Short	Soil	7/10/2018	11:42	1	Gallon bag	6020, 7471, 901.1	
	B30-SS28-01-071018	Bkgd Study Short	Soil	7/10/2018	12:30	1	Gallon bag	6020, 7471, 901.1	Y
	B30-SS29-01-071018	Bkgd Study Short	Soil	7/10/2018	12:36	1	Gallon bag	6020, 7471, 901.1	
	B30-SS30-01-071018	Bkgd Study Short	Soil	7/10/2018	13:18	1	Gallon bag	6020, 7471, 901.1	
	B30-SS30-02-071018	Bkgd Study Short	Soil	7/10/2018	13:18	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: U1, U2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0066**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B29-SB07-01-071118	Bkgd Study Short	Soil	7/11/2018	16:50	1	Gallon bag	6020, 7471, 901.1	
	B29-SB08-01-071118	Bkgd Study Short	Soil	7/11/2018	16:41	1	Gallon bag	6020, 7471, 901.1	
	B29-SB15-01-071318	Bkgd Study Short	Soil	7/13/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	B29-SS01-01-071018	Bkgd Study Long	Soil	7/10/2018	15:30	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B29-SS02-01-071018	Bkgd Study Short	Soil	7/10/2018	15:25	1	Gallon bag	6020, 7471, 901.1	
	B29-SS03-01-071018	Bkgd Study Short	Soil	7/10/2018	15:22	1	Gallon bag	6020, 7471, 901.1	
	B29-SS04-01-071018	Bkgd Study Short	Soil	7/10/2018	15:20	1	Gallon bag	6020, 7471, 901.1	
	B29-SS05-01-071018	Bkgd Study Short	Soil	7/10/2018	15:18	1	Gallon bag	6020, 7471, 901.1	Y
	B29-SS06-01-071018	Bkgd Study Long	Soil	7/10/2018	15:15	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B29-SS07-01-071118	Bkgd Study Short	Soil	7/11/2018	16:45	1	Gallon bag	6020, 7471, 901.1	
	B29-SS08-01-071118	Bkgd Study Short	Soil	7/11/2018	16:40	1	Gallon bag	6020, 7471, 901.1	
	B29-SS09-01-071118	Bkgd Study Short	Soil	7/11/2018	16:45	1	Gallon bag	6020, 7471, 901.1	
	B29-SS10-01-071318	Bkgd Study Short	Soil	7/13/2018	09:40	1	Gallon bag	6020, 7471, 901.1	
	B29-SS11-01-071318	Bkgd Study Long	Soil	7/13/2018	09:44	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B29-SS12-01-071318	Bkgd Study Short	Soil	7/13/2018	09:51	1	Gallon bag	6020, 7471, 901.1	
	B29-SS13-01-071118	Bkgd Study Short	Soil	7/11/2018	16:47	1	Gallon bag	6020, 7471, 901.1	
	B29-SS13-02-071118	Bkgd Study Short	Soil	7/11/2018	16:47	1	Gallon bag	6020, 7471, 901.1	
	B29-SS14-01-071118	Bkgd Study Short	Soil	7/11/2018	16:58	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: U1, U2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0066**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B29-SS15-01-071318	Bkgd Study Short	Soil	7/13/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	B29-SS16-01-071318	Bkgd Study Short	Soil	7/13/2018	10:25	1	Gallon bag	6020, 7471, 901.1	
	B29-SS17-01-071318	Bkgd Study Short	Soil	7/13/2018	09:58	1	Gallon bag	6020, 7471, 901.1	
	B29-SS18-01-071318	Bkgd Study Short	Soil	7/13/2018	09:55	1	Gallon bag	6020, 7471, 901.1	
	B29-SS19-01-071118	Bkgd Study Short	Soil	7/11/2018	16:52	1	Gallon bag	6020, 7471, 901.1	
	B29-SS20-01-071118	Bkgd Study Long	Soil	7/11/2018	16:54	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B29-SS21-01-071118	Bkgd Study Short	Soil	7/11/2018	16:56	1	Gallon bag	6020, 7471, 901.1	
	B29-SS22-01-071118	Bkgd Study Short	Soil	7/11/2018	17:00	1	Gallon bag	6020, 7471, 901.1	
	B29-SS23-01-071318	Bkgd Study Long	Soil	7/13/2018	10:14	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B29-SS24-01-071318	Bkgd Study Short	Soil	7/13/2018	10:18	1	Gallon bag	6020, 7471, 901.1	
	B29-SS25-01-071118	Bkgd Study Short	Soil	7/11/2018	16:50	1	Gallon bag	6020, 7471, 901.1	
	B29-SS26-01-071118	Bkgd Study Long	Soil	7/11/2018	16:48	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B29-SS27-01-071118	Bkgd Study Short	Soil	7/11/2018	16:45	1	Gallon bag	6020, 7471, 901.1	
	B29-SS28-01-071318	Bkgd Study Short	Soil	7/13/2018	10:06	1	Gallon bag	6020, 7471, 901.1	
	B29-SS29-01-071318	Bkgd Study Short	Soil	7/13/2018	10:04	1	Gallon bag	6020, 7471, 901.1	
	B29-SS30-01-071118	Bkgd Study Short	Soil	7/11/2018	16:58	1	Gallon bag	6020, 7471, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: V1, V2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0067**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B15-SB02-01-071118	Bkgd Study Short	Soil	7/11/2018	13:40	1	Gallon bag	6020, 7471, 901.1	
	B15-SB12-01-071118	Bkgd Study Short	Soil	7/11/2018	13:17	1	Gallon bag	6020, 7471, 901.1	
	B15-SB16-01-071118	Bkgd Study Long	Soil	7/11/2018	13:00	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B15-SB16-02-071118	Bkgd Study Long	Soil	7/11/2018	13:00	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B15-SS01-01-071118	Bkgd Study Short	Soil	7/11/2018	13:45	1	Gallon bag	6020, 7471, 901.1	
	B15-SS02-01-071118	Bkgd Study Short	Soil	7/11/2018	13:35	1	Gallon bag	6020, 7471, 901.1	Y
	B15-SS03-01-071118	Bkgd Study Short	Soil	7/11/2018	13:33	1	Gallon bag	6020, 7471, 901.1	
	B15-SS04-01-071118	Bkgd Study Short	Soil	7/11/2018	13:30	1	Gallon bag	6020, 7471, 901.1	
	B15-SS05-01-071118	Bkgd Study Long	Soil	7/11/2018	13:27	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B15-SS06-01-071118	Bkgd Study Short	Soil	7/11/2018	13:25	1	Gallon bag	6020, 7471, 901.1	
	B15-SS07-01-071118	Bkgd Study Short	Soil	7/11/2018	12:42	1	Gallon bag	6020, 7471, 901.1	
	B15-SS08-01-071118	Bkgd Study Short	Soil	7/11/2018	12:44	1	Gallon bag	6020, 7471, 901.1	
	B15-SS09-01-071118	Bkgd Study Long	Soil	7/11/2018	12:46	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B15-SS10-01-071118	Bkgd Study Short	Soil	7/11/2018	12:48	1	Gallon bag	6020, 7471, 901.1	
	B15-SS10-02-071118	Bkgd Study Short	Soil	7/11/2018	12:48	1	Gallon bag	6020, 7471, 901.1	
	B15-SS11-01-071118	Bkgd Study Short	Soil	7/11/2018	13:20	1	Gallon bag	6020, 7471, 901.1	
	B15-SS12-01-071118	Bkgd Study Short	Soil	7/11/2018	13:15	1	Gallon bag	6020, 7471, 901.1	
	B15-SS13-01-071118	Bkgd Study Short	Soil	7/11/2018	12:38	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: V1, V2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0067**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B15-SS14-01-071118	Bkgd Study Short	Soil	7/11/2018	12:35	1	Gallon bag	6020, 7471, 901.1	
	B15-SS15-01-071118	Bkgd Study Short	Soil	7/11/2018	12:52	1	Gallon bag	6020, 7471, 901.1	
	B15-SS16-01-071118	Bkgd Study Long	Soil	7/11/2018	12:55	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B15-SS17-01-071118	Bkgd Study Short	Soil	7/11/2018	13:05	1	Gallon bag	6020, 7471, 901.1	
	B15-SS18-01-071118	Bkgd Study Short	Soil	7/11/2018	13:08	1	Gallon bag	6020, 7471, 901.1	
	B15-SS18-02-071118	Bkgd Study Short	Soil	7/11/2018	13:08	1	Gallon bag	6020, 7471, 901.1	
	B15-SS19-01-071118	Bkgd Study Long	Soil	7/11/2018	12:00	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B15-SS20-01-071118	Bkgd Study Short	Soil	7/11/2018	12:33	1	Gallon bag	6020, 7471, 901.1	
	B15-SS21-01-071118	Bkgd Study Short	Soil	7/11/2018	12:30	1	Gallon bag	6020, 7471, 901.1	
	B15-SS22-01-071118	Bkgd Study Short	Soil	7/11/2018	12:28	1	Gallon bag	6020, 7471, 901.1	
	B15-SS23-01-071118	Bkgd Study Short	Soil	7/11/2018	12:25	1	Gallon bag	6020, 7471, 901.1	
	B15-SS24-01-071118	Bkgd Study Short	Soil	7/11/2018	12:22	1	Gallon bag	6020, 7471, 901.1	Y
	B15-SS25-01-071118	Bkgd Study Short	Soil	7/11/2018	12:03	1	Gallon bag	6020, 7471, 901.1	
	B15-SS26-01-071118	Bkgd Study Short	Soil	7/11/2018	12:06	1	Gallon bag	6020, 7471, 901.1	
	B15-SS27-01-071118	Bkgd Study Short	Soil	7/11/2018	12:08	1	Gallon bag	6020, 7471, 901.1	
	B15-SS28-01-071118	Bkgd Study Short	Soil	7/11/2018	12:13	1	Gallon bag	6020, 7471, 901.1	
	B15-SS29-01-071118	Bkgd Study Short	Soil	7/11/2018	12:15	1	Gallon bag	6020, 7471, 901.1	
	B15-SS30-01-071118	Bkgd Study Short	Soil	7/11/2018	12:17	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: W1, W2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0068**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B32-SB18-01-071218	Bkgd Study Short	Soil	7/12/2018	14:10	1	Gallon bag	6020, 7471, 901.1	
	B32-SB24-01-071218	Bkgd Study Short	Soil	7/12/2018	14:07	1	Gallon bag	6020, 7471, 901.1	Y
	B32-SB30-01-071218	Bkgd Study Long	Soil	7/12/2018	14:05	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B32-SS01-01-071218	Bkgd Study Short	Soil	7/12/2018	11:45	1	Gallon bag	6020, 7471, 901.1	
	B32-SS02-01-071218	Bkgd Study Short	Soil	7/12/2018	12:19	1	Gallon bag	6020, 7471, 901.1	
	B32-SS03-01-071218	Bkgd Study Short	Soil	7/12/2018	12:22	1	Gallon bag	6020, 7471, 901.1	
	B32-SS04-01-071218	Bkgd Study Short	Soil	7/12/2018	13:00	1	Gallon bag	6020, 7471, 901.1	
	B32-SS05-01-071218	Bkgd Study Short	Soil	7/12/2018	13:40	1	Gallon bag	6020, 7471, 901.1	
	B32-SS06-01-071218	Bkgd Study Long	Soil	7/12/2018	14:15	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B32-SS07-01-071218	Bkgd Study Short	Soil	7/12/2018	11:48	1	Gallon bag	6020, 7471, 901.1	
	B32-SS08-01-071218	Bkgd Study Long	Soil	7/12/2018	12:16	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B32-SS09-01-071218	Bkgd Study Short	Soil	7/12/2018	12:28	1	Gallon bag	6020, 7471, 901.1	
	B32-SS10-01-071218	Bkgd Study Short	Soil	7/12/2018	12:58	1	Gallon bag	6020, 7471, 901.1	
	B32-SS11-01-071218	Bkgd Study Short	Soil	7/12/2018	13:45	1	Gallon bag	6020, 7471, 901.1	
	B32-SS12-01-071218	Bkgd Study Short	Soil	7/12/2018	14:12	1	Gallon bag	6020, 7471, 901.1	
	B32-SS13-01-071218	Bkgd Study Short	Soil	7/12/2018	11:52	1	Gallon bag	6020, 7471, 901.1	
	B32-SS14-01-071218	Bkgd Study Short	Soil	7/12/2018	12:12	1	Gallon bag	6020, 7471, 901.1	
	B32-SS15-01-071218	Bkgd Study Short	Soil	7/12/2018	12:32	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: W1, W2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0068**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B32-SS16-01-071218	Bkgd Study Long	Soil	7/12/2018	12:52	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B32-SS17-01-071218	Bkgd Study Short	Soil	7/12/2018	13:50	1	Gallon bag	6020, 7471, 901.1	
	B32-SS18-01-071218	Bkgd Study Short	Soil	7/12/2018	14:08	1	Gallon bag	6020, 7471, 901.1	
	B32-SS19-01-071218	Bkgd Study Short	Soil	7/12/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	B32-SS20-01-071218	Bkgd Study Short	Soil	7/12/2018	12:08	1	Gallon bag	6020, 7471, 901.1	
	B32-SS21-01-071218	Bkgd Study Short	Soil	7/12/2018	12:36	1	Gallon bag	6020, 7471, 901.1	
	B32-SS22-01-071218	Bkgd Study Short	Soil	7/12/2018	12:50	1	Gallon bag	6020, 7471, 901.1	
	B32-SS23-01-071218	Bkgd Study Short	Soil	7/12/2018	13:55	1	Gallon bag	6020, 7471, 901.1	
	B32-SS24-01-071218	Bkgd Study Short	Soil	7/12/2018	14:08	1	Gallon bag	6020, 7471, 901.1	
	B32-SS25-01-071218	Bkgd Study Short	Soil	7/12/2018	12:00	1	Gallon bag	6020, 7471, 901.1	
	B32-SS26-01-071218	Bkgd Study Short	Soil	7/12/2018	12:05	1	Gallon bag	6020, 7471, 901.1	
	B32-SS27-01-071218	Bkgd Study Short	Soil	7/12/2018	12:40	1	Gallon bag	6020, 7471, 901.1	
	B32-SS28-01-071218	Bkgd Study Short	Soil	7/12/2018	12:44	1	Gallon bag	6020, 7471, 901.1	Y
	B32-SS29-01-071218	Bkgd Study Short	Soil	7/12/2018	13:58	1	Gallon bag	6020, 7471, 901.1	
	B32-SS30-01-071218	Bkgd Study Long	Soil	7/12/2018	14:00	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B6-SS08-01-071418	Bkgd Study Short	Soil	7/14/2018	15:22	1	Gallon bag	6020, 7471, 901.1	
	B6-SS12-01-071418	Bkgd Study Short	Soil	7/14/2018	15:15	1	Gallon bag	6020, 7471, 901.1	
	B6-SS21-01-071418	Bkgd Study Short	Soil	7/14/2018	15:12	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: W1, W2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0068**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B6-SS22-01-071418	Bkgd Study Short	Soil	7/14/2018	15:10	1	Gallon bag	6020, 7471, 901.1	
	B6-SS23-01-071418	Bkgd Study Short	Soil	7/14/2018	15:06	1	Gallon bag	6020, 7471, 901.1	
	B6-SS26-01-071418	Bkgd Study Short	Soil	7/14/2018	14:52	1	Gallon bag	6020, 7471, 901.1	
	B6-SS27-01-071418	Bkgd Study Long	Soil	7/14/2018	14:56	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B6-SS28-01-071418	Bkgd Study Short	Soil	7/14/2018	15:00	1	Gallon bag	6020, 7471, 901.1	
	B6-SS29-01-071418	Bkgd Study Short	Soil	7/14/2018	15:03	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: X1, X2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0069**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B31-SB06-01-071318	Bkgd Study Short	Soil	7/13/2018	10:27	1	Gallon bag	6020, 7471, 901.1	
	B31-SB18-01-071318	Bkgd Study Short	Soil	7/13/2018	10:10	1	Gallon bag	6020, 7471, 901.1	
	B31-SB30-01-071318	Bkgd Study Long	Soil	7/13/2018	09:57	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B31-SS01-01-071318	Bkgd Study Short	Soil	7/13/2018	10:42	1	Gallon bag	6020, 7471, 901.1	
	B31-SS01-02-071318	Bkgd Study Short	Soil	7/13/2018	10:42	1	Gallon bag	6020, 7471, 901.1	Y
	B31-SS02-01-071318	Bkgd Study Short	Soil	7/13/2018	10:40	1	Gallon bag	6020, 7471, 901.1	
	B31-SS03-01-071318	Bkgd Study Short	Soil	7/13/2018	10:38	1	Gallon bag	6020, 7471, 901.1	
	B31-SS04-01-071318	Bkgd Study Short	Soil	7/13/2018	10:36	1	Gallon bag	6020, 7471, 901.1	
	B31-SS05-01-071318	Bkgd Study Short	Soil	7/13/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	B31-SS06-01-071318	Bkgd Study Long	Soil	7/13/2018	10:25	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B31-SS07-01-071318	Bkgd Study Short	Soil	7/13/2018	10:28	1	Gallon bag	6020, 7471, 901.1	
	B31-SS08-01-071318	Bkgd Study Short	Soil	7/13/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	B31-SS09-01-071318	Bkgd Study Short	Soil	7/13/2018	10:32	1	Gallon bag	6020, 7471, 901.1	
	B31-SS10-01-071318	Bkgd Study Short	Soil	7/13/2018	10:33	1	Gallon bag	6020, 7471, 901.1	
	B31-SS11-01-071318	Bkgd Study Short	Soil	7/13/2018	10:23	1	Gallon bag	6020, 7471, 901.1	
	B31-SS12-01-071318	Bkgd Study Short	Soil	7/13/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	B31-SS13-01-071318	Bkgd Study Short	Soil	7/13/2018	10:18	1	Gallon bag	6020, 7471, 901.1	
	B31-SS14-01-071318	Bkgd Study Short	Soil	7/13/2018	10:14	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: X1, X2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0069**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B31-SS15-01-071318	Bkgd Study Short	Soil	7/13/2018	10:13	1	Gallon bag	6020, 7471, 901.1	
	B31-SS16-01-071318	Bkgd Study Short	Soil	7/13/2018	10:07	1	Gallon bag	6020, 7471, 901.1	
	B31-SS17-01-071318	Bkgd Study Short	Soil	7/13/2018	10:08	1	Gallon bag	6020, 7471, 901.1	
	B31-SS18-01-071318	Bkgd Study Long	Soil	7/13/2018	10:09	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B31-SS19-01-071318	Bkgd Study Short	Soil	7/13/2018	10:10	1	Gallon bag	6020, 7471, 901.1	
	B31-SS20-01-071318	Bkgd Study Short	Soil	7/13/2018	10:12	1	Gallon bag	6020, 7471, 901.1	
	B31-SS21-01-071318	Bkgd Study Short	Soil	7/13/2018	10:06	1	Gallon bag	6020, 7471, 901.1	
	B31-SS22-01-071318	Bkgd Study Short	Soil	7/13/2018	10:05	1	Gallon bag	6020, 7471, 901.1	
	B31-SS22-02-071318	Bkgd Study Short	Soil	7/13/2018	10:05	1	Gallon bag	6020, 7471, 901.1	
	B31-SS23-01-071318	Bkgd Study Short	Soil	7/13/2018	10:04	1	Gallon bag	6020, 7471, 901.1	
	B31-SS24-01-071318	Bkgd Study Short	Soil	7/13/2018	10:02	1	Gallon bag	6020, 7471, 901.1	
	B31-SS25-01-071318	Bkgd Study Short	Soil	7/13/2018	10:00	1	Gallon bag	6020, 7471, 901.1	
	B31-SS26-01-071318	Bkgd Study Short	Soil	7/13/2018	09:45	1	Gallon bag	6020, 7471, 901.1	
	B31-SS27-01-071318	Bkgd Study Short	Soil	7/13/2018	09:47	1	Gallon bag	6020, 7471, 901.1	Y
	B31-SS28-01-071318	Bkgd Study Short	Soil	7/13/2018	09:50	1	Gallon bag	6020, 7471, 901.1	
	B31-SS29-01-071318	Bkgd Study Short	Soil	7/13/2018	09:52	1	Gallon bag	6020, 7471, 901.1	
	B31-SS30-01-071318	Bkgd Study Long	Soil	7/13/2018	09:55	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Y1, Y2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0070**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B13-SB12-01-071518	Bkgd Study Short	Soil	7/15/2018	10:50	1	Gallon bag	6020, 7471, 901.1	
	B13-SB16-01-071518	Bkgd Study Long	Soil	7/15/2018	11:13	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B13-SB24-01-071518	Bkgd Study Short	Soil	7/15/2018	09:25	1	Gallon bag	6020, 7471, 901.1	
	B13-SS01-01-071518	Bkgd Study Short	Soil	7/15/2018	10:56	1	Gallon bag	6020, 7471, 901.1	
	B13-SS02-01-071518	Bkgd Study Short	Soil	7/15/2018	10:52	1	Gallon bag	6020, 7471, 901.1	
	B13-SS03-01-071518	Bkgd Study Short	Soil	7/15/2018	09:50	1	Gallon bag	6020, 7471, 901.1	
	B13-SS04-01-071518	Bkgd Study Short	Soil	7/15/2018	09:45	1	Gallon bag	6020, 7471, 901.1	
	B13-SS05-01-071518	Bkgd Study Short	Soil	7/15/2018	08:51	1	Gallon bag	6020, 7471, 901.1	Y
	B13-SS06-01-071518	Bkgd Study Short	Soil	7/15/2018	11:00	1	Gallon bag	6020, 7471, 901.1	
	B13-SS07-01-071518	Bkgd Study Short	Soil	7/15/2018	10:47	1	Gallon bag	6020, 7471, 901.1	
	B13-SS08-01-071518	Bkgd Study Long	Soil	7/15/2018	09:55	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B13-SS09-01-071518	Bkgd Study Short	Soil	7/15/2018	09:43	1	Gallon bag	6020, 7471, 901.1	
	B13-SS10-01-071518	Bkgd Study Short	Soil	7/15/2018	08:55	1	Gallon bag	6020, 7471, 901.1	
	B13-SS11-01-071518	Bkgd Study Short	Soil	7/15/2018	11:05	1	Gallon bag	6020, 7471, 901.1	
	B13-SS12-01-071518	Bkgd Study Short	Soil	7/15/2018	10:45	1	Gallon bag	6020, 7471, 901.1	
	B13-SS13-01-071518	Bkgd Study Short	Soil	7/15/2018	10:00	1	Gallon bag	6020, 7471, 901.1	
	B13-SS14-01-071518	Bkgd Study Short	Soil	7/15/2018	09:40	1	Gallon bag	6020, 7471, 901.1	
	B13-SS15-01-071518	Bkgd Study Short	Soil	7/15/2018	09:00	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Y1, Y2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0070**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B13-SS16-01-071518	Bkgd Study Long	Soil	7/15/2018	11:10	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B13-SS17-01-071518	Bkgd Study Short	Soil	7/15/2018	10:40	1	Gallon bag	6020, 7471, 901.1	
	B13-SS18-01-071518	Bkgd Study Short	Soil	7/15/2018	10:05	1	Gallon bag	6020, 7471, 901.1	
	B13-SS19-01-071518	Bkgd Study Short	Soil	7/15/2018	09:30	1	Gallon bag	6020, 7471, 901.1	
	B13-SS20-01-071518	Bkgd Study Short	Soil	7/15/2018	09:05	1	Gallon bag	6020, 7471, 901.1	
	B13-SS21-01-071518	Bkgd Study Short	Soil	7/15/2018	11:15	1	Gallon bag	6020, 7471, 901.1	
	B13-SS22-01-071518	Bkgd Study Short	Soil	7/15/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	B13-SS23-01-071518	Bkgd Study Long	Soil	7/15/2018	10:10	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B13-SS24-01-071518	Bkgd Study Short	Soil	7/15/2018	09:20	1	Gallon bag	6020, 7471, 901.1	
	B13-SS25-01-071518	Bkgd Study Short	Soil	7/15/2018	09:10	1	Gallon bag	6020, 7471, 901.1	Y
	B13-SS26-01-071518	Bkgd Study Short	Soil	7/15/2018	11:17	1	Gallon bag	6020, 7471, 901.1	
	B13-SS27-01-071518	Bkgd Study Short	Soil	7/15/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	B13-SS28-01-071518	Bkgd Study Short	Soil	7/15/2018	10:15	1	Gallon bag	6020, 7471, 901.1	
	B13-SS29-01-071518	Bkgd Study Short	Soil	7/15/2018	09:17	1	Gallon bag	6020, 7471, 901.1	
	B13-SS30-01-071518	Bkgd Study Short	Soil	7/15/2018	09:15	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Z1, Z2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0071**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B14-SB06-01-071518	Bkgd Study Short	Soil	7/15/2018	11:09	1	Gallon bag	6020, 7471, 901.1	
	B14-SB16-01-071518	Bkgd Study Short	Soil	7/15/2018	11:14	1	Gallon bag	6020, 7471, 901.1	
	B14-SB27-01-071518	Bkgd Study Long	Soil	7/15/2018	10:57	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	Y
	B14-SS01-01-071518	Bkgd Study Short	Soil	7/15/2018	10:11	1	Gallon bag	6020, 7471, 901.1	
	B14-SS02-01-071518	Bkgd Study Short	Soil	7/15/2018	10:15	1	Gallon bag	6020, 7471, 901.1	
	B14-SS03-01-071518	Bkgd Study Short	Soil	7/15/2018	10:16	1	Gallon bag	6020, 7471, 901.1	
	B14-SS04-01-071518	Bkgd Study Short	Soil	7/15/2018	10:18	1	Gallon bag	6020, 7471, 901.1	
	B14-SS05-01-071518	Bkgd Study Short	Soil	7/15/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	B14-SS06-01-071518	Bkgd Study Short	Soil	7/15/2018	11:07	1	Gallon bag	6020, 7471, 901.1	
	B14-SS07-01-071518	Bkgd Study Short	Soil	7/15/2018	11:05	1	Gallon bag	6020, 7471, 901.1	
	B14-SS08-01-071518	Bkgd Study Short	Soil	7/15/2018	10:46	1	Gallon bag	6020, 7471, 901.1	
	B14-SS09-01-071518	Bkgd Study Short	Soil	7/15/2018	10:44	1	Gallon bag	6020, 7471, 901.1	
	B14-SS10-01-071518	Bkgd Study Short	Soil	7/15/2018	10:22	1	Gallon bag	6020, 7471, 901.1	
	B14-SS11-01-071518	Bkgd Study Short	Soil	7/15/2018	11:10	1	Gallon bag	6020, 7471, 901.1	
	B14-SS12-01-071518	Bkgd Study Short	Soil	7/15/2018	11:03	1	Gallon bag	6020, 7471, 901.1	
	B14-SS13-01-071518	Bkgd Study Long	Soil	7/15/2018	10:48	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B14-SS14-01-071518	Bkgd Study Short	Soil	7/15/2018	10:42	1	Gallon bag	6020, 7471, 901.1	
	B14-SS15-01-071518	Bkgd Study Short	Soil	7/15/2018	10:24	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Z1, Z2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0071**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B14-SS16-01-071518	Bkgd Study Short	Soil	7/15/2018	11:12	1	Gallon bag	6020, 7471, 901.1	
	B14-SS17-01-071518	Bkgd Study Short	Soil	7/15/2018	11:01	1	Gallon bag	6020, 7471, 901.1	
	B14-SS18-01-071518	Bkgd Study Short	Soil	7/15/2018	10:50	1	Gallon bag	6020, 7471, 901.1	
	B14-SS19-01-071518	Bkgd Study Short	Soil	7/15/2018	10:40	1	Gallon bag	6020, 7471, 901.1	
	B14-SS20-01-071518	Bkgd Study Short	Soil	7/15/2018	10:26	1	Gallon bag	6020, 7471, 901.1	
	B14-SS21-01-071518	Bkgd Study Short	Soil	7/15/2018	11:16	1	Gallon bag	6020, 7471, 901.1	
	B14-SS22-01-071518	Bkgd Study Short	Soil	7/15/2018	11:00	1	Gallon bag	6020, 7471, 901.1	
	B14-SS23-01-071518	Bkgd Study Short	Soil	7/15/2018	10:51	1	Gallon bag	6020, 7471, 901.1	
	B14-SS24-01-071518	Bkgd Study Short	Soil	7/15/2018	10:40	1	Gallon bag	6020, 7471, 901.1	
	B14-SS25-01-071518	Bkgd Study Short	Soil	7/15/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	B14-SS26-01-071518	Bkgd Study Short	Soil	7/15/2018	11:20	1	Gallon bag	6020, 7471, 901.1	
	B14-SS27-01-071518	Bkgd Study Long	Soil	7/15/2018	10:55	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B14-SS28-01-071518	Bkgd Study Short	Soil	7/15/2018	10:53	1	Gallon bag	6020, 7471, 901.1	
	B14-SS29-01-071518	Bkgd Study Short	Soil	7/15/2018	10:38	1	Gallon bag	6020, 7471, 901.1	Y
	B14-SS30-01-071518	Bkgd Study Short	Soil	7/15/2018	10:32	1	Gallon bag	6020, 7471, 901.1	
	B21-SS28-01-071518	Bkgd Study Short	Soil	7/15/2018	12:50	1	Gallon bag	6020, 7471, 901.1	
	B21-SS29-01-071518	Bkgd Study Short	Soil	7/15/2018	12:55	1	Gallon bag	6020, 7471, 901.1	
	B21-SS30-01-071518	Bkgd Study Short	Soil	7/15/2018	12:57	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: A1, A2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0072**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B24-SB01-01-071618	Bkgd Study Short	Soil	7/16/2018	09:42	1	Gallon bag	6020, 7471, 901.1	
	B24-SB03-01-071618	Bkgd Study Short	Soil	7/16/2018	09:53	1	Gallon bag	6020, 7471, 901.1	
	B24-SB05-01-071618	Bkgd Study Long	Soil	7/16/2018	10:05	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B24-SS01-01-071618	Bkgd Study Short	Soil	7/16/2018	09:40	1	Gallon bag	6020, 7471, 901.1	
	B24-SS02-01-071618	Bkgd Study Short	Soil	7/16/2018	09:50	1	Gallon bag	6020, 7471, 901.1	
	B24-SS03-01-071618	Bkgd Study Short	Soil	7/16/2018	09:52	1	Gallon bag	6020, 7471, 901.1	Y
	B24-SS04-01-071618	Bkgd Study Short	Soil	7/16/2018	10:00	1	Gallon bag	6020, 7471, 901.1	
	B24-SS05-01-071618	Bkgd Study Long	Soil	7/16/2018	10:03	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B24-SS06-01-071618	Bkgd Study Short	Soil	7/16/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	B24-SS07-01-071618	Bkgd Study Short	Soil	7/16/2018	10:26	1	Gallon bag	6020, 7471, 901.1	
	B24-SS08-01-071618	Bkgd Study Short	Soil	7/16/2018	10:10	1	Gallon bag	6020, 7471, 901.1	
	B24-SS09-01-071618	Bkgd Study Short	Soil	7/16/2018	10:15	1	Gallon bag	6020, 7471, 901.1	
	B24-SS10-01-071618	Bkgd Study Short	Soil	7/16/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	B24-SS11-01-071618	Bkgd Study Short	Soil	7/16/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	B24-SS12-01-071618	Bkgd Study Short	Soil	7/16/2018	10:40	1	Gallon bag	6020, 7471, 901.1	
	B24-SS13-01-071618	Bkgd Study Short	Soil	7/16/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	B24-SS14-01-071618	Bkgd Study Short	Soil	7/16/2018	12:00	1	Gallon bag	6020, 7471, 901.1	
	B24-SS15-01-071618	Bkgd Study Short	Soil	7/16/2018	12:05	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: A1, A2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0072**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B24-SS16-01-071618	Bkgd Study Short	Soil	7/16/2018	11:20	1	Gallon bag	6020, 7471, 901.1	
	B24-SS17-01-071618	Bkgd Study Short	Soil	7/16/2018	11:25	1	Gallon bag	6020, 7471, 901.1	
	B24-SS18-01-071618	Bkgd Study Short	Soil	7/16/2018	11:45	1	Gallon bag	6020, 7471, 901.1	
	B24-SS19-01-071618	Bkgd Study Short	Soil	7/16/2018	11:50	1	Gallon bag	6020, 7471, 901.1	
	B24-SS20-01-071618	Bkgd Study Short	Soil	7/16/2018	12:25	1	Gallon bag	6020, 7471, 901.1	
	B24-SS21-01-071618	Bkgd Study Short	Soil	7/16/2018	11:10	1	Gallon bag	6020, 7471, 901.1	
	B24-SS22-01-071618	Bkgd Study Short	Soil	7/16/2018	11:27	1	Gallon bag	6020, 7471, 901.1	
	B24-SS23-01-071618	Bkgd Study Long	Soil	7/16/2018	12:30	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B24-SS24-01-071618	Bkgd Study Short	Soil	7/16/2018	12:35	1	Gallon bag	6020, 7471, 901.1	
	B24-SS25-01-071618	Bkgd Study Short	Soil	7/16/2018	12:40	1	Gallon bag	6020, 7471, 901.1	Y
	B24-SS26-01-071618	Bkgd Study Short	Soil	7/16/2018	11:15	1	Gallon bag	6020, 7471, 901.1	
	B24-SS27-01-071618	Bkgd Study Short	Soil	7/16/2018	11:30	1	Gallon bag	6020, 7471, 901.1	
	B24-SS28-01-071618	Bkgd Study Short	Soil	7/16/2018	12:45	1	Gallon bag	6020, 7471, 901.1	
	B24-SS29-01-071618	Bkgd Study Short	Soil	7/16/2018	12:50	1	Gallon bag	6020, 7471, 901.1	
	B24-SS30-01-071618	Bkgd Study Short	Soil	7/16/2018	12:55	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: B1, B2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0073**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B33-SB01-01-071618	Bkgd Study Short	Soil	7/16/2018	10:08	1	Gallon bag	6020, 7471, 901.1	
	B33-SB12-01-071618	Bkgd Study Long	Soil	7/16/2018	11:08	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B33-SB28-01-071618	Bkgd Study Short	Soil	7/16/2018	10:38	1	Gallon bag	6020, 7471, 901.1	
	B33-SS01-01-071618	Bkgd Study Short	Soil	7/16/2018	10:05	1	Gallon bag	6020, 7471, 901.1	
	B33-SS02-01-071618	Bkgd Study Short	Soil	7/16/2018	10:10	1	Gallon bag	6020, 7471, 901.1	Y
	B33-SS03-01-071618	Bkgd Study Short	Soil	7/16/2018	10:12	1	Gallon bag	6020, 7471, 901.1	
	B33-SS04-01-071618	Bkgd Study Short	Soil	7/16/2018	10:15	1	Gallon bag	6020, 7471, 901.1	
	B33-SS05-01-071618	Bkgd Study Short	Soil	7/16/2018	10:23	1	Gallon bag	6020, 7471, 901.1	
	B33-SS06-01-071618	Bkgd Study Short	Soil	7/16/2018	10:22	1	Gallon bag	6020, 7471, 901.1	
	B33-SS07-01-071618	Bkgd Study Short	Soil	7/16/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	B33-SS08-01-071618	Bkgd Study Short	Soil	7/16/2018	10:18	1	Gallon bag	6020, 7471, 901.1	
	B33-SS09-01-071618	Bkgd Study Short	Soil	7/16/2018	10:25	1	Gallon bag	6020, 7471, 901.1	
	B33-SS10-01-071618	Bkgd Study Short	Soil	7/16/2018	11:15	1	Gallon bag	6020, 7471, 901.1	
	B33-SS11-01-071618	Bkgd Study Short	Soil	7/16/2018	11:11	1	Gallon bag	6020, 7471, 901.1	
	B33-SS12-01-071618	Bkgd Study Long	Soil	7/16/2018	11:08	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B33-SS13-01-071618	Bkgd Study Short	Soil	7/16/2018	10:26	1	Gallon bag	6020, 7471, 901.1	
	B33-SS14-01-071618	Bkgd Study Short	Soil	7/16/2018	11:05	1	Gallon bag	6020, 7471, 901.1	
	B33-SS15-01-071618	Bkgd Study Short	Soil	7/16/2018	11:00	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: B1, B2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0073**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B33-SS16-01-071618	Bkgd Study Short	Soil	7/16/2018	10:29	1	Gallon bag	6020, 7471, 901.1	
	B33-SS17-01-071618	Bkgd Study Short	Soil	7/16/2018	10:28	1	Gallon bag	6020, 7471, 901.1	
	B33-SS18-01-071618	Bkgd Study Long	Soil	7/16/2018	10:58	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B33-SS19-01-071618	Bkgd Study Short	Soil	7/16/2018	10:56	1	Gallon bag	6020, 7471, 901.1	
	B33-SS20-01-071618	Bkgd Study Short	Soil	7/16/2018	10:32	1	Gallon bag	6020, 7471, 901.1	
	B33-SS21-01-071618	Bkgd Study Short	Soil	7/16/2018	10:50	1	Gallon bag	6020, 7471, 901.1	
	B33-SS22-01-071618	Bkgd Study Short	Soil	7/16/2018	10:51	1	Gallon bag	6020, 7471, 901.1	
	B33-SS23-01-071618	Bkgd Study Short	Soil	7/16/2018	10:54	1	Gallon bag	6020, 7471, 901.1	
	B33-SS24-01-071618	Bkgd Study Short	Soil	7/16/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	B33-SS25-01-071618	Bkgd Study Short	Soil	7/16/2018	10:48	1	Gallon bag	6020, 7471, 901.1	
	B33-SS26-01-071618	Bkgd Study Short	Soil	7/16/2018	10:46	1	Gallon bag	6020, 7471, 901.1	
	B33-SS27-01-071618	Bkgd Study Short	Soil	7/16/2018	10:44	1	Gallon bag	6020, 7471, 901.1	Y
	B33-SS28-01-071618	Bkgd Study Short	Soil	7/16/2018	10:36	1	Gallon bag	6020, 7471, 901.1	
	B33-SS29-01-071618	Bkgd Study Short	Soil	7/16/2018	10:40	1	Gallon bag	6020, 7471, 901.1	
	B33-SS30-01-071618	Bkgd Study Short	Soil	7/16/2018	10:43	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: C

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0074**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M25-XS16-01-071718	XRF Conf Short	Soil	7/17/2018	13:00	2	Quart + Gallon bags	6020, 901.1	Y
	M25-XS23-01-071718	XRF Conf Short	Soil	7/17/2018	12:45	2	Quart + Gallon bags	6020, 901.1	
	M25-XS47-01-071718	XRF Conf Short	Soil	7/17/2018	10:25	2	Quart + Gallon bags	6020, 901.1	
	M25-XS88-01-071718	XRF Conf Long	Soil	7/17/2018	11:10	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T33-XS43-01-071718	XRF Conf Short	Soil	7/17/2018	11:30	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-D, RAD-D

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0075**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M34-XS110-01-081218	XRF Conf Long	Soil	8/12/2018	13:35	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M34-XS22-01-081218	XRF Conf Short	Soil	8/12/2018	14:57	2	Quart + Gallon bags	6020, 901.1	
	M34-XS43-01-081218	XRF Conf Short	Soil	8/12/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M34-XS50-01-081218	XRF Conf Short	Soil	8/12/2018	14:45	2	Quart + Gallon bags	6020, 901.1	
	M34-XS68-01-081218	XRF Conf Short	Soil	8/12/2018	12:55	2	Quart + Gallon bags	6020, 901.1	
	M35-XS11-01-081218	XRF Conf Short	Soil	8/12/2018	14:40	2	Quart + Gallon bags	6020, 901.1	
	M35-XS20-01-081318	XRF Conf Short	Soil	8/13/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	M35-XS31-01-081218	XRF Conf Short	Soil	8/12/2018	12:35	2	Quart + Gallon bags	6020, 901.1	
	M35-XS63-01-081218	XRF Conf Short	Soil	8/12/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	M35-XS74-01-081318	XRF Conf Short	Soil	8/13/2018	11:20	2	Quart + Gallon bags	6020, 901.1	
	M35-XS74-02-081318	XRF Conf Short	Soil	8/13/2018	11:20	2	Quart + Gallon bags	6020, 901.1	
	M36-XS20-01-081218	XRF Conf Short	Soil	8/12/2018	14:20	2	Quart + Gallon bags	6020, 901.1	
	M36-XS2-01-081218	XRF Conf Short	Soil	8/12/2018	12:01	2	Quart + Gallon bags	6020, 901.1	Y
	M36-XS3-01-081218	XRF Conf Short	Soil	8/12/2018	11:15	2	Quart + Gallon bags	6020, 901.1	
	M36-XS31-01-081218	XRF Conf Short	Soil	8/12/2018	13:17	2	Quart + Gallon bags	6020, 901.1	
	M37-XS124A-01-081318	XRF Conf Long	Soil	8/13/2018	13:02	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M37-XS144-01-081318	XRF Conf Short	Soil	8/13/2018	11:23	2	Quart + Gallon bags	6020, 901.1	
	M37-XS2-01-081318	XRF Conf Short	Soil	8/13/2018	10:30	2	Quart + Gallon bags	6020, 901.1	
	M37-XS23-01-081318	XRF Conf Short	Soil	8/13/2018	12:20	2	Quart + Gallon bags	6020, 901.1	
	M37-XS31-01-081318	XRF Conf Short	Soil	8/13/2018	13:33	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-E, RAD-E

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0076**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M37-XS38-01-081318	XRF Conf Short	Soil	8/13/2018	11:15	2	Quart + Gallon bags	6020, 901.1	Y
	M37-XS44-01-081318	XRF Conf Long	Soil	8/13/2018	13:19	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M37-XS50-01-081318	XRF Conf Short	Soil	8/13/2018	11:48	2	Quart + Gallon bags	6020, 901.1	
	M37-XS7-01-081318	XRF Conf Short	Soil	8/13/2018	10:59	2	Quart + Gallon bags	6020, 901.1	
	M7-XS162A-01-081518	XRF Conf Long	Soil	8/15/2018	12:10	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M7-XS203-01-081418	XRF Conf Short	Soil	8/14/2018	11:35	2	Quart + Gallon bags	6020, 901.1	
	M7-XS213-01-081518	XRF Conf Short	Soil	8/15/2018	13:25	2	Quart + Gallon bags	6020, 901.1	
	M7-XS214-01-081518	XRF Conf Short	Soil	8/15/2018	13:30	2	Quart + Gallon bags	6020, 901.1	
	M7-XS235A-01-081418	XRF Conf Short	Soil	8/14/2018	11:05	2	Quart + Gallon bags	6020, 901.1	
	M7-XS244-01-081518	XRF Conf Short	Soil	8/15/2018	13:50	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG16-01-081518	XRF Conf Short	Soil	8/15/2018	11:35	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG28-01-081418	XRF Conf Short	Soil	8/14/2018	12:40	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG31-01-081518	XRF Conf Short	Soil	8/15/2018	10:55	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG37-01-081418	XRF Conf Short	Soil	8/14/2018	10:52	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG40-01-081418	XRF Conf Short	Soil	8/14/2018	11:00	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG4-01-081518	XRF Conf Short	Soil	8/15/2018	12:45	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG44-01-081418	XRF Conf Short	Soil	8/14/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG44-02-081418	XRF Conf Short	Soil	8/14/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG47-01-081418	XRF Conf Short	Soil	8/14/2018	10:00	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG55-01-081418	XRF Conf Short	Soil	8/14/2018	13:25	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: F

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0077**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3E-SD10-01-081718	Surf Sed Short	Sed	8/17/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD11-01-081718	Surf Sed Short	Sed	8/17/2018	10:40	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD12-01-081718	Surf Sed Short	Sed	8/17/2018	10:46	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD13-01-081718	Surf Sed Short	Sed	8/17/2018	11:00	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD14-01-081718	Surf Sed Short	Sed	8/17/2018	11:05	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD15-01-081718	Surf Sed Short	Sed	8/17/2018	11:20	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD6-01-081718	Surf Sed Short	Sed	8/17/2018	09:20	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD7-01-081718	Surf Sed Short	Sed	8/17/2018	09:55	1	Gallon bag	6020, 7471, 901.1	
	DM39-SD10-01-081618	Surf Sed Short	Sed	8/16/2018	11:35	1	Gallon bag	6020, 7471, 901.1	Y
	DM39-SD11-01-081618	Surf Sed Short	Sed	8/16/2018	11:24	1	Gallon bag	6020, 7471, 901.1	
	DM39-SD12-01-081618	Surf Sed Long	Sed	8/16/2018	10:34	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DM39-SD13-01-081618	Surf Sed Short	Sed	8/16/2018	10:27	1	Gallon bag	6020, 7471, 901.1	
	DM39-SD14-01-081618	Surf Sed Short	Sed	8/16/2018	10:20	1	Gallon bag	6020, 7471, 901.1	
	DM39-SD15-01-081618	Surf Sed Long	Sed	8/16/2018	10:11	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DM39-SD16-01-081618	Surf Sed Short	Sed	8/16/2018	10:03	1	Gallon bag	6020, 7471, 901.1	
	DM39-SD16-02-081618	Surf Sed Short	Sed	8/16/2018	10:03	1	Gallon bag	6020, 7471, 901.1	
	DM39-SD17-01-081618	Surf Sed Long	Sed	8/16/2018	09:54	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DM39-SD7-01-081618	Surf Sed Short	Sed	8/16/2018	12:15	1	Gallon bag	6020, 7471, 901.1	
	DM39-SD8-01-081618	Surf Sed Short	Sed	8/16/2018	12:06	1	Gallon bag	6020, 7471, 901.1	
	DM39-SD9-01-081618	Surf Sed Short	Sed	8/16/2018	11:46	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-G, RAD-G

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0078**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M3-XS19-01-081718	XRF Conf Short	Soil	8/17/2018	11:35	2	Quart + Gallon bags	6020, 901.1	
	M3-XS41-01-081718	XRF Conf Short	Soil	8/17/2018	12:55	2	Quart + Gallon bags	6020, 901.1	
	M6-XS108-01-081618	XRF Conf Short	Soil	8/16/2018	08:35	2	Quart + Gallon bags	6020, 901.1	
	M6-XS108-02-081618	XRF Conf Short	Soil	8/16/2018	08:35	2	Quart + Gallon bags	6020, 901.1	
	M6-XS198-01-081618	XRF Conf Short	Soil	8/16/2018	10:25	2	Quart + Gallon bags	6020, 901.1	
	M6-XS249-01-081618	XRF Conf Short	Soil	8/16/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	M6-XS289-01-081618	XRF Conf Short	Soil	8/16/2018	14:15	2	Quart + Gallon bags	6020, 901.1	
	M6-XS324-01-081618	XRF Conf Short	Soil	8/16/2018	11:45	2	Quart + Gallon bags	6020, 901.1	
	M6-XS60-01-081618	XRF Conf Short	Soil	8/16/2018	13:15	2	Quart + Gallon bags	6020, 901.1	
	M6-XS72-01-081618	XRF Conf Short	Soil	8/16/2018	08:54	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG6-01-081518	XRF Conf Short	Soil	8/15/2018	13:15	2	Quart + Gallon bags	6020, 901.1	
	M8-XSG83-01-081418	XRF Conf Short	Soil	8/14/2018	13:10	2	Quart + Gallon bags	6020, 901.1	
	T13-XSG16-01-081618	XRF Conf Short	Soil	8/16/2018	12:30	2	Quart + Gallon bags	6020, 901.1	
	T13-XSG26-01-081618	XRF Conf Short	Soil	8/16/2018	13:30	2	Quart + Gallon bags	6020, 901.1	
	T13-XSG7-01-081618	XRF Conf Short	Soil	8/16/2018	13:05	2	Quart + Gallon bags	6020, 901.1	
	T17-XSG17-01-081618	XRF Conf Short	Soil	8/16/2018	09:40	2	Quart + Gallon bags	6020, 901.1	
	T17-XSG27-01-081618	XRF Conf Short	Soil	8/16/2018	08:45	2	Quart + Gallon bags	6020, 901.1	
	T17-XSG31-01-081518	XRF Conf Short	Soil	8/15/2018	14:05	2	Quart + Gallon bags	6020, 901.1	Y
	T17-XSG7-01-081618	XRF Conf Short	Soil	8/16/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	T17-XSG7-02-081618	XRF Conf Short	Soil	8/16/2018	10:15	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-H, RAD-H

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0079**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M1-XSG2-01-081918	XRF Conf Short	Soil	8/19/2018	14:50	2	Quart + Gallon bags	6020, 901.1	
	M38-XS20-01-081818	XRF Conf Short	Soil	8/18/2018	10:20	2	Quart + Gallon bags	6020, 901.1	
	M4-XS210-01-081818	XRF Conf Short	Soil	8/18/2018	12:10	2	Quart + Gallon bags	6020, 901.1	
	M4-XSG11-01-081818	XRF Conf Short	Soil	8/18/2018	10:50	2	Quart + Gallon bags	6020, 901.1	
	M4-XSG2-01-081818	XRF Conf Short	Soil	8/18/2018	10:30	2	Quart + Gallon bags	6020, 901.1	
	M5-XS15-01-081818	XRF Conf Short	Soil	8/18/2018	14:54	2	Quart + Gallon bags	6020, 901.1	
	M5-XS192-01-081818	XRF Conf Short	Soil	8/18/2018	13:45	2	Quart + Gallon bags	6020, 901.1	
	M9-XS19A-01-081718	XRF Conf Long	Soil	8/17/2018	12:25	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	M9-XS28A-01-081718	XRF Conf Long	Soil	8/17/2018	12:30	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T10-XSG1-01-081818	XRF Conf Short	Soil	8/18/2018	16:30	2	Quart + Gallon bags	6020, 901.1	
	T15-XS20-01-081718	XRF Conf Short	Soil	8/17/2018	09:30	2	Quart + Gallon bags	6020, 901.1	Y
	T15-XS65-01-081718	XRF Conf Short	Soil	8/17/2018	08:50	2	Quart + Gallon bags	6020, 901.1	
	T1-XSG38-01-081918	XRF Conf Short	Soil	8/19/2018	15:01	2	Quart + Gallon bags	6020, 901.1	
	T1-XSG49A-01-081918	XRF Conf Long	Soil	8/19/2018	14:36	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T1-XSG5A-01-081918	XRF Conf Long	Soil	8/19/2018	15:42	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T4-XSG10-01-081918	XRF Conf Short	Soil	8/19/2018	12:29	2	Quart + Gallon bags	6020, 901.1	
	T4-XSG39-01-081918	XRF Conf Short	Soil	8/19/2018	11:31	2	Quart + Gallon bags	6020, 901.1	
	T4-XSG50A-01-081918	XRF Conf Long	Soil	8/19/2018	12:49	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T5-XSG10-01-081918	XRF Conf Short	Soil	8/19/2018	15:30	2	Quart + Gallon bags	6020, 901.1	
	T9-XSG12-01-081818	XRF Conf Short	Soil	8/18/2018	15:30	2	Quart + Gallon bags	6020, 901.1	

Special Instructions: HF digestion analysis for samples: M9-XS19A-01-081718 M9-XS28A-01-081718	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: I

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0080**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3E-SD8-01-081718	Surf Sed Short	Sed	8/17/2018	10:00	1	Gallon bag	6020, 7471, 901.1	Y
	DC3E-SD9-01-081718	Surf Sed Long	Sed	8/17/2018	10:20	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DM35-SD10-01-082018	Surf Sed Short	Sed	8/20/2018	13:10	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD11-01-082018	Surf Sed Short	Sed	8/20/2018	11:51	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD12-01-082018	Surf Sed Short	Sed	8/20/2018	11:46	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD13-01-082018	Surf Sed Short	Sed	8/20/2018	11:40	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD14-01-082018	Surf Sed Short	Sed	8/20/2018	11:36	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD15-01-082018	Surf Sed Short	Sed	8/20/2018	11:18	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD16-01-082018	Surf Sed Short	Sed	8/20/2018	11:11	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD17-01-082018	Surf Sed Long	Sed	8/20/2018	11:00	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DM35-SD18-01-082018	Surf Sed Short	Sed	8/20/2018	10:52	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD19-01-082018	Surf Sed Short	Sed	8/20/2018	10:42	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD7-01-082018	Surf Sed Short	Sed	8/20/2018	12:32	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD8-01-082018	Surf Sed Short	Sed	8/20/2018	12:25	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD9-01-082018	Surf Sed Short	Sed	8/20/2018	12:19	1	Gallon bag	6020, 7471, 901.1	
	M10-SD1-01-081718	Surf Sed Long	Sed	8/17/2018	09:45	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	M10-SD2-01-081718	Surf Sed Short	Sed	8/17/2018	10:05	1	Gallon bag	6020, 7471, 901.1	
	M7-SD2-01-081418	Surf Sed Long	Sed	8/14/2018	10:30	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	M7-SD3-01-081418	Surf Sed Short	Sed	8/14/2018	10:35	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: J1, J2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0081**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DM33-SD10-01-081818	Surf Sed Short	Sed	8/18/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD1-01-081818	Surf Sed Short	Sed	8/18/2018	11:40	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD11-01-081818	Surf Sed Short	Sed	8/18/2018	10:25	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD12-01-081818	Surf Sed Short	Sed	8/18/2018	10:18	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD13-01-081818	Surf Sed Short	Sed	8/18/2018	10:12	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD14-01-081818	Surf Sed Long	Sed	8/18/2018	10:07	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DM33-SD15-01-081818	Surf Sed Short	Sed	8/18/2018	09:59	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD16-01-081818	Surf Sed Short	Sed	8/18/2018	09:42	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD16-02-081818	Surf Sed Short	Sed	8/18/2018	09:42	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD2-01-081818	Surf Sed Short	Sed	8/18/2018	11:31	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD3-01-081818	Surf Sed Short	Sed	8/18/2018	11:25	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD4-01-081818	Surf Sed Short	Sed	8/18/2018	11:19	1	Gallon bag	6020, 7471, 901.1	Y
	DM33-SD5-01-081818	Surf Sed Short	Sed	8/18/2018	11:12	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD6-01-081818	Surf Sed Short	Sed	8/18/2018	11:06	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD7-01-081818	Surf Sed Short	Sed	8/18/2018	10:59	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD8-01-081818	Surf Sed Short	Sed	8/18/2018	10:49	1	Gallon bag	6020, 7471, 901.1	
	DM33-SD9-01-081818	Surf Sed Short	Sed	8/18/2018	10:35	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD20-01-081818	Surf Sed Short	Sed	8/18/2018	13:58	1	Gallon bag	6020, 7471, 901.1	
	DM35-SD21-01-081818	Surf Sed Short	Sed	8/18/2018	13:53	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: K1, K2, K3

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0082**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DM1-SD10-01-081918	Surf Sed Short	Sed	8/19/2018	12:39	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD1-01-081918	Surf Sed Short	Sed	8/19/2018	13:44	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD1-02-081918	Surf Sed Short	Sed	8/19/2018	13:44	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD11-01-081918	Surf Sed Short	Sed	8/19/2018	12:34	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD12-01-081918	Surf Sed Short	Sed	8/19/2018	12:26	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD13-01-081918	Surf Sed Short	Sed	8/19/2018	12:21	1	Gallon bag	6020, 7471, 901.1	Y
	DM1-SD14-01-081918	Surf Sed Short	Sed	8/19/2018	12:13	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD15-01-081918	Surf Sed Short	Sed	8/19/2018	12:07	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD16-01-081918	Surf Sed Short	Sed	8/19/2018	11:55	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD17-01-081918	Surf Sed Long	Sed	8/19/2018	11:52	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DM1-SD2-01-081918	Surf Sed Short	Sed	8/19/2018	13:34	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD3-01-081918	Surf Sed Short	Sed	8/19/2018	13:27	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD4-01-081918	Surf Sed Short	Sed	8/19/2018	13:22	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD5-01-081918	Surf Sed Short	Sed	8/19/2018	13:17	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD6-01-081918	Surf Sed Long	Sed	8/19/2018	13:10	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	DM1-SD7-01-081918	Surf Sed Short	Sed	8/19/2018	12:59	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD8-01-081918	Surf Sed Short	Sed	8/19/2018	12:51	1	Gallon bag	6020, 7471, 901.1	
	DM1-SD9-01-081918	Surf Sed Short	Sed	8/19/2018	12:45	1	Gallon bag	6020, 7471, 901.1	
	T6-EB-01-081918	Equip Blank	Water	8/19/2018	16:50	3	(1)L Poly + (1)250ml Poly + (1	6020, 7470, 901.1, 903.1, 904.0, D3972 (U, Th)	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: L

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0083**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B3-Corr1-01-081918	Gamma Corr	Soil	8/19/2018	15:00	1	Gallon bag	6020, 901.1	
	B3-Corr1-02-081918	Gamma Corr	Soil	8/19/2018	15:00	1	Gallon bag	6020, 901.1	
	M2-Corr1-01-081918	Gamma Corr	Soil	8/19/2018	16:00	1	Gallon bag	6020, 901.1	
	M2-Corr2-01-081918	Gamma Corr	Soil	8/19/2018	16:40	1	Gallon bag	6020, 901.1	
	M2-Corr3-01-081918	Gamma Corr	Soil	8/19/2018	17:00	1	Gallon bag	6020, 901.1	
	M30-Corr1-01-082118	Gamma Corr	Soil	8/21/2018	10:45	1	Gallon bag	6020, 901.1	
	M30-Corr2-01-082118	Gamma Corr	Soil	8/21/2018	11:10	1	Gallon bag	6020, 901.1	
	M32-Corr1-01-082118	Gamma Corr	Soil	8/21/2018	10:00	1	Gallon bag	6020, 901.1	
	M32-Corr2-01-082118	Gamma Corr	Soil	8/21/2018	10:15	1	Gallon bag	6020, 901.1	
	M34-Corr1-01-082018	Gamma Corr	Soil	8/20/2018	11:45	1	Gallon bag	6020, 901.1	
	M34-Corr2-01-082018	Gamma Corr	Soil	8/20/2018	12:15	1	Gallon bag	6020, 901.1	
	M34-Corr3-01-082018	Gamma Corr	Soil	8/20/2018	12:25	1	Gallon bag	6020, 901.1	
	M34-Corr4-01-082018	Gamma Corr	Soil	8/20/2018	12:45	1	Gallon bag	6020, 901.1	
	M37-Corr1-01-082018	Gamma Corr	Soil	8/20/2018	10:40	1	Gallon bag	6020, 901.1	
	M37-Corr2-01-082018	Gamma Corr	Soil	8/20/2018	11:00	1	Gallon bag	6020, 901.1	
	T1-Corr1-01-081918	Gamma Corr	Soil	8/19/2018	11:30	1	Gallon bag	6020, 901.1	
	T1-Corr2-01-081918	Gamma Corr	Soil	8/19/2018	12:00	1	Gallon bag	6020, 901.1	
	T2-Corr1-01-081918	Gamma Corr	Soil	8/19/2018	13:00	1	Gallon bag	6020, 901.1	Y
	T4-Corr1-01-081918	Gamma Corr	Soil	8/19/2018	13:45	1	Gallon bag	6020, 901.1	
	T7-Corr1-01-081918	Gamma Corr	Soil	8/19/2018	17:30	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: MET-M, RAD-M

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0084**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M5-XS131-01-082018	XRF Conf Short	Soil	8/20/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	M5-XS199-01-082018	XRF Conf Short	Soil	8/20/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	M5-XS207A-01-082018	XRF Conf Short	Soil	8/20/2018	12:30	2	Quart + Gallon bags	6020, 901.1	
	M5-XS261-01-082018	XRF Conf Short	Soil	8/20/2018	14:00	2	Quart + Gallon bags	6020, 901.1	
	M5-XS263-01-082018	XRF Conf Short	Soil	8/20/2018	11:05	2	Quart + Gallon bags	6020, 901.1	
	M5-XS305-01-082018	XRF Conf Short	Soil	8/20/2018	13:30	2	Quart + Gallon bags	6020, 901.1	
	M5-XS476-01-082018	XRF Conf Short	Soil	8/20/2018	11:35	2	Quart + Gallon bags	6020, 901.1	
	M5-XS488-01-082018	XRF Conf Short	Soil	8/20/2018	11:20	2	Quart + Gallon bags	6020, 901.1	
	T4-XS15A-01-081918	XRF Conf Long	Soil	8/19/2018	12:30	2	Quart + Gallon bags	6020, 901.1, 7471, Eichrom, D3972 (Th)	
	T6-XSG6-01-081918	XRF Conf Short	Soil	8/19/2018	15:50	2	Quart + Gallon bags	6020, 901.1	Y
	T6-XSG6-02-081918	XRF Conf Short	Soil	8/19/2018	15:50	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: N

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0085**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3E-SD1-01-082118	Surf Sed Short	Sed	8/21/2018	12:20	1	Gallon bag	6020, 7471, 901.1	
	DC3E-SD5A-01-082118	Surf Sed Short	Sed	8/21/2018	12:50	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD10-01-082118	Surf Sed Short	Sed	8/21/2018	10:30	1	Gallon bag	6020, 7471, 901.1	
	DC3-SD18A-01-082118	Surf Sed Short	Sed	8/21/2018	11:50	1	Gallon bag	6020, 7471, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: O1-O5

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0086**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	DC3E-SW1-01-082118	Surf Water	Water	8/21/2018	12:15	16	multi	6020,7470,1630,901.1,903.1,904,3972,900,7500,2540,415.1,2320,300,376.1,365.2,2340,353.2,351.4,350.1	Y
	DC3E-SW5A-01-082118	Surf Water	Water	8/21/2018	12:45	16	multi	6020,7470,1630,901.1,903.1,904,3972,900,7500,2540,415.1,2320,300,376.1,365.2,2340,353.2,351.4,350.1	
	DC3-SW10-01-082118	Surf Water	Water	8/21/2018	10:00	16	multi	6020,7470,1630,901.1,903.1,904,3972,900,7500,2540,415.1,2320,300,376.1,365.2,2340,353.2,351.4,350.1	
	DC3-SW10-02-082118	Surf Water	Water	8/21/2018	10:00	16	multi	6020,7470,1630,901.1,903.1,904,3972,900,7500,2540,415.1,2320,300,376.1,365.2,2340,353.2,351.4,350.1	
	DC3-SW18A-01-082118	Surf Water	Water	8/21/2018	11:45	16	multi	6020,7470,1630,901.1,903.1,904,3972,900,7500,2540,415.1,2320,300,376.1,365.2,2340,353.2,351.4,350.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Q

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0088**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M15-XSG20-01-091118	XRF Conf Short	Soil	9/11/2018	09:29	2	Quart + Gallon bags	6020, 901.1	
	M15-XSG2-01-091118	XRF Conf Short	Soil	9/11/2018	08:44	2	Quart + Gallon bags	6020, 901.1	Y
	M16-XSG13-01-091118	XRF Conf Short	Soil	9/11/2018	12:23	2	Quart + Gallon bags	6020, 901.1	
	M16-XSG24-01-091118	XRF Conf Short	Soil	9/11/2018	13:12	2	Quart + Gallon bags	6020, 901.1	
	M21-XS1-01-091218	XRF Conf Short	Soil	9/12/2018	11:27	2	Quart + Gallon bags	6020, 901.1	
	M21-XS317-01-091218	XRF Conf Short	Soil	9/12/2018	09:55	2	Quart + Gallon bags	6020, 901.1	
	M21-XS323-01-091218	XRF Conf Long2	Soil	9/12/2018	14:00	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M21-XS465-01-091218	XRF Conf Short	Soil	9/12/2018	14:35	2	Quart + Gallon bags	6020, 901.1	
	M21-XS503-01-091218	XRF Conf Short	Soil	9/12/2018	11:47	2	Quart + Gallon bags	6020, 901.1	
	M21-XS511-01-091218	XRF Conf Short	Soil	9/12/2018	09:55	2	Quart + Gallon bags	6020, 901.1	
	M21-XS536-01-091218	XRF Conf Short	Soil	9/12/2018	14:45	2	Quart + Gallon bags	6020, 901.1	
	M21-XSG16-01-091218	XRF Conf Short	Soil	9/12/2018	10:35	2	Quart + Gallon bags	6020, 901.1	
	M21-XSG7-01-091218	XRF Conf Short	Soil	9/12/2018	10:50	2	Quart + Gallon bags	6020, 901.1	
	M6-XS164-01-091118	XRF Conf Short	Soil	9/11/2018	13:50	2	Quart + Gallon bags	6020, 901.1	
	M6-XS224-01-091118	XRF Conf Short	Soil	9/11/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	M6-XS52-01-091118	XRF Conf Short	Soil	9/11/2018	12:20	2	Quart + Gallon bags	6020, 901.1	
	T19-XS9-01-091118	XRF Conf Short	Soil	9/11/2018	14:25	2	Quart + Gallon bags	6020, 901.1	
	T20-XSG3-01-091118	XRF Conf Short	Soil	9/11/2018	14:12	2	Quart + Gallon bags	6020, 901.1	
	T21-XSG13-01-091118	XRF Conf Short	Soil	9/11/2018	12:40	2	Quart + Gallon bags	6020, 901.1	
	T21-XSG26-01-091118	XRF Conf Short	Soil	9/11/2018	13:20	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: R

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0089**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T9-SB109-006018-01-091118	Soil Short	Soil	9/11/2018	09:57	1	Gallon bag	6020, 901.1	
	T9-SB109-060072-01-091118	Soil Short	Soil	9/11/2018	10:10	1	Gallon bag	6020, 901.1	
	T9-SB109-084102-01-091118	Soil Short	Soil	9/11/2018	10:22	1	Gallon bag	6020, 901.1	
	T9-SB129-006024-01-091118	Soil Short	Soil	9/11/2018	13:35	1	Gallon bag	6020, 901.1	Y
	T9-SB129-024048-01-091118	Soil Short	Soil	9/11/2018	13:36	1	Gallon bag	6020, 901.1	
	T9-SB129-048096-01-091118	Soil Short	Soil	9/11/2018	13:43	1	Gallon bag	6020, 901.1	
	T9-SB129-096114-01-091118	Soil Short	Soil	9/11/2018	13:50	1	Gallon bag	6020, 901.1	
	T9-SB216-0612-01-091118	Soil Short	Soil	9/11/2018	14:15	1	Gallon bag	6020, 901.1	
	T9-SB216-1218-01-091118	Soil Short	Soil	9/11/2018	14:20	1	Gallon bag	6020, 901.1	
	T9-SB227-0612-01-091118	Soil Short	Soil	9/11/2018	14:30	1	Gallon bag	6020, 901.1	
	T9-SB227-1218-01-091118	Soil Short	Soil	9/11/2018	14:35	1	Gallon bag	6020, 901.1	
	T9-SB67-006048-01-091118	Soil Short	Soil	9/11/2018	11:30	1	Gallon bag	6020, 901.1	
	T9-SB67-048096-01-091118	Soil Short	Soil	9/11/2018	11:40	1	Gallon bag	6020, 901.1	
	T9-SB67-120132-01-091118	Soil Short	Soil	9/11/2018	12:30	1	Gallon bag	6020, 901.1	
	T9-SS109-01-091118	Soil Short	Soil	9/11/2018	09:45	1	Gallon bag	6020, 901.1	
	T9-SS129-01-091118	Soil Short	Soil	9/11/2018	13:30	1	Gallon bag	6020, 901.1	
	T9-SS129-02-091118	Soil Short	Soil	9/11/2018	13:30	1	Gallon bag	6020, 901.1	
	T9-SS216-01-091118	Soil Short	Soil	9/11/2018	14:05	1	Gallon bag	6020, 901.1	
	T9-SS227-01-091118	Soil Short	Soil	9/11/2018	14:25	1	Gallon bag	6020, 901.1	
	T9-SS67-01-091118	Soil Long	Soil	9/11/2018	11:20	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0090**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M21-SB434-0612-01-091218	Soil Short	Soil	9/12/2018	13:20	1	Gallon bag	6020, 901.1	
	M21-SB434-1218-01-091218	Soil Short	Soil	9/12/2018	13:25	1	Gallon bag	6020, 901.1	
	M21-SB528-0612-01-091218	Soil Long	Soil	9/12/2018	12:45	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M21-SB528-1218-01-091218	Soil Long	Soil	9/12/2018	12:55	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M21-SS434-01-091218	Soil Short	Soil	9/12/2018	13:15	1	Gallon bag	6020, 901.1	
	M21-SS528-01-091218	Soil Long	Soil	9/12/2018	12:40	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	T37-SB69-006018-01-091218	Soil Short	Soil	9/12/2018	13:45	1	Gallon bag	6020, 901.1	
	T37-SB69-018048-01-091218	Soil Short	Soil	9/12/2018	13:50	1	Gallon bag	6020, 901.1	
	T37-SB69-048066-01-091218	Soil Short	Soil	9/12/2018	14:04	1	Gallon bag	6020, 901.1	
	T37-SB69-084096-01-091218	Soil Short	Soil	9/12/2018	14:39	1	Gallon bag	6020, 901.1	
	T37-SB77-006018-01-091218	Soil Short	Soil	9/12/2018	15:00	1	Gallon bag	6020, 901.1	
	T37-SB77-018048-01-091218	Soil Short	Soil	9/12/2018	15:05	1	Gallon bag	6020, 901.1	
	T37-SB77-048072-01-091218	Soil Short	Soil	9/12/2018	15:15	1	Gallon bag	6020, 901.1	
	T37-SS69-01-091218	Soil Short	Soil	9/12/2018	13:40	1	Gallon bag	6020, 901.1	
	T37-SS77-01-091218	Soil Short	Soil	9/12/2018	14:55	1	Gallon bag	6020, 901.1	
	T9-SB155-006018-01-091118	Soil Short	Soil	9/11/2018	15:20	1	Gallon bag	6020, 901.1	Y
	T9-SB155-048060-01-091118	Soil Short	Soil	9/11/2018	15:45	1	Gallon bag	6020, 901.1	
	T9-SB155-108120-01-091118	Soil Short	Soil	9/11/2018	15:50	1	Gallon bag	6020, 901.1	
	T9-SB155-168180-01-091118	Soil Short	Soil	9/11/2018	15:57	1	Gallon bag	6020, 901.1	
	T9-SS155-01-091118	Soil Short	Soil	9/11/2018	15:17	1	Gallon bag	6020, 901.1	

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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0091**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M17-XS79-01-091318	XRF Conf Long2	Soil	9/13/2018	11:16	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M17-XSG1-01-091318	XRF Conf Short	Soil	9/13/2018	12:26	2	Quart + Gallon bags	6020, 901.1	
	M17-XSG27-01-091318	XRF Conf Short	Soil	9/13/2018	10:32	2	Quart + Gallon bags	6020, 901.1	
	M17-XSG36-01-091318	XRF Conf Short	Soil	9/13/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M17-XSG36-02-091318	XRF Conf Short	Soil	9/13/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M18-XSG16-01-091318	XRF Conf Short	Soil	9/13/2018	09:23	2	Quart + Gallon bags	6020, 901.1	
	M18-XSG30-01-091318	XRF Conf Short	Soil	9/13/2018	10:40	2	Quart + Gallon bags	6020, 901.1	
	M18-XSG32-01-091318	XRF Conf Short	Soil	9/13/2018	09:45	2	Quart + Gallon bags	6020, 901.1	
	M19-XSG11-01-091318	XRF Conf Short	Soil	9/13/2018	12:47	2	Quart + Gallon bags	6020, 901.1	
	M19-XSG19-01-091318	XRF Conf Long2	Soil	9/13/2018	13:10	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M19-XSG25-01-091318	XRF Conf Short	Soil	9/13/2018	12:20	2	Quart + Gallon bags	6020, 901.1	
	M19-XSG29-01-091318	XRF Conf Short	Soil	9/13/2018	14:05	2	Quart + Gallon bags	6020, 901.1	
	M19-XSG39-01-091318	XRF Conf Short	Soil	9/13/2018	13:50	2	Quart + Gallon bags	6020, 901.1	
	M19-XSG43-01-091318	XRF Conf Short	Soil	9/13/2018	13:35	2	Quart + Gallon bags	6020, 901.1	
	T22-XS20-01-091118	XRF Conf Short	Soil	9/11/2018	09:25	2	Quart + Gallon bags	6020, 901.1	
	T23-XSG26-01-091118	XRF Conf Short	Soil	9/11/2018	10:12	2	Quart + Gallon bags	6020, 901.1	Y
	T23-XSG7-01-091118	XRF Conf Short	Soil	9/11/2018	10:42	2	Quart + Gallon bags	6020, 901.1	
	T24-XSG2-01-091118	XRF Conf Short	Soil	9/11/2018	11:20	2	Quart + Gallon bags	6020, 901.1	
	T24-XSG26-01-091118	XRF Conf Short	Soil	9/11/2018	10:45	2	Quart + Gallon bags	6020, 901.1	

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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0092**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T12-SB1-0612-01-091218	Soil Short	Soil	9/12/2018	15:30	1	Gallon bag	6020, 901.1	
	T12-SB9-0612-01-091218	Soil Short	Soil	9/12/2018	16:05	1	Gallon bag	6020, 901.1	
	T12-SS10-01-091218	Soil Short	Soil	9/12/2018	16:20	1	Gallon bag	6020, 901.1	
	T12-SS1-01-091218	Soil Short	Soil	9/12/2018	15:30	1	Gallon bag	6020, 901.1	
	T12-SS11-01-091218	Soil Short	Soil	9/12/2018	16:25	1	Gallon bag	6020, 901.1	
	T12-SS12-01-091218	Soil Short	Soil	9/12/2018	16:30	1	Gallon bag	6020, 901.1	
	T12-SS2-01-091218	Soil Short	Soil	9/12/2018	15:40	1	Gallon bag	6020, 901.1	
	T12-SS3-01-091218	Soil Short	Soil	9/12/2018	15:45	1	Gallon bag	6020, 901.1	Y
	T12-SS4-01-091218	Soil Short	Soil	9/12/2018	15:50	1	Gallon bag	6020, 901.1	
	T12-SS5-01-091218	Soil Short	Soil	9/12/2018	15:55	1	Gallon bag	6020, 901.1	
	T12-SS6-01-091218	Soil Short	Soil	9/12/2018	16:00	1	Gallon bag	6020, 901.1	
	T12-SS7-01-091218	Soil Short	Soil	9/12/2018	16:15	1	Gallon bag	6020, 901.1	
	T12-SS8-01-091218	Soil Short	Soil	9/12/2018	16:10	1	Gallon bag	6020, 901.1	
	T12-SS9-01-091218	Soil Short	Soil	9/12/2018	16:05	1	Gallon bag	6020, 901.1	
	T9-SB144-006018-01-091218	Soil Short	Soil	9/12/2018	08:26	1	Gallon bag	6020, 901.1	
	T9-SB144-024036-01-091218	Soil Short	Soil	9/12/2018	08:31	1	Gallon bag	6020, 901.1	
	T9-SB144-048060-01-091218	Soil Short	Soil	9/12/2018	08:35	1	Gallon bag	6020, 901.1	
	T9-SB144-108120-01-091218	Soil Short	Soil	9/12/2018	08:40	1	Gallon bag	6020, 901.1	
	T9-SB144-156162-01-091218	Soil Short	Soil	9/12/2018	08:50	1	Gallon bag	6020, 901.1	
	T9-SB176-006018-01-091218	Soil Short	Soil	9/12/2018	10:49	1	Gallon bag	6020, 901.1	

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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0093**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M18-SB76-006018-01-091318	Soil Short	Soil	9/13/2018	14:32	1	Gallon bag	6020, 901.1	
	M18-SB76-018036-01-091318	Soil Short	Soil	9/13/2018	14:34	1	Gallon bag	6020, 901.1	
	M18-SB76-036040-01-091318	Soil Short	Soil	9/13/2018	14:43	1	Gallon bag	6020, 901.1	
	M18-SS76-01-091318	Soil Short	Soil	9/13/2018	14:25	1	Gallon bag	6020, 901.1	
	T9-SB176-024036-01-091218	Soil Short	Soil	9/12/2018	10:55	1	Gallon bag	6020, 901.1	
	T9-SB176-048060-01-091218	Soil Short	Soil	9/12/2018	11:00	1	Gallon bag	6020, 901.1	
	T9-SB176-108120-01-091218	Soil Short	Soil	9/12/2018	11:05	1	Gallon bag	6020, 901.1	
	T9-SB185-006018-01-091218	Soil Short	Soil	9/12/2018	09:09	1	Gallon bag	6020, 901.1	
	T9-SB185-024036-01-091218	Soil Short	Soil	9/12/2018	09:14	1	Gallon bag	6020, 901.1	
	T9-SB185-048060-01-091218	Soil Short	Soil	9/12/2018	09:18	1	Gallon bag	6020, 901.1	
	T9-SB185-108120-01-091218	Soil Short	Soil	9/12/2018	09:22	1	Gallon bag	6020, 901.1	
	T9-SB185-156162-01-091218	Soil Short	Soil	9/12/2018	09:30	1	Gallon bag	6020, 901.1	
	T9-SB212-006018-01-091218	Soil Short	Soil	9/12/2018	10:05	1	Gallon bag	6020, 901.1	
	T9-SB212-024036-01-091218	Soil Short	Soil	9/12/2018	10:08	1	Gallon bag	6020, 901.1	
	T9-SB212-048060-01-091218	Soil Short	Soil	9/12/2018	10:11	1	Gallon bag	6020, 901.1	
	T9-SB212-108120-01-091218	Soil Short	Soil	9/12/2018	10:15	1	Gallon bag	6020, 901.1	
	T9-SS144-01-091218	Soil Short	Soil	9/12/2018	08:22	1	Gallon bag	6020, 901.1	Y
	T9-SS176-01-091218	Soil Short	Soil	9/12/2018	10:45	1	Gallon bag	6020, 901.1	
	T9-SS185-01-091218	Soil Short	Soil	9/12/2018	09:00	1	Gallon bag	6020, 901.1	
	T9-SS212-01-091218	Soil Short	Soil	9/12/2018	10:00	1	Gallon bag	6020, 901.1	

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3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0094**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M21-SD1-01-091218	Soil Short	Sed	9/12/2018	11:00	1	Gallon bag	6020, 901.1	
	M21-SD2-01-091218	Soil Long	Sed	9/12/2018	11:00	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M5-SB79-0612-01-091818	Soil Short	Soil	9/18/2018	13:50	1	Gallon bag	6020, 901.1	
	M5-SB79-1218-01-091818	Soil Short	Soil	9/18/2018	13:55	1	Gallon bag	6020, 901.1	
	M5-SB97-0612-01-091818	Soil Short	Soil	9/18/2018	14:05	1	Gallon bag	6020, 901.1	
	M5-SB97-1218-01-091818	Soil Short	Soil	9/18/2018	14:10	1	Gallon bag	6020, 901.1	
	M5-SS156-01-091818	Soil Short	Soil	9/18/2018	14:35	1	Gallon bag	6020, 901.1	
	M5-SS79-01-091818	Soil Short	Soil	9/18/2018	13:45	1	Gallon bag	6020, 901.1	Y
	M5-SS97-01-091818	Soil Short	Soil	9/18/2018	14:00	1	Gallon bag	6020, 901.1	
	M6-SD1-01-091618	Soil Short	Sed	9/16/2018	08:45	1	Gallon bag	6020, 901.1	
	M6-SD2-01-091618	Soil Short	Sed	9/16/2018	09:00	1	Gallon bag	6020, 901.1	
	M6-SD3-01-091618	Soil Short	Sed	9/16/2018	11:25	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

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 Fort Collins, CO 80525  
 Cooler #: X

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0095**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M16-SB193-0612-01-091318	Soil Long	Soil	9/13/2018	12:25	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M16-SB193-1218-01-091318	Soil Long	Soil	9/13/2018	12:35	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M16-SS193-01-091318	Soil Long	Soil	9/13/2018	12:15	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M17-SB35-0612-01-091318	Soil Short	Soil	9/13/2018	10:15	1	Gallon bag	6020, 901.1	
	M17-SB35-1218-01-091318	Soil Short	Soil	9/13/2018	10:20	1	Gallon bag	6020, 901.1	
	M17-SB38-0612-01-091318	Soil Short	Soil	9/13/2018	09:55	1	Gallon bag	6020, 901.1	Y
	M17-SB38-1218-01-091318	Soil Short	Soil	9/13/2018	10:05	1	Gallon bag	6020, 901.1	
	M17-SB4-0612-01-091318	Soil Short	Soil	9/13/2018	14:40	1	Gallon bag	6020, 901.1	
	M17-SB64-0612-01-091318	Soil Long	Soil	9/13/2018	10:30	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M17-SB64-1218-01-091318	Soil Long	Soil	9/13/2018	10:35	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M17-SB93-0612-01-091318	Soil Short	Soil	9/13/2018	10:55	1	Gallon bag	6020, 901.1	
	M17-SB93-1218-01-091318	Soil Short	Soil	9/13/2018	11:05	1	Gallon bag	6020, 901.1	
	M17-SS35-01-091318	Soil Short	Soil	9/13/2018	10:10	1	Gallon bag	6020, 901.1	
	M17-SS38-01-091318	Soil Short	Soil	9/13/2018	09:45	1	Gallon bag	6020, 901.1	
	M17-SS4-01-091318	Soil Short	Soil	9/13/2018	14:30	1	Gallon bag	6020, 901.1	
	M17-SS64-01-091318	Soil Long	Soil	9/13/2018	10:25	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M17-SS93-01-091318	Soil Short	Soil	9/13/2018	10:45	1	Gallon bag	6020, 901.1	
	M18-SB73-006018-01-091318	Soil Short	Soil	9/13/2018	15:03	1	Gallon bag	6020, 901.1	
	M18-SB92-006018-01-091318	Soil Short	Soil	9/13/2018	13:43	1	Gallon bag	6020, 901.1	
	M18-SB92-018048-01-091318	Soil Short	Soil	9/13/2018	13:45	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Y

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0096**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M18-SS73-01-091318	Soil Short	Soil	9/13/2018	14:54	1	Gallon bag	6020, 901.1	
	M18-SS92-01-091318	Soil Short	Soil	9/13/2018	13:37	1	Gallon bag	6020, 901.1	Y
	T37-SB103-006018-01-091318	Soil Short	Soil	9/13/2018	08:33	1	Gallon bag	6020, 901.1	
	T37-SB103-024036-01-091318	Soil Short	Soil	9/13/2018	08:37	1	Gallon bag	6020, 901.1	
	T37-SB103-048060-01-091318	Soil Short	Soil	9/13/2018	08:43	1	Gallon bag	6020, 901.1	
	T37-SB103-108120-01-091318	Soil Short	Soil	9/13/2018	08:50	1	Gallon bag	6020, 901.1	
	T37-SB86-006018-01-091318	Soil Short	Soil	9/13/2018	10:27	1	Gallon bag	6020, 901.1	
	T37-SB86-024036-01-091318	Soil Short	Soil	9/13/2018	10:31	1	Gallon bag	6020, 901.1	
	T37-SB86-048060-01-091318	Soil Short	Soil	9/13/2018	10:36	1	Gallon bag	6020, 901.1	
	T37-SB86-108120-01-091318	Soil Short	Soil	9/13/2018	10:41	1	Gallon bag	6020, 901.1	
	T37-SB86A-006018-01-091318	Soil Short	Soil	9/13/2018	11:02	1	Gallon bag	6020, 901.1	
	T37-SB86A-024036-01-091318	Soil Short	Soil	9/13/2018	11:06	1	Gallon bag	6020, 901.1	
	T37-SB86A-048060-01-091318	Soil Short	Soil	9/13/2018	11:12	1	Gallon bag	6020, 901.1	
	T37-SB86A-108120-01-091318	Soil Short	Soil	9/13/2018	11:16	1	Gallon bag	6020, 901.1	
	T37-SB87-006018-01-091318	Soil Short	Soil	9/13/2018	09:55	1	Gallon bag	6020, 901.1	
	T37-SB87-024036-01-091318	Soil Short	Soil	9/13/2018	09:57	1	Gallon bag	6020, 901.1	
	T37-SB87-024036-02-091318	Soil Short	Soil	9/13/2018	09:57	1	Gallon bag	6020, 901.1	
	T37-SB87-048060-01-091318	Soil Short	Soil	9/13/2018	10:04	1	Gallon bag	6020, 901.1	
	T37-SB87-108120-01-091318	Soil Short	Soil	9/13/2018	10:05	1	Gallon bag	6020, 901.1	
	T37-SB94-006018-01-091318	Soil Short	Soil	9/13/2018	09:20	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Z

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0097**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M15-SS3-02-091518	Soil Short	Soil	9/15/2018	14:25	1	Gallon bag	6020, 901.1	
	M16-SB108-0612-01-091418	Soil Short	Soil	9/14/2018	16:15	1	Gallon bag	6020, 901.1	
	M16-SB19-0612-01-091418	Soil Short	Soil	9/14/2018	15:45	1	Gallon bag	6020, 901.1	
	M16-SB43-0612-01-091418	Soil Short	Soil	9/14/2018	15:55	1	Gallon bag	6020, 901.1	
	M16-SB47-0612-01-091418	Soil Short	Soil	9/14/2018	16:05	1	Gallon bag	6020, 901.1	
	M16-SB7-0612-01-091418	Soil Short	Soil	9/14/2018	15:35	1	Gallon bag	6020, 901.1	
	M16-SS108-01-091418	Soil Short	Soil	9/14/2018	16:10	1	Gallon bag	6020, 901.1	
	M16-SS19-01-091418	Soil Short	Soil	9/14/2018	15:40	1	Gallon bag	6020, 901.1	
	M16-SS43-01-091418	Soil Short	Soil	9/14/2018	15:50	1	Gallon bag	6020, 901.1	
	M16-SS47-01-091418	Soil Short	Soil	9/14/2018	16:00	1	Gallon bag	6020, 901.1	
	M16-SS7-01-091418	Soil Short	Soil	9/14/2018	15:30	1	Gallon bag	6020, 901.1	
	M16-SS7-02-091418	Soil Short	Soil	9/14/2018	15:30	1	Gallon bag	6020, 901.1	
	T37-SB94-024036-01-091318	Soil Short	Soil	9/13/2018	09:24	1	Gallon bag	6020, 901.1	
	T37-SB94-048060-01-091318	Soil Short	Soil	9/13/2018	09:27	1	Gallon bag	6020, 901.1	
	T37-SB94-108120-01-091318	Soil Short	Soil	9/13/2018	09:32	1	Gallon bag	6020, 901.1	Y
	T37-SS103-01-091318	Soil Short	Soil	9/13/2018	08:30	1	Gallon bag	6020, 901.1	
	T37-SS86-01-091318	Soil Short	Soil	9/13/2018	10:23	1	Gallon bag	6020, 901.1	
	T37-SS86A-01-091318	Soil Short	Soil	9/13/2018	10:59	1	Gallon bag	6020, 901.1	
	T37-SS87-01-091318	Soil Short	Soil	9/13/2018	09:49	1	Gallon bag	6020, 901.1	
	T37-SS94-01-091318	Soil Long	Soil	9/13/2018	09:08	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0098**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Num b Cont	Container	Analytical_Method	Lab QC
	M18-SB115-0612-01-091418	Soil Short	Soil	9/14/2018	10:15	1	Gallon bag	6020, 901.1	
	M18-SB115-1218-01-091418	Soil Short	Soil	9/14/2018	10:30	1	Gallon bag	6020, 901.1	
	M18-SB115-1824-01-091418	Soil Short	Soil	9/14/2018	10:35	1	Gallon bag	6020, 901.1	
	M18-SB145-0612-01-091418	Soil Long	Soil	9/14/2018	11:00	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M18-SB150-0612-01-091418	Soil Short	Soil	9/14/2018	11:25	1	Gallon bag	6020, 901.1	
	M18-SB53-0612-01-091418	Soil Short	Soil	9/14/2018	11:05	1	Gallon bag	6020, 901.1	
	M18-SB63-0612-01-091418	Soil Short	Soil	9/14/2018	10:55	1	Gallon bag	6020, 901.1	
	M18-SB74-006018-01-091418	Soil Short	Soil	9/14/2018	10:15	1	Gallon bag	6020, 901.1	Y
	M18-SB74-018054-01-091418	Soil Short	Soil	9/14/2018	10:20	1	Gallon bag	6020, 901.1	
	M18-SB84-006018-01-091418	Soil Short	Soil	9/14/2018	09:40	1	Gallon bag	6020, 901.1	
	M18-SB84-018058-01-091418	Soil Short	Soil	9/14/2018	09:45	1	Gallon bag	6020, 901.1	
	M18-SS115-01-091418	Soil Short	Soil	9/14/2018	10:05	1	Gallon bag	6020, 901.1	
	M18-SS115-02-091418	Soil Short	Soil	9/14/2018	10:05	1	Gallon bag	6020, 901.1	
	M18-SS145-01-091418	Soil Long	Soil	9/14/2018	10:50	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M18-SS150-01-091418	Soil Short	Soil	9/14/2018	11:15	1	Gallon bag	6020, 901.1	
	M18-SS53-01-091418	Soil Short	Soil	9/14/2018	11:00	1	Gallon bag	6020, 901.1	
	M18-SS63-01-091418	Soil Short	Soil	9/14/2018	10:50	1	Gallon bag	6020, 901.1	
	M18-SS74-01-091418	Soil Short	Soil	9/14/2018	10:10	1	Gallon bag	6020, 901.1	
	M18-SS74-02-091418	Soil Short	Soil	9/14/2018	10:10	1	Gallon bag	6020, 901.1	
	M18-SS84-01-091418	Soil Short	Soil	9/14/2018	09:30	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0099**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Num b Cont	Container	Analytical_Method	Lab QC
	M15-SB16-0612-01-091418	Soil Short	Soil	9/14/2018	12:50	1	Gallon bag	6020, 901.1	
	M15-SB16-1218-01-091418	Soil Short	Soil	9/14/2018	12:55	1	Gallon bag	6020, 901.1	
	M15-SB22-0612-01-091418	Soil Short	Soil	9/14/2018	13:10	1	Gallon bag	6020, 901.1	
	M15-SB22-1218-01-091418	Soil Short	Soil	9/14/2018	13:15	1	Gallon bag	6020, 901.1	
	M15-SB50-0612-01-091418	Soil Short	Soil	9/14/2018	13:25	1	Gallon bag	6020, 901.1	
	T23-SB24-006018-01-091418	Soil Short	Soil	9/14/2018	11:45	1	Gallon bag	6020, 901.1	
	T23-SB24-018048-01-091418	Soil Short	Soil	9/14/2018	11:53	1	Gallon bag	6020, 901.1	
	T23-SB32-006018-01-091418	Soil Short	Soil	9/14/2018	13:55	1	Gallon bag	6020, 901.1	
	T23-SB32-018072-01-091418	Soil Short	Soil	9/14/2018	14:01	1	Gallon bag	6020, 901.1	
	T23-SB33-006018-01-091418	Soil Short	Soil	9/14/2018	13:15	1	Gallon bag	6020, 901.1	
	T23-SB44-006018-01-091418	Soil Short	Soil	9/14/2018	14:30	1	Gallon bag	6020, 901.1	
	T23-SB44-018072-01-091418	Soil Short	Soil	9/14/2018	14:40	1	Gallon bag	6020, 901.1	
	T23-SB45-006018-01-091418	Soil Short	Soil	9/14/2018	15:30	1	Gallon bag	6020, 901.1	
	T23-SB45-018060-01-091418	Soil Short	Soil	9/14/2018	15:40	1	Gallon bag	6020, 901.1	
	T23-SS24-01-091418	Soil Short	Soil	9/14/2018	11:40	1	Gallon bag	6020, 901.1	
	T23-SS32-01-091418	Soil Long	Soil	9/14/2018	13:45	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	T23-SS33-01-091418	Soil Short	Soil	9/14/2018	13:10	1	Gallon bag	6020, 901.1	
	T23-SS44-01-091418	Soil Short	Soil	9/14/2018	14:25	1	Gallon bag	6020, 901.1	
	T23-SS45-01-091418	Soil Short	Soil	9/14/2018	15:22	1	Gallon bag	6020, 901.1	Y
	T23-SS45-02-091418	Soil Short	Soil	9/14/2018	15:22	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: C

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0100**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Number Cont	Container	Analytical_Method	Lab QC
	M15-SS16-01-091418	Soil Short	Soil	9/14/2018	12:40	1	Gallon bag	6020, 901.1	
	M15-SS16-02-091418	Soil Short	Soil	9/14/2018	12:40	1	Gallon bag	6020, 901.1	Y
	M2-SB37-018036-01-091618	Soil Short	Soil	9/16/2018	14:20	1	Gallon bag	6020, 901.1	
	M2-SB37-054072-01-091618	Soil Short	Soil	9/16/2018	14:25	1	Gallon bag	6020, 901.1	
	M2-SB37-090108-01-091618	Soil Short	Soil	9/16/2018	14:30	1	Gallon bag	6020, 901.1	
	M2-SB37-126144-01-091618	Soil Short	Soil	9/16/2018	14:35	1	Gallon bag	6020, 901.1	
	M2-SB37-162180-01-091618	Soil Short	Soil	9/16/2018	14:45	1	Gallon bag	6020, 901.1	
	M2-SB55-018036-01-091618	Soil Short	Soil	9/16/2018	12:55	1	Gallon bag	6020, 901.1	
	M2-SB55-054068-01-091618	Soil Short	Soil	9/16/2018	13:00	1	Gallon bag	6020, 901.1	
	M2-SB55-072090-01-091618	Soil Long	Soil	9/16/2018	13:05	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M2-SB55-090108-01-091618	Soil Short	Soil	9/16/2018	13:10	1	Gallon bag	6020, 901.1	
	M2-SB55-108126-01-091618	Soil Short	Soil	9/16/2018	13:15	1	Gallon bag	6020, 901.1	
	M2-SB55-126144-01-091618	Soil Short	Soil	9/16/2018	13:20	1	Gallon bag	6020, 901.1	
	M2-SB55-152162-01-091618	Soil Short	Soil	9/16/2018	13:25	1	Gallon bag	6020, 901.1	
	M2-SB63A-018036-01-091618	Soil Short	Soil	9/16/2018	15:20	1	Gallon bag	6020, 901.1	
	M2-SB63A-018036-02-091618	Soil Short	Soil	9/16/2018	15:20	1	Gallon bag	6020, 901.1	
	M2-SB63A-054072-01-091618	Soil Short	Soil	9/16/2018	15:25	1	Gallon bag	6020, 901.1	
	M2-SB63A-090108-01-091618	Soil Short	Soil	9/16/2018	15:30	1	Gallon bag	6020, 901.1	
	M2-SB63A-126144-01-091618	Soil Short	Soil	9/16/2018	15:35	1	Gallon bag	6020, 901.1	
	T23-SS42-02-091518	Soil Short	Soil	9/15/2018	09:45	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: D

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0101**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M13-XS112-01-091518	XRF Conf Short	Soil	9/15/2018	16:00	2	Quart + Gallon bags	6020, 901.1	
	M13-XS258-01-091518	XRF Conf Short	Soil	9/15/2018	15:00	2	Quart + Gallon bags	6020, 901.1	
	M16-XSG30-01-091518	XRF Conf Short	Soil	9/15/2018	12:45	2	Quart + Gallon bags	6020, 901.1	
	M16-XSG38-01-091518	XRF Conf Short	Soil	9/15/2018	14:02	2	Quart + Gallon bags	6020, 901.1	
	M20-XS335-01-091418	XRF Conf Short	Soil	9/14/2018	12:29	2	Quart + Gallon bags	6020, 901.1	
	M20-XS422-01-091418	XRF Conf Short	Soil	9/14/2018	11:14	2	Quart + Gallon bags	6020, 901.1	
	M20-XSG15-01-091418	XRF Conf Short	Soil	9/14/2018	09:46	2	Quart + Gallon bags	6020, 901.1	
	M20-XSG28-01-091418	XRF Conf Short	Soil	9/14/2018	10:19	2	Quart + Gallon bags	6020, 901.1	
	M20-XSG7-01-091418	XRF Conf Short	Soil	9/14/2018	14:04	2	Quart + Gallon bags	6020, 901.1	
	M21-XS366-01-091418	XRF Conf Short	Soil	9/14/2018	10:55	2	Quart + Gallon bags	6020, 901.1	
	M21-XS366-02-091418	XRF Conf Short	Soil	9/14/2018	10:55	2	Quart + Gallon bags	6020, 901.1	
	M21-XSG38-01-091418	XRF Conf Short	Soil	9/14/2018	09:45	2	Quart + Gallon bags	6020, 901.1	Y
	M21-XSG43-01-091418	XRF Conf Short	Soil	9/14/2018	09:20	2	Quart + Gallon bags	6020, 901.1	
	M22-XS112-01-091418	XRF Conf Short	Soil	9/14/2018	11:10	2	Quart + Gallon bags	6020, 901.1	
	M22-XS115-01-091418	XRF Conf Short	Soil	9/14/2018	11:25	2	Quart + Gallon bags	6020, 901.1	
	M22-XS121-01-091418	XRF Conf Short	Soil	9/14/2018	10:46	2	Quart + Gallon bags	6020, 901.1	
	M22-XS94-01-091418	XRF Conf Short	Soil	9/14/2018	11:50	2	Quart + Gallon bags	6020, 901.1	
	M23-XSG1-01-091418	XRF Conf Short	Soil	9/14/2018	15:00	2	Quart + Gallon bags	6020, 901.1	
	M23-XSG20-01-091418	XRF Conf Short	Soil	9/14/2018	13:40	2	Quart + Gallon bags	6020, 901.1	
	M23-XSG5-01-091418	XRF Conf Short	Soil	9/14/2018	14:05	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: E

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0102**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B26-SS01-01-091418	Bkgd Study Short	Soil	9/14/2018	11:08	1	Gallon bag	6020, 7471, 901.1	
	B26-SS03-01-091418	Bkgd Study Short	Soil	9/14/2018	11:01	1	Gallon bag	6020, 7471, 901.1	
	B26-SS07-01-091418	Bkgd Study Long	Soil	9/14/2018	11:04	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B26-SS09-01-091418	Bkgd Study Short	Soil	9/14/2018	10:57	1	Gallon bag	6020, 7471, 901.1	
	B26-SS13-01-091418	Bkgd Study Short	Soil	9/14/2018	10:32	1	Gallon bag	6020, 7471, 901.1	
	B26-SS13-02-091418	Bkgd Study Short	Soil	9/14/2018	10:32	1	Gallon bag	6020, 7471, 901.1	
	B26-SS15-01-091418	Bkgd Study Short	Soil	9/14/2018	10:50	1	Gallon bag	6020, 7471, 901.1	
	B26-SS17-01-091418	Bkgd Study Short	Soil	9/14/2018	10:29	1	Gallon bag	6020, 7471, 901.1	
	B26-SS19-01-091418	Bkgd Study Short	Soil	9/14/2018	10:45	1	Gallon bag	6020, 7471, 901.1	Y
	B26-SS21-01-091418	Bkgd Study Short	Soil	9/14/2018	10:19	1	Gallon bag	6020, 7471, 901.1	
	B26-SS21-02-091418	Bkgd Study Short	Soil	9/14/2018	10:19	1	Gallon bag	6020, 7471, 901.1	
	B26-SS28-01-091418	Bkgd Study Short	Soil	9/14/2018	10:14	1	Gallon bag	6020, 7471, 901.1	
	B26-SS28-02-091418	Bkgd Study Short	Soil	9/14/2018	10:14	1	Gallon bag	6020, 7471, 901.1	
	B3-SS01-01-091618	Bkgd Study Short	Soil	9/16/2018	08:27	1	Gallon bag	6020, 7471, 901.1	
	B3-SS03-01-091618	Bkgd Study Long	Soil	9/16/2018	08:33	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B3-SS07-01-091618	Bkgd Study Short	Soil	9/16/2018	08:24	1	Gallon bag	6020, 7471, 901.1	
	B3-SS09-01-091618	Bkgd Study Short	Soil	9/16/2018	08:14	1	Gallon bag	6020, 7471, 901.1	
	B3-SS13-01-091618	Bkgd Study Short	Soil	9/16/2018	08:19	1	Gallon bag	6020, 7471, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**REVISED**  
 10:54 pm, Sep 17, 2018

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: E

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0102**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	B3-SS15-01-091618	Bkgd Study Short	Soil	9/16/2018	08:11	1	Gallon bag	6020, 7471, 901.1	
	B3-SS17-01-091618	Bkgd Study Long	Soil	9/16/2018	08:03	1	Gallon bag	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	B3-SS19-01-091618	Bkgd Study Short	Soil	9/16/2018	08:06	1	Gallon bag	6020, 7471, 901.1	
	B3-SS21-01-091618	Bkgd Study Short	Soil	9/16/2018	08:33	1	Gallon bag	6020, 7471, 901.1	
	B3-SS28-01-091618	Bkgd Study Short	Soil	9/16/2018	08:41	1	Gallon bag	6020, 7471, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt

**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: F

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0103**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M13-SB114-0612-01-091518	Soil Short	Soil	9/15/2018	16:10	1	Gallon bag	6020, 901.1	
	M13-SB114-1230-01-091518	Soil Long	Soil	9/15/2018	16:15	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M13-SB2-0612-01-091518	Soil Short	Soil	9/15/2018	09:50	1	Gallon bag	6020, 901.1	
	M13-SB210-0612-01-091518	Soil Short	Soil	9/15/2018	15:35	1	Gallon bag	6020, 901.1	
	M13-SB210-1230-01-091518	Soil Short	Soil	9/15/2018	15:40	1	Gallon bag	6020, 901.1	
	M13-SB228-0612-01-091518	Soil Short	Soil	9/15/2018	14:35	1	Gallon bag	6020, 901.1	
	M13-SB25-0612-01-091518	Soil Short	Soil	9/15/2018	10:15	1	Gallon bag	6020, 901.1	
	M13-SB35-0612-01-091518	Soil Short	Soil	9/15/2018	10:30	1	Gallon bag	6020, 901.1	
	M13-SB35-1218-01-091518	Soil Short	Soil	9/15/2018	10:35	1	Gallon bag	6020, 901.1	
	M13-SB59-0612-01-091518	Soil Short	Soil	9/15/2018	10:55	1	Gallon bag	6020, 901.1	
	M13-SB83-0612-01-091518	Soil Short	Soil	9/15/2018	10:45	1	Gallon bag	6020, 901.1	
	M13-SB83-1218-01-091518	Soil Short	Soil	9/15/2018	10:50	1	Gallon bag	6020, 901.1	
	M13-SS114-01-091518	Soil Long	Soil	9/15/2018	16:00	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M13-SS2-01-091518	Soil Short	Soil	9/15/2018	09:47	1	Gallon bag	6020, 901.1	
	M13-SS210-01-091518	Soil Short	Soil	9/15/2018	15:30	1	Gallon bag	6020, 901.1	
	M13-SS228-01-091518	Soil Short	Soil	9/15/2018	14:30	1	Gallon bag	6020, 901.1	
	M13-SS25-01-091518	Soil Short	Soil	9/15/2018	10:10	1	Gallon bag	6020, 901.1	
	M13-SS35-01-091518	Soil Short	Soil	9/15/2018	10:25	1	Gallon bag	6020, 901.1	Y
	M13-SS59-01-091518	Soil Short	Soil	9/15/2018	10:50	1	Gallon bag	6020, 901.1	
	M13-SS83-01-091518	Soil Short	Soil	9/15/2018	10:40	1	Gallon bag	6020, 901.1	

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0104**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M15-SB14-006018-01-091518	Soil Short	Soil	9/15/2018	12:40	1	Gallon bag	6020, 901.1	
	M15-SB14-018048-01-091518	Soil Short	Soil	9/15/2018	12:45	1	Gallon bag	6020, 901.1	
	M15-SB14-048084-01-091518	Soil Short	Soil	9/15/2018	12:50	1	Gallon bag	6020, 901.1	
	M15-SB23-006018-01-091518	Soil Short	Soil	9/15/2018	13:55	1	Gallon bag	6020, 901.1	
	M15-SB23-018072-01-091518	Soil Short	Soil	9/15/2018	14:00	1	Gallon bag	6020, 901.1	
	M15-SB23A-006018-01-091518	Soil Short	Soil	9/15/2018	14:15	1	Gallon bag	6020, 901.1	
	M15-SB3-006018-01-091518	Soil Short	Soil	9/15/2018	14:35	1	Gallon bag	6020, 901.1	
	M15-SB3-018060-01-091518	Soil Short	Soil	9/15/2018	14:45	1	Gallon bag	6020, 901.1	
	M15-SB34-006018-01-091518	Soil Short	Soil	9/15/2018	13:25	1	Gallon bag	6020, 901.1	
	M15-SB34-018048-01-091518	Soil Short	Soil	9/15/2018	13:28	1	Gallon bag	6020, 901.1	
	M15-SB34-048084-01-091518	Soil Short	Soil	9/15/2018	13:40	1	Gallon bag	6020, 901.1	
	M15-SB43-0612-01-091518	Soil Short	Soil	9/15/2018	13:30	1	Gallon bag	6020, 901.1	
	M15-SS14-01-091518	Soil Long	Soil	9/15/2018	12:35	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M15-SS23-01-091518	Soil Short	Soil	9/15/2018	13:50	1	Gallon bag	6020, 901.1	Y
	M15-SS23A-01-091518	Soil Short	Soil	9/15/2018	14:10	1	Gallon bag	6020, 901.1	
	M15-SS3-01-091518	Soil Short	Soil	9/15/2018	14:25	1	Gallon bag	6020, 901.1	
	M15-SS34-01-091518	Soil Short	Soil	9/15/2018	13:20	1	Gallon bag	6020, 901.1	
	M15-SS43-01-091518	Soil Short	Soil	9/15/2018	13:25	1	Gallon bag	6020, 901.1	
	T23-SB22-006018-01-091518	Soil Short	Soil	9/15/2018	09:10	1	Gallon bag	6020, 901.1	
	T23-SB22-018048-01-091518	Soil Short	Soil	9/15/2018	09:15	1	Gallon bag	6020, 901.1	

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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0105**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Num b Cont	Container	Analytical_Method	Lab QC
	M15-SB84-0612-01-091418	Soil Long	Soil	9/14/2018	14:35	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M15-SS22-01-091418	Soil Short	Soil	9/14/2018	13:00	1	Gallon bag	6020, 901.1	
	M15-SS22-02-091418	Soil Short	Soil	9/14/2018	13:00	1	Gallon bag	6020, 901.1	
	M15-SS50-01-091418	Soil Short	Soil	9/14/2018	13:20	1	Gallon bag	6020, 901.1	
	M15-SS50-02-091418	Soil Short	Soil	9/14/2018	13:20	1	Gallon bag	6020, 901.1	
	M15-SS84-01-091418	Soil Long	Soil	9/14/2018	14:30	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	T23-SB35-006018-01-091518	Soil Short	Soil	9/15/2018	11:05	1	Gallon bag	6020, 901.1	
	T23-SB35-018060-01-091518	Soil Short	Soil	9/15/2018	11:10	1	Gallon bag	6020, 901.1	
	T23-SB41-006018-01-091518	Soil Short	Soil	9/15/2018	11:30	1	Gallon bag	6020, 901.1	
	T23-SB41-018048-01-091518	Soil Short	Soil	9/15/2018	11:35	1	Gallon bag	6020, 901.1	
	T23-SB41-048060-01-091518	Soil Short	Soil	9/15/2018	11:45	1	Gallon bag	6020, 901.1	
	T23-SB42-006018-01-091518	Soil Short	Soil	9/15/2018	09:50	1	Gallon bag	6020, 901.1	
	T23-SB42-018084-01-091518	Soil Short	Soil	9/15/2018	10:00	1	Gallon bag	6020, 901.1	
	T23-SB52-006018-01-091518	Soil Short	Soil	9/15/2018	10:25	1	Gallon bag	6020, 901.1	
	T23-SB52-018048-01-091518	Soil Short	Soil	9/15/2018	10:40	1	Gallon bag	6020, 901.1	
	T23-SS22-01-091518	Soil Short	Soil	9/15/2018	09:05	1	Gallon bag	6020, 901.1	Y
	T23-SS35-01-091518	Soil Short	Soil	9/15/2018	10:55	1	Gallon bag	6020, 901.1	
	T23-SS41-01-091518	Soil Short	Soil	9/15/2018	11:25	1	Gallon bag	6020, 901.1	
	T23-SS42-01-091518	Soil Short	Soil	9/15/2018	09:45	1	Gallon bag	6020, 901.1	
	T23-SS52-01-091518	Soil Short	Soil	9/15/2018	10:20	1	Gallon bag	6020, 901.1	

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: I

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0106**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M2-SB63A-162167-01-091618	Soil Short	Soil	9/16/2018	15:40	1	Gallon bag	6020, 901.1	
	M2-SB73-006018-01-091618	Soil Short	Soil	9/16/2018	10:40	1	Gallon bag	6020, 901.1	
	M2-SB73-018036-01-091618	Soil Short	Soil	9/16/2018	10:45	1	Gallon bag	6020, 901.1	
	M2-SB73-036054-01-091618	Soil Short	Soil	9/16/2018	10:50	1	Gallon bag	6020, 901.1	
	M2-SB73-054072-01-091618	Soil Short	Soil	9/16/2018	10:55	1	Gallon bag	6020, 901.1	
	M2-SB73-086090-01-091618	Soil Short	Soil	9/16/2018	11:00	1	Gallon bag	6020, 901.1	Y
	M2-SB73-090108-01-091618	Soil Short	Soil	9/16/2018	11:05	1	Gallon bag	6020, 901.1	
	M2-SB73-108126-01-091618	Soil Short	Soil	9/16/2018	11:10	1	Gallon bag	6020, 901.1	
	M2-SB73-126144-01-091618	Soil Short	Soil	9/16/2018	11:15	1	Gallon bag	6020, 901.1	
	M2-SB77-006018-01-091618	Soil Short	Soil	9/16/2018	16:10	1	Gallon bag	6020, 901.1	
	M2-SB77-018036-01-091618	Soil Short	Soil	9/16/2018	16:15	1	Gallon bag	6020, 901.1	
	M2-SB77-054072-01-091618	Soil Short	Soil	9/16/2018	16:20	1	Gallon bag	6020, 901.1	
	M2-SB77-090108-01-091618	Soil Short	Soil	9/16/2018	16:25	1	Gallon bag	6020, 901.1	
	M2-SB77-126144-01-091618	Soil Short	Soil	9/16/2018	16:30	1	Gallon bag	6020, 901.1	
	M2-SB77-126144-02-091618	Soil Short	Soil	9/16/2018	16:30	1	Gallon bag	6020, 901.1	
	M2-SB77-162180-01-091618	Soil Short	Soil	9/16/2018	16:35	1	Gallon bag	6020, 901.1	
	M2-SB81-018036-01-091618	Soil Short	Soil	9/16/2018	11:55	1	Gallon bag	6020, 901.1	
	M2-SB81-036054-01-091618	Soil Short	Soil	9/16/2018	12:00	1	Gallon bag	6020, 901.1	
	M2-SB81-072090-01-091618	Soil Short	Soil	9/16/2018	12:10	1	Gallon bag	6020, 901.1	
	M2-SB81-108126-01-091618	Soil Short	Soil	9/16/2018	12:15	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: J

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0107**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M1-SB28-0612-01-091618	Soil Short	Soil	9/16/2018	09:25	1	Gallon bag	6020, 901.1	
	M1-SB36-0612-01-091618	Soil Long	Soil	9/16/2018	10:05	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M1-SB36-1218-01-091618	Soil Long	Soil	9/16/2018	10:08	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M1-SB36-1824-01-091618	Soil Long	Soil	9/16/2018	10:11	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M1-SB36-2436-01-091618	Soil Long	Soil	9/16/2018	10:15	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M2-SS37-01-091618	Soil Short	Soil	9/16/2018	14:15	1	Gallon bag	6020, 901.1	
	M2-SS55-01-091618	Soil Short	Soil	9/16/2018	12:45	1	Gallon bag	6020, 901.1	Y
	M2-SS63A-01-091618	Soil Short	Soil	9/16/2018	15:10	1	Gallon bag	6020, 901.1	
	M2-SS73-01-091618	Soil Short	Soil	9/16/2018	10:25	1	Gallon bag	6020, 901.1	
	M2-SS77-01-091618	Soil Short	Soil	9/16/2018	16:05	1	Gallon bag	6020, 901.1	
	M2-SS81-01-091618	Soil Short	Soil	9/16/2018	11:45	1	Gallon bag	6020, 901.1	
	M2-SS81-02-091618	Soil Short	Soil	9/16/2018	11:45	1	Gallon bag	6020, 901.1	
	M3-SB11-0612-01-091618	Soil Short	Soil	9/16/2018	12:25	1	Gallon bag	6020, 901.1	
	M3-SB17-0612-01-091618	Soil Short	Soil	9/16/2018	12:35	1	Gallon bag	6020, 901.1	
	M3-SB28-0612-01-091618	Soil Short	Soil	9/16/2018	12:50	1	Gallon bag	6020, 901.1	
	M3-SB36-0610-01-091618	Soil Short	Soil	9/16/2018	13:10	1	Gallon bag	6020, 901.1	
	M3-SB41-0612-01-091618	Soil Short	Soil	9/16/2018	13:05	1	Gallon bag	6020, 901.1	
	M3-SB41-0612-02-091618	Soil Short	Soil	9/16/2018	13:05	1	Gallon bag	6020, 901.1	
	M3-SB42-0612-01-091618	Soil Short	Soil	9/16/2018	13:20	1	Gallon bag	6020, 901.1	
	M3-SB42-1218-01-091618	Soil Short	Soil	9/16/2018	13:25	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: K

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0108**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M1-SS28-01-091618	Soil Short	Soil	9/16/2018	09:20	1	Gallon bag	6020, 901.1	
	M1-SS36-01-091618	Soil Long	Soil	9/16/2018	10:02	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M1-SS8-01-091618	Soil Short	Soil	9/16/2018	09:52	1	Gallon bag	6020, 901.1	
	M1-SS8-02-091618	Soil Short	Soil	9/16/2018	09:52	1	Gallon bag	6020, 901.1	
	M3-SB51-0612-01-091618	Soil Long	Soil	9/16/2018	12:35	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M3-SB51-1218-01-091618	Soil Long	Soil	9/16/2018	12:40	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M3-SS11-01-091618	Soil Short	Soil	9/16/2018	12:20	1	Gallon bag	6020, 901.1	
	M3-SS17-01-091618	Soil Short	Soil	9/16/2018	12:30	1	Gallon bag	6020, 901.1	Y
	M3-SS28-01-091618	Soil Short	Soil	9/16/2018	12:45	1	Gallon bag	6020, 901.1	
	M3-SS36-01-091618	Soil Short	Soil	9/16/2018	13:05	1	Gallon bag	6020, 901.1	
	M3-SS41-01-091618	Soil Short	Soil	9/16/2018	13:00	1	Gallon bag	6020, 901.1	
	M3-SS42-01-091618	Soil Short	Soil	9/16/2018	13:15	1	Gallon bag	6020, 901.1	
	M3-SS51-01-091618	Soil Long	Soil	9/16/2018	12:30	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M6-SB204-0612-01-091618	Soil Short	Soil	9/16/2018	09:55	1	Gallon bag	6020, 901.1	
	M6-SB204-1218-01-091618	Soil Short	Soil	9/16/2018	10:00	1	Gallon bag	6020, 901.1	
	M6-SB240-0612-01-091618	Soil Short	Soil	9/16/2018	11:05	1	Gallon bag	6020, 901.1	
	M6-SB252-0612-01-091618	Soil Short	Soil	9/16/2018	10:35	1	Gallon bag	6020, 901.1	
	M6-SB252-1218-01-091618	Soil Short	Soil	9/16/2018	10:40	1	Gallon bag	6020, 901.1	
	M6-SB285-0612-01-091618	Soil Long	Soil	9/16/2018	10:10	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M6-SB285-1218-01-091618	Soil Long	Soil	9/16/2018	10:15	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: L

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0109**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M6-SB5-0612-01-091618	Soil Short	Soil	9/16/2018	09:25	1	Gallon bag	6020, 901.1	
	M6-SB62-0612-01-091618	Soil Short	Soil	9/16/2018	09:40	1	Gallon bag	6020, 901.1	
	M6-SS204-01-091618	Soil Short	Soil	9/16/2018	09:50	1	Gallon bag	6020, 901.1	Y
	M6-SS240-01-091618	Soil Short	Soil	9/16/2018	11:00	1	Gallon bag	6020, 901.1	
	M6-SS252-01-091618	Soil Short	Soil	9/16/2018	10:30	1	Gallon bag	6020, 901.1	
	M6-SS285-01-091618	Soil Long	Soil	9/16/2018	10:05	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M6-SS5-01-091618	Soil Short	Soil	9/16/2018	09:20	1	Gallon bag	6020, 901.1	
	M6-SS62-01-091618	Soil Short	Soil	9/16/2018	09:30	1	Gallon bag	6020, 901.1	
	M7-SB107-0612-01-091618	Soil Short	Soil	9/16/2018	15:00	1	Gallon bag	6020, 901.1	
	M7-SB156-0612-01-091618	Soil Short	Soil	9/16/2018	15:10	1	Gallon bag	6020, 901.1	
	M7-SB156-1218-01-091618	Soil Short	Soil	9/16/2018	15:15	1	Gallon bag	6020, 901.1	
	M7-SB161-0612-01-091618	Soil Long	Soil	9/16/2018	11:40	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M7-SB161-1218-01-091618	Soil Long	Soil	9/16/2018	11:45	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M7-SB168-0612-01-091618	Soil Short	Soil	9/16/2018	15:20	1	Gallon bag	6020, 901.1	
	M7-SB204-0612-01-091618	Soil Short	Soil	9/16/2018	12:55	1	Gallon bag	6020, 901.1	
	M7-SB204-1218-01-091618	Soil Short	Soil	9/16/2018	13:00	1	Gallon bag	6020, 901.1	
	M7-SB204-1824-01-091618	Soil Short	Soil	9/16/2018	13:05	1	Gallon bag	6020, 901.1	
	M7-SB204-2430-01-091618	Soil Short	Soil	9/16/2018	13:10	1	Gallon bag	6020, 901.1	
	M7-SB59-0612-01-091618	Soil Short	Soil	9/16/2018	15:10	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: M

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0110**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M7-SB161-1824-01-091618	Soil Long	Soil	9/16/2018	11:50	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M7-SB161-2430-01-091618	Soil Long	Soil	9/16/2018	11:55	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M7-SB64-0612-01-091618	Soil Short	Soil	9/16/2018	14:45	1	Gallon bag	6020, 901.1	
	M7-SS107-01-091618	Soil Short	Soil	9/16/2018	14:55	1	Gallon bag	6020, 901.1	Y
	M7-SS133-01-091618	Soil Short	Soil	9/16/2018	15:05	1	Gallon bag	6020, 901.1	
	M7-SS156-01-091618	Soil Short	Soil	9/16/2018	15:05	1	Gallon bag	6020, 901.1	
	M7-SS161-01-091618	Soil Long	Soil	9/16/2018	11:35	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M7-SS168-01-091618	Soil Short	Soil	9/16/2018	15:15	1	Gallon bag	6020, 901.1	
	M7-SS204-01-091618	Soil Short	Soil	9/16/2018	12:50	1	Gallon bag	6020, 901.1	
	M7-SS28-01-091618	Soil Short	Soil	9/16/2018	14:40	1	Gallon bag	6020, 901.1	
	M7-SS59-01-091618	Soil Short	Soil	9/16/2018	14:50	1	Gallon bag	6020, 901.1	
	M7-SS64-01-091618	Soil Short	Soil	9/16/2018	14:40	1	Gallon bag	6020, 901.1	
	M7-SS64-02-091618	Soil Short	Soil	9/16/2018	14:40	1	Gallon bag	6020, 901.1	
	T1-SB40-0612-01-091618	Soil Short	Soil	9/16/2018	11:46	1	Gallon bag	6020, 901.1	
	T1-SS14-01-091618	Soil Long	Soil	9/16/2018	11:20	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	T1-SS23-01-091618	Soil Short	Soil	9/16/2018	11:29	1	Gallon bag	6020, 901.1	
	T1-SS33-01-091618	Soil Short	Soil	9/16/2018	11:50	1	Gallon bag	6020, 901.1	
	T1-SS37-01-091618	Soil Short	Soil	9/16/2018	11:40	1	Gallon bag	6020, 901.1	
	T1-SS40-01-091618	Soil Short	Soil	9/16/2018	11:44	1	Gallon bag	6020, 901.1	

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3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0111**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M14-XS62-01-091818	XRF Conf Short	Soil	9/18/2018	13:05	2	Quart + Gallon bags	6020, 901.1	
	M14-XSG14A-01-091818	XRF Conf Short	Soil	9/18/2018	11:00	2	Quart + Gallon bags	6020, 901.1	
	M14-XSG27A-01-091818	XRF Conf Short	Soil	9/18/2018	12:02	2	Quart + Gallon bags	6020, 901.1	
	M14-XSG41-01-091818	XRF Conf Short	Soil	9/18/2018	09:12	2	Quart + Gallon bags	6020, 901.1	
	M14-XSG49-01-091818	XRF Conf Short	Soil	9/18/2018	13:35	2	Quart + Gallon bags	6020, 901.1	
	M14-XSG58-01-091818	XRF Conf Short	Soil	9/18/2018	08:20	2	Quart + Gallon bags	6020, 901.1	
	M14-XSG6-01-091818	XRF Conf Short	Soil	9/18/2018	10:40	2	Quart + Gallon bags	6020, 901.1	
	M20-XS146-01-091718	XRF Conf Long2	Soil	9/17/2018	10:50	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	Y
	M20-XS243-01-091718	XRF Conf Long2	Soil	9/17/2018	11:08	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M20-XS247-01-091718	XRF Conf Short	Soil	9/17/2018	13:27	2	Quart + Gallon bags	6020, 901.1	
	M20-XS267-01-091718	XRF Conf Long2	Soil	9/17/2018	11:17	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M20-XS271-01-091718	XRF Conf Short	Soil	9/17/2018	13:31	2	Quart + Gallon bags	6020, 901.1	
	M20-XS30-01-091718	XRF Conf Short	Soil	9/17/2018	10:20	2	Quart + Gallon bags	6020, 901.1	
	M20-XS58-01-091718	XRF Conf Short	Soil	9/17/2018	10:36	2	Quart + Gallon bags	6020, 901.1	
	M20-XS60-01-091718	XRF Conf Short	Soil	9/17/2018	12:03	2	Quart + Gallon bags	6020, 901.1	
	M6-XS353A-01-091618	XRF Conf Short	Soil	9/16/2018	10:58	2	Quart + Gallon bags	6020, 901.1	
	M6-XS369-01-091618	XRF Conf Short	Soil	9/16/2018	10:05	2	Quart + Gallon bags	6020, 901.1	
	M6-XSG13A-01-091618	XRF Conf Long2	Soil	9/16/2018	11:54	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M6-XSG22-01-091618	XRF Conf Short	Soil	9/16/2018	09:30	2	Quart + Gallon bags	6020, 901.1	
	M7-XSG34-01-091618	XRF Conf Short	Soil	9/16/2018	10:23	2	Quart + Gallon bags	6020, 901.1	

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**Tetra Tech**

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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0112**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M2-SB12-018036-01-091718	Soil Short	Soil	9/17/2018	13:35	1	Gallon bag	6020, 901.1	
	M2-SB12-054072-01-091718	Soil Short	Soil	9/17/2018	13:45	1	Gallon bag	6020, 901.1	
	M2-SB12-090108-01-091718	Soil Short	Soil	9/17/2018	13:50	1	Gallon bag	6020, 901.1	
	M2-SB12-090108-02-091718	Soil Short	Soil	9/17/2018	13:50	1	Gallon bag	6020, 901.1	
	M2-SB12-126144-01-091718	Soil Short	Soil	9/17/2018	14:00	1	Gallon bag	6020, 901.1	
	M2-SB23-018036-01-091718	Soil Short	Soil	9/17/2018	12:35	1	Gallon bag	6020, 901.1	
	M2-SB23-054072-01-091718	Soil Short	Soil	9/17/2018	12:45	1	Gallon bag	6020, 901.1	Y
	M2-SB23-090108-01-091718	Soil Short	Soil	9/17/2018	12:50	1	Gallon bag	6020, 901.1	
	M2-SB23-126144-01-091718	Soil Short	Soil	9/17/2018	12:55	1	Gallon bag	6020, 901.1	
	M2-SB23-162180-01-091718	Soil Short	Soil	9/17/2018	13:00	1	Gallon bag	6020, 901.1	
	M2-SB40-006018-01-091718	Soil Short	Soil	9/17/2018	11:20	1	Gallon bag	6020, 901.1	
	M2-SB40-036054-01-091718	Soil Short	Soil	9/17/2018	11:25	1	Gallon bag	6020, 901.1	
	M2-SB40-072090-01-091718	Soil Short	Soil	9/17/2018	11:35	1	Gallon bag	6020, 901.1	
	M2-SB40-108126-01-091718	Soil Short	Soil	9/17/2018	11:40	1	Gallon bag	6020, 901.1	
	M2-SB50-018036-01-091718	Soil Short	Soil	9/17/2018	10:30	1	Gallon bag	6020, 901.1	
	M2-SB50-054072-01-091718	Soil Short	Soil	9/17/2018	10:35	1	Gallon bag	6020, 901.1	
	M2-SB50-090108-01-091718	Soil Short	Soil	9/17/2018	10:45	1	Gallon bag	6020, 901.1	
	M2-SB50-126144-01-091718	Soil Short	Soil	9/17/2018	10:50	1	Gallon bag	6020, 901.1	
	M2-SB5-018036-01-091718	Soil Short	Soil	9/17/2018	14:40	1	Gallon bag	6020, 901.1	
	M2-SB5-054072-01-091718	Soil Short	Soil	9/17/2018	14:45	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: P

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0113**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M23-SS43-01-091718	Soil Short	Soil	9/17/2018	15:25	1	Gallon bag	6020, 901.1	
	M2-SB5-090108-01-091718	Soil Short	Soil	9/17/2018	14:50	1	Gallon bag	6020, 901.1	
	M2-SB51-018036-01-091718	Soil Short	Soil	9/17/2018	09:30	1	Gallon bag	6020, 901.1	
	M2-SB51-054072-01-091718	Soil Short	Soil	9/17/2018	09:35	1	Gallon bag	6020, 901.1	
	M2-SB51-054072-02-091718	Soil Short	Soil	9/17/2018	09:35	1	Gallon bag	6020, 901.1	
	M2-SB51-090108-01-091718	Soil Long	Soil	9/17/2018	09:45	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M2-SB51-126144-01-091718	Soil Short	Soil	9/17/2018	09:55	1	Gallon bag	6020, 901.1	
	M2-SB5-126144-01-091718	Soil Short	Soil	9/17/2018	14:55	1	Gallon bag	6020, 901.1	
	M2-SB59-006018-01-091718	Soil Short	Soil	9/17/2018	08:35	1	Gallon bag	6020, 901.1	
	M2-SB59-036054-01-091718	Soil Short	Soil	9/17/2018	08:40	1	Gallon bag	6020, 901.1	
	M2-SB59-072090-01-091718	Soil Short	Soil	9/17/2018	08:45	1	Gallon bag	6020, 901.1	
	M2-SB59-108126-01-091718	Soil Short	Soil	9/17/2018	08:50	1	Gallon bag	6020, 901.1	
	M2-SB59-144162-01-091718	Soil Short	Soil	9/17/2018	08:55	1	Gallon bag	6020, 901.1	
	M2-SS12-01-091718	Soil Short	Soil	9/17/2018	13:30	1	Gallon bag	6020, 901.1	
	M2-SS23-01-091718	Soil Short	Soil	9/17/2018	12:30	1	Gallon bag	6020, 901.1	
	M2-SS40-01-091718	Soil Short	Soil	9/17/2018	11:15	1	Gallon bag	6020, 901.1	
	M2-SS50-01-091718	Soil Short	Soil	9/17/2018	10:20	1	Gallon bag	6020, 901.1	Y
	M2-SS5-01-091718	Soil Short	Soil	9/17/2018	14:30	1	Gallon bag	6020, 901.1	
	M2-SS51-01-091718	Soil Short	Soil	9/17/2018	09:25	1	Gallon bag	6020, 901.1	
	M2-SS59-01-091718	Soil Short	Soil	9/17/2018	08:30	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: QQ

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0114**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M21-SB121-0612-01-091718	Soil Short	Soil	9/17/2018	11:25	1	Gallon bag	6020, 901.1	
	M21-SB222-0612-01-091718	Soil Short	Soil	9/17/2018	11:40	1	Gallon bag	6020, 901.1	
	M21-SB280-0612-01-091718	Soil Short	Soil	9/17/2018	10:20	1	Gallon bag	6020, 901.1	
	M21-SB405-0612-01-091718	Soil Short	Soil	9/17/2018	12:45	1	Gallon bag	6020, 901.1	
	M21-SB497-0612-01-091718	Soil Short	Soil	9/17/2018	13:05	1	Gallon bag	6020, 901.1	
	M21-SS121-01-091718	Soil Short	Soil	9/17/2018	11:20	1	Gallon bag	6020, 901.1	Y
	M21-SS121-02-091718	Soil Short	Soil	9/17/2018	11:20	1	Gallon bag	6020, 901.1	
	M21-SS222-01-091718	Soil Short	Soil	9/17/2018	11:35	1	Gallon bag	6020, 901.1	
	M21-SS280-01-091718	Soil Short	Soil	9/17/2018	10:15	1	Gallon bag	6020, 901.1	
	M21-SS405-01-091718	Soil Short	Soil	9/17/2018	12:35	1	Gallon bag	6020, 901.1	
	M21-SS46-01-091718	Soil Long	Soil	9/17/2018	10:50	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M21-SS497-01-091718	Soil Short	Soil	9/17/2018	13:00	1	Gallon bag	6020, 901.1	
	M23-SB108-0612-01-091718	Soil Short	Soil	9/17/2018	15:28	1	Gallon bag	6020, 901.1	
	M23-SS108-01-091718	Soil Short	Soil	9/17/2018	15:15	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: R

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0115**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M14-SB17-0612-01-091818	Soil Short	Soil	9/18/2018	08:50	1	Gallon bag	6020, 901.1	
	M14-SB17-1218-01-091818	Soil Short	Soil	9/18/2018	08:55	1	Gallon bag	6020, 901.1	
	M14-SB37-0612-01-091818	Soil Long	Soil	9/18/2018	09:20	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M14-SB37-1218-01-091818	Soil Long	Soil	9/18/2018	09:25	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M14-SB69-0612-01-091818	Soil Short	Soil	9/18/2018	10:05	1	Gallon bag	6020, 901.1	
	M14-SB87-0612-01-091818	Soil Short	Soil	9/18/2018	10:20	1	Gallon bag	6020, 901.1	
	M14-SS17-01-091818	Soil Short	Soil	9/18/2018	08:45	1	Gallon bag	6020, 901.1	
	M14-SS37-01-091818	Soil Long	Soil	9/18/2018	09:15	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M14-SS69-01-091818	Soil Short	Soil	9/18/2018	10:00	1	Gallon bag	6020, 901.1	
	M14-SS87-01-091818	Soil Short	Soil	9/18/2018	10:15	1	Gallon bag	6020, 901.1	
	M19-SB34-0612-01-091818	Soil Short	Soil	9/18/2018	13:20	1	Gallon bag	6020, 901.1	
	M19-SB34-1218-01-091818	Soil Short	Soil	9/18/2018	13:25	1	Gallon bag	6020, 901.1	
	M19-SB36-0612-01-091818	Soil Long	Soil	9/18/2018	13:05	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M19-SB36-1218-01-091818	Soil Long	Soil	9/18/2018	13:10	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M19-SB40-0610-01-091818	Soil Short	Soil	9/18/2018	13:45	1	Gallon bag	6020, 901.1	
	M19-SB49-0612-01-091818	Soil Short	Soil	9/18/2018	12:55	1	Gallon bag	6020, 901.1	
	M19-SS34-01-091818	Soil Short	Soil	9/18/2018	13:15	1	Gallon bag	6020, 901.1	
	M19-SS36-01-091818	Soil Long	Soil	9/18/2018	13:00	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M19-SS40-01-091818	Soil Short	Soil	9/18/2018	13:40	1	Gallon bag	6020, 901.1	
	M19-SS49-01-091818	Soil Short	Soil	9/18/2018	12:50	1	Gallon bag	6020, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: S

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0116**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M20-SB112-0612-01-091718	Soil Short	Soil	9/17/2018	14:50	1	Gallon bag	6020, 901.1	
	M20-SB147-0612-01-091718	Soil Short	Soil	9/17/2018	11:35	1	Gallon bag	6020, 901.1	
	M20-SB147-1230-01-091718	Soil Short	Soil	9/17/2018	11:40	1	Gallon bag	6020, 901.1	
	M20-SB157-0612-01-091718	Soil Short	Soil	9/17/2018	15:05	1	Gallon bag	6020, 901.1	
	M20-SB244-0612-01-091718	Soil Short	Soil	9/17/2018	12:05	1	Gallon bag	6020, 901.1	
	M20-SB244-1218-01-091718	Soil Short	Soil	9/17/2018	12:10	1	Gallon bag	6020, 901.1	
	M20-SB377-0612-01-091718	Soil Short	Soil	9/17/2018	15:15	1	Gallon bag	6020, 901.1	
	M20-SB377-1218-01-091718	Soil Short	Soil	9/17/2018	15:20	1	Gallon bag	6020, 901.1	
	M20-SB394-0612-01-091718	Soil Short	Soil	9/17/2018	15:30	1	Gallon bag	6020, 901.1	
	M20-SB394-1218-01-091718	Soil Short	Soil	9/17/2018	15:35	1	Gallon bag	6020, 901.1	
	M20-SB59-0612-01-091718	Soil Long	Soil	9/17/2018	11:05	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M20-SB59-1218-01-091718	Soil Long	Soil	9/17/2018	11:10	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M20-SS112-01-091718	Soil Short	Soil	9/17/2018	14:45	1	Gallon bag	6020, 901.1	
	M20-SS125-01-091718	Soil Short	Soil	9/17/2018	15:15	1	Gallon bag	6020, 901.1	
	M20-SS147-01-091718	Soil Short	Soil	9/17/2018	11:30	1	Gallon bag	6020, 901.1	
	M20-SS157-01-091718	Soil Short	Soil	9/17/2018	15:00	1	Gallon bag	6020, 901.1	Y
	M20-SS244-01-091718	Soil Short	Soil	9/17/2018	12:00	1	Gallon bag	6020, 901.1	
	M20-SS377-01-091718	Soil Short	Soil	9/17/2018	15:10	1	Gallon bag	6020, 901.1	
	M20-SS394-01-091718	Soil Short	Soil	9/17/2018	15:25	1	Gallon bag	6020, 901.1	
	M20-SS59-01-091718	Soil Long	Soil	9/17/2018	11:00	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: TT

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0117**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M20-SB300-0610-01-091718	Soil Short	Soil	9/17/2018	15:05	1	Gallon bag	6020, 901.1	
	M20-SS300-01-091718	Soil Short	Soil	9/17/2018	15:00	1	Gallon bag	6020, 901.1	
	M22-SB104-0612-01-091618	Soil Long	Soil	9/16/2018	10:35	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M22-SB55-0612-01-091718	Soil Short	Soil	9/17/2018	13:50	1	Gallon bag	6020, 901.1	
	M22-SB59-0612-01-091718	Soil Short	Soil	9/17/2018	13:55	1	Gallon bag	6020, 901.1	
	M22-SB60-0612-01-091718	Soil Short	Soil	9/17/2018	14:00	1	Gallon bag	6020, 901.1	
	M22-SB60-1224-01-091718	Soil Short	Soil	9/17/2018	14:05	1	Gallon bag	6020, 901.1	
	M22-SS104-01-091618	Soil Long	Soil	9/16/2018	10:30	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M22-SS55-01-091718	Soil Short	Soil	9/17/2018	13:45	1	Gallon bag	6020, 901.1	
	M22-SS59-01-091718	Soil Short	Soil	9/17/2018	13:50	1	Gallon bag	6020, 901.1	
	M22-SS60-01-091718	Soil Short	Soil	9/17/2018	13:55	1	Gallon bag	6020, 901.1	
	M33-SB19-0612-01-091818	Soil Short	Soil	9/18/2018	11:00	1	Gallon bag	6020, 901.1	
	M33-SB26-0612-01-091818	Soil Short	Soil	9/18/2018	09:35	1	Gallon bag	6020, 901.1	
	M33-SB97-0612-01-091818	Soil Short	Soil	9/18/2018	10:20	1	Gallon bag	6020, 901.1	
	M33-SS19-01-091818	Soil Short	Soil	9/18/2018	10:55	1	Gallon bag	6020, 901.1	Y
	M33-SS26-01-091818	Soil Short	Soil	9/18/2018	09:30	1	Gallon bag	6020, 901.1	
	M33-SS74-01-091818	Soil Short	Soil	9/18/2018	09:41	1	Gallon bag	6020, 901.1	
	M33-SS86-01-091818	Soil Long	Soil	9/18/2018	09:45	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M33-SS97-01-091818	Soil Short	Soil	9/18/2018	10:16	1	Gallon bag	6020, 901.1	
	M33-SS98-01-091818	Soil Short	Soil	9/18/2018	10:05	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: U

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0118**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M4-SB122-0612-01-091818	Soil Short	Soil	9/18/2018	09:00	1	Gallon bag	6020, 901.1	
	M4-SB164-0612-01-091818	Soil Short	Soil	9/18/2018	09:10	1	Gallon bag	6020, 901.1	
	M4-SB176-0612-01-091818	Soil Short	Soil	9/18/2018	09:25	1	Gallon bag	6020, 901.1	
	M4-SB237-0612-01-091818	Soil Short	Soil	9/18/2018	09:50	1	Gallon bag	6020, 901.1	
	M4-SB237-1218-01-091818	Soil Short	Soil	9/18/2018	09:55	1	Gallon bag	6020, 901.1	
	M4-SB36-0612-01-091818	Soil Short	Soil	9/18/2018	08:25	1	Gallon bag	6020, 901.1	
	M4-SB81-0612-01-091818	Soil Long	Soil	9/18/2018	08:45	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M4-SB81-1218-01-091818	Soil Long	Soil	9/18/2018	08:50	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M4-SS122-01-091818	Soil Short	Soil	9/18/2018	08:56	1	Gallon bag	6020, 901.1	
	M4-SS164-01-091818	Soil Short	Soil	9/18/2018	09:05	1	Gallon bag	6020, 901.1	
	M4-SS176-01-091818	Soil Short	Soil	9/18/2018	09:20	1	Gallon bag	6020, 901.1	
	M4-SS201-01-091818	Soil Short	Soil	9/18/2018	09:30	1	Gallon bag	6020, 901.1	
	M4-SS237-01-091818	Soil Short	Soil	9/18/2018	09:45	1	Gallon bag	6020, 901.1	Y
	M4-SS36-01-091818	Soil Short	Soil	9/18/2018	08:20	1	Gallon bag	6020, 901.1	
	M4-SS36-02-091818	Soil Short	Soil	9/18/2018	08:20	1	Gallon bag	6020, 901.1	
	M4-SS81-01-091818	Soil Long	Soil	9/18/2018	08:40	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M5-SB156-0612-01-091818	Soil Short	Soil	9/18/2018	14:40	1	Gallon bag	6020, 901.1	
	M5-SB156-1218-01-091818	Soil Short	Soil	9/18/2018	14:45	1	Gallon bag	6020, 901.1	
	M5-SB91-0612-01-091818	Soil Short	Soil	9/18/2018	14:25	1	Gallon bag	6020, 901.1	
	M5-SS91-01-091818	Soil Short	Soil	9/18/2018	14:20	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: UU

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0119**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M5-SB17-0612-01-091818	Soil Short	Soil	9/18/2018	13:35	1	Gallon bag	6020, 901.1	
	M5-SB17-1218-01-091818	Soil Short	Soil	9/18/2018	13:40	1	Gallon bag	6020, 901.1	
	M5-SS17-01-091818	Soil Short	Soil	9/18/2018	13:30	1	Gallon bag	6020, 901.1	
	M5-SS17-02-091818	Soil Short	Soil	9/18/2018	13:30	1	Gallon bag	6020, 901.1	
	M8-SB16-0612-01-091818	Soil Short	Soil	9/18/2018	10:55	1	Gallon bag	6020, 901.1	
	M8-SB16-1218-01-091818	Soil Short	Soil	9/18/2018	11:00	1	Gallon bag	6020, 901.1	
	M8-SB47-0612-01-091818	Soil Short	Soil	9/18/2018	11:15	1	Gallon bag	6020, 901.1	
	M8-SB47-1218-01-091818	Soil Short	Soil	9/18/2018	11:20	1	Gallon bag	6020, 901.1	
	M8-SB69-0612-01-091818	Soil Short	Soil	9/18/2018	12:25	1	Gallon bag	6020, 901.1	
	M8-SB69-1218-01-091818	Soil Short	Soil	9/18/2018	12:30	1	Gallon bag	6020, 901.1	
	M8-SB94-0612-01-091818	Soil Short	Soil	9/18/2018	12:05	1	Gallon bag	6020, 901.1	
	M8-SB94-1218-01-091818	Soil Short	Soil	9/18/2018	12:10	1	Gallon bag	6020, 901.1	
	M8-SS111-01-091818	Soil Short	Soil	9/18/2018	12:35	1	Gallon bag	6020, 901.1	Y
	M8-SS16-01-091818	Soil Short	Soil	9/18/2018	10:50	1	Gallon bag	6020, 901.1	
	M8-SS47-01-091818	Soil Short	Soil	9/18/2018	11:10	1	Gallon bag	6020, 901.1	
	M8-SS47-02-091818	Soil Short	Soil	9/18/2018	11:10	1	Gallon bag	6020, 901.1	
	M8-SS52-01-091818	Soil Long	Soil	9/18/2018	11:30	2	Gallon bag	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M8-SS69-01-091818	Soil Short	Soil	9/18/2018	12:20	1	Gallon bag	6020, 901.1	
	M8-SS94-01-091818	Soil Short	Soil	9/18/2018	12:00	1	Gallon bag	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: A

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0121**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M24-XS112-01-092518	XRF Conf Short	Soil	9/25/2018	11:04	2	Quart + Gallon bags	6020, 901.1	
	M24-XS114-01-092518	XRF Conf Short	Soil	9/25/2018	11:24	2	Quart + Gallon bags	6020, 901.1	
	M24-XSG15-01-092518	XRF Conf Short	Soil	9/25/2018	13:52	2	Quart + Gallon bags	6020, 901.1	
	M24-XSG3-01-092518	XRF Conf Short	Soil	9/25/2018	13:13	2	Quart + Gallon bags	6020, 901.1	
	M24-XSG32-01-092518	XRF Conf Short	Soil	9/25/2018	11:49	2	Quart + Gallon bags	6020, 901.1	
	M28-XS29-01-092618	XRF Conf Long2	Soil	9/26/2018	12:09	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M28-XSG49-01-092618	XRF Conf Short	Soil	9/26/2018	15:44	2	Quart + Gallon bags	6020, 901.1	
	M28-XSG7-01-092618	XRF Conf Long2	Soil	9/26/2018	11:38	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M29-XS19-01-092518	XRF Conf Short	Soil	9/25/2018	14:40	2	Quart + Gallon bags	6020, 901.1	
	M29-XS42-01-092518	XRF Conf Short	Soil	9/25/2018	13:45	2	Quart + Gallon bags	6020, 901.1	
	M29-XS59-01-092518	XRF Conf Short	Soil	9/25/2018	11:45	2	Quart + Gallon bags	6020, 901.1	
	M29-XS64-01-092518	XRF Conf Short	Soil	9/25/2018	12:55	2	Quart + Gallon bags	6020, 901.1	
	M29-XSG1-01-092518	XRF Conf Short	Soil	9/25/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	M29-XSG25-01-092518	XRF Conf Short	Soil	9/25/2018	10:35	2	Quart + Gallon bags	6020, 901.1	
	M29-XSG35-01-092518	XRF Conf Short	Soil	9/25/2018	12:05	2	Quart + Gallon bags	6020, 901.1	
	T30-XS20-01-092518	XRF Conf Short	Soil	9/25/2018	11:50	2	Quart + Gallon bags	6020, 901.1	Y
	T30-XS28-01-092518	XRF Conf Short	Soil	9/25/2018	11:25	2	Quart + Gallon bags	6020, 901.1	
	T30-XS8-01-092518	XRF Conf Short	Soil	9/25/2018	12:30	2	Quart + Gallon bags	6020, 901.1	
	T31-XSG7-01-092518	XRF Conf Short	Soil	9/25/2018	10:00	2	Quart + Gallon bags	6020, 901.1	
	T31-XSG9-01-092518	XRF Conf Short	Soil	9/25/2018	09:25	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: C1, C2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0123**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T17-SB137-006018-01-092518	Soil Short	Soil	9/25/2018	14:10	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB137-048096-01-092518	Soil Short	Soil	9/25/2018	14:15	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB139-006018-01-092518	Soil Short	Soil	9/25/2018	13:20	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB139-018084-01-092518	Soil Short	Soil	9/25/2018	13:30	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB143-0612-01-092518	Soil Short	Soil	9/25/2018	14:35	2	(1) Quart + (1) Gallon bags	6020, 901.1	Y
	T17-SB196-006018-01-092518	Soil Short	Soil	9/25/2018	12:30	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB196-048084-01-092518	Soil Short	Soil	9/25/2018	12:35	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB198-006018-01-092518	Soil Short	Soil	9/25/2018	10:35	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB198-018060-01-092518	Soil Short	Soil	9/25/2018	10:45	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB258-006018-01-092518	Soil Short	Soil	9/25/2018	12:00	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB258-018090-01-092518	Soil Long	Soil	9/25/2018	12:10	3	(2) Quart + (1) Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	T17-SB261-006018-01-092518	Soil Short	Soil	9/25/2018	11:35	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB261-006018-02-092518	Soil Short	Soil	9/25/2018	11:35	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB261-048084-01-092518	Soil Short	Soil	9/25/2018	11:45	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB89-006018-01-092518	Soil Short	Soil	9/25/2018	15:05	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SB89-060096-01-092518	Soil Short	Soil	9/25/2018	15:20	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SS137-01-092518	Soil Short	Soil	9/25/2018	14:05	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SS139-01-092518	Soil Short	Soil	9/25/2018	13:15	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SS143-01-092518	Soil Short	Soil	9/25/2018	14:30	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SS196-01-092518	Soil Short	Soil	9/25/2018	12:25	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SS198-01-092518	Soil Short	Soil	9/25/2018	10:25	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SS258-01-092518	Soil Short	Soil	9/25/2018	11:55	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SS261-01-092518	Soil Short	Soil	9/25/2018	11:25	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	T17-SS89-01-092518	Soil Short	Soil	9/25/2018	15:00	2	(1) Quart + (1) Gallon bags	6020, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt





**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: D1, D2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0124**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M24-SB127-0612-01-092518	Soil Short	Soil	9/25/2018	13:05	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SB22-0612-01-092518	Soil Short	Soil	9/25/2018	10:55	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SB40-0612-01-092518	Soil Short	Soil	9/25/2018	12:20	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SB40-1218-01-092518	Soil Short	Soil	9/25/2018	12:25	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SB76-0612-01-092518	Soil Long	Soil	9/25/2018	11:10	3	(2) Quart + (1) Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M24-SB76-1218-01-092518	Soil Long	Soil	9/25/2018	11:20	3	(2) Quart + (1) Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M24-SB88-0612-01-092518	Soil Short	Soil	9/25/2018	12:45	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SB88-1218-01-092518	Soil Short	Soil	9/25/2018	12:50	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SS127-01-092518	Soil Short	Soil	9/25/2018	13:00	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SS22-01-092518	Soil Short	Soil	9/25/2018	10:50	2	(1) Quart + (1) Gallon bags	6020, 901.1	Y
	M24-SS35-01-092518	Soil Short	Soil	9/25/2018	10:15	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SS40-01-092518	Soil Short	Soil	9/25/2018	12:05	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SS40-02-092518	Soil Short	Soil	9/25/2018	12:05	2	(1) Quart + (1) Gallon bags	6020, 901.1	
	M24-SS76-01-092518	Soil Long	Soil	9/25/2018	11:05	3	(2) Quart + (1) Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M24-SS88-01-092518	Soil Short	Soil	9/25/2018	12:40	2	(1) Quart + (1) Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: E

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0125**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M27-SB212-0612-01-092618	Soil Short	Soil	9/26/2018	16:10	2	Quart + Gallon bags	6020, 901.1	
	M27-SB216-0612-01-092618	Soil Short	Soil	9/26/2018	15:55	2	Quart + Gallon bags	6020, 901.1	
	M27-SB51-0612-01-092618	Soil Long	Soil	9/26/2018	14:20	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M27-SS212-01-092618	Soil Short	Soil	9/26/2018	16:00	2	Quart + Gallon bags	6020, 901.1	
	M27-SS216-01-092618	Soil Short	Soil	9/26/2018	15:50	2	Quart + Gallon bags	6020, 901.1	
	M27-SS43-01-092618	Soil Short	Soil	9/26/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	M27-SS51-01-092618	Soil Long	Soil	9/26/2018	14:15	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M29-SB19-0612-01-092518	Soil Short	Soil	9/25/2018	15:30	2	Quart + Gallon bags	6020, 901.1	
	M29-SB45-0612-01-092518	Soil Short	Soil	9/25/2018	14:35	2	Quart + Gallon bags	6020, 901.1	
	M29-SB45-1218-01-092518	Soil Short	Soil	9/25/2018	14:40	2	Quart + Gallon bags	6020, 901.1	
	M29-SS13-01-092518	Soil Short	Soil	9/25/2018	14:10	2	Quart + Gallon bags	6020, 901.1	
	M29-SS19-01-092518	Soil Short	Soil	9/25/2018	15:25	2	Quart + Gallon bags	6020, 901.1	Y
	M29-SS19-02-092518	Soil Short	Soil	9/25/2018	15:25	2	Quart + Gallon bags	6020, 901.1	
	M29-SS45-01-092518	Soil Short	Soil	9/25/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	M29-SS48-01-092518	Soil Long	Soil	9/25/2018	15:00	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M29-SS5-01-092518	Soil Short	Soil	9/25/2018	14:20	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: F

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0126**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M26-SB28-0612-01-092618	Soil Long	Soil	9/26/2018	14:50	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M26-SB43-0612-01-092618	Soil Short	Soil	9/26/2018	15:05	2	Quart + Gallon bags	6020, 901.1	
	M26-SB62-0612-01-092618	Soil Short	Soil	9/26/2018	15:20	2	Quart + Gallon bags	6020, 901.1	
	M26-SS28-01-092618	Soil Long	Soil	9/26/2018	14:45	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M26-SS43-01-092618	Soil Short	Soil	9/26/2018	15:00	2	Quart + Gallon bags	6020, 901.1	
	M26-SS62-01-092618	Soil Short	Soil	9/26/2018	15:15	2	Quart + Gallon bags	6020, 901.1	
	M28-SB104-0612-01-092618	Soil Short	Soil	9/26/2018	10:55	2	Quart + Gallon bags	6020, 901.1	
	M28-SB133-0612-01-092618	Soil Short	Soil	9/26/2018	11:05	2	Quart + Gallon bags	6020, 901.1	
	M28-SB30-0612-01-092618	Soil Long	Soil	9/26/2018	12:40	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M28-SB32-0612-01-092618	Soil Short	Soil	9/26/2018	12:10	2	Quart + Gallon bags	6020, 901.1	
	M28-SB8-0612-01-092618	Soil Short	Soil	9/26/2018	10:40	2	Quart + Gallon bags	6020, 901.1	
	M28-SD1-01-092618	Surf Sed Long	Sed	9/26/2018	14:10	2	Gallon bags	6020, 7471, 901.1, Eichrom, D3972 (U,Th)	
	M28-SD2-01-092618	Surf Sed Short	Sed	9/26/2018	13:35	2	Gallon bags	6020, 7471, 901.1	
	M28-SS104-01-092618	Soil Short	Soil	9/26/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	M28-SS133-01-092618	Soil Short	Soil	9/26/2018	11:00	2	Quart + Gallon bags	6020, 901.1	Y
	M28-SS30-01-092618	Soil Long	Soil	9/26/2018	12:35	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M28-SS32-01-092618	Soil Short	Soil	9/26/2018	12:05	2	Quart + Gallon bags	6020, 901.1	
	M28-SS8-01-092618	Soil Short	Soil	9/26/2018	10:30	2	Quart + Gallon bags	6020, 901.1	
	M28-SS8-02-092618	Soil Short	Soil	9/26/2018	10:30	2	Quart + Gallon bags	6020, 901.1	
	M28-SSG7-01-092618	Soil Long	Soil	9/26/2018	12:15	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: G1, G2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0127**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T17-SB11-0612-01-092618	Soil Short	Soil	9/26/2018	11:10	2	Quart + Gallon bags	6020, 901.1	
	T17-SB11-1218-01-092618	Soil Short	Soil	9/26/2018	11:15	2	Quart + Gallon bags	6020, 901.1	
	T17-SB11-1824-01-092618	Soil Short	Soil	9/26/2018	11:20	2	Quart + Gallon bags	6020, 901.1	
	T17-SB141-006018-01-092618	Soil Short	Soil	9/26/2018	12:05	2	Quart + Gallon bags	6020, 901.1	
	T17-SB141-006018-02-092618	Soil Short	Soil	9/26/2018	12:05	2	Quart + Gallon bags	6020, 901.1	
	T17-SB141-018048-01-092618	Soil Short	Soil	9/26/2018	12:10	2	Quart + Gallon bags	6020, 901.1	
	T17-SB141A-006018-01-092618	Soil Short	Soil	9/26/2018	12:20	2	Quart + Gallon bags	6020, 901.1	Y
	T17-SB163-006018-01-092618	Soil Short	Soil	9/26/2018	10:30	2	Quart + Gallon bags	6020, 901.1	
	T17-SB199-006018-01-092618	Soil Short	Soil	9/26/2018	13:05	2	Quart + Gallon bags	6020, 901.1	
	T17-SB199-018048-01-092618	Soil Short	Soil	9/26/2018	13:10	2	Quart + Gallon bags	6020, 901.1	
	T17-SB67-006018-01-092618	Soil Short	Soil	9/26/2018	10:00	2	Quart + Gallon bags	6020, 901.1	
	T17-SB67-018072-01-092618	Soil Short	Soil	9/26/2018	10:05	2	Quart + Gallon bags	6020, 901.1	
	T17-SB71-006018-01-092618	Soil Short	Soil	9/26/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	T17-SB71-048084-01-092618	Soil Short	Soil	9/26/2018	11:50	2	Quart + Gallon bags	6020, 901.1	
	T17-SB91-006018-01-092618	Soil Short	Soil	9/26/2018	11:05	2	Quart + Gallon bags	6020, 901.1	
	T17-SB91-018060-01-092618	Soil Short	Soil	9/26/2018	11:10	2	Quart + Gallon bags	6020, 901.1	
	T17-SS11-01-092618	Soil Short	Soil	9/26/2018	11:05	2	Quart + Gallon bags	6020, 901.1	
	T17-SS141-01-092618	Soil Short	Soil	9/26/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	T17-SS141A-01-092618	Soil Short	Soil	9/26/2018	12:15	2	Quart + Gallon bags	6020, 901.1	
	T17-SS163-01-092618	Soil Short	Soil	9/26/2018	10:25	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: G1, G2

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0127**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	T17-SS199-01-092618	Soil Short	Soil	9/26/2018	13:00	2	Quart + Gallon bags	6020, 901.1	
	T17-SS67-01-092618	Soil Short	Soil	9/26/2018	09:55	2	Quart + Gallon bags	6020, 901.1	
	T17-SS71-01-092618	Soil Short	Soil	9/26/2018	11:35	2	Quart + Gallon bags	6020, 901.1	
	T17-SS91-01-092618	Soil Short	Soil	9/26/2018	11:00	2	Quart + Gallon bags	6020, 901.1	Y

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: H

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0128**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Num b Cont	Container	Analytical_Method	Lab QC
	M37-SB124-0612-01-092718	Soil Short	Soil	9/27/2018	15:20	2	Quart + Gallon bags	6020, 901.1	
	M37-SB36-0612-01-092718	Soil Short	Soil	9/27/2018	16:05	2	Quart + Gallon bags	6020, 901.1	
	M37-SB9-0612-01-092718	Soil Short	Soil	9/27/2018	15:35	2	Quart + Gallon bags	6020, 901.1	
	M37-SS11-01-092718	Soil Short	Soil	9/27/2018	15:45	2	Quart + Gallon bags	6020, 901.1	
	M37-SS124-01-092718	Soil Short	Soil	9/27/2018	15:15	2	Quart + Gallon bags	6020, 901.1	
	M37-SS136-01-092718	Soil Short	Soil	9/27/2018	15:10	2	Quart + Gallon bags	6020, 901.1	
	M37-SS36-01-092718	Soil Short	Soil	9/27/2018	16:00	2	Quart + Gallon bags	6020, 901.1	
	M37-SS44-01-092718	Soil Long	Soil	9/27/2018	15:25	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M37-SS9-01-092718	Soil Short	Soil	9/27/2018	15:30	2	Quart + Gallon bags	6020, 901.1	
	M8-SB100-006018-01-092618	Soil Short	Soil	9/26/2018	14:30	2	Quart + Gallon bags	6020, 901.1	
	M8-SB100-018096-01-092618	Soil Short	Soil	9/26/2018	14:35	2	Quart + Gallon bags	6020, 901.1	
	M8-SB100-096120-01-092618	Soil Short	Soil	9/26/2018	14:40	2	Quart + Gallon bags	6020, 901.1	
	M8-SB103-006018-01-092618	Soil Short	Soil	9/26/2018	15:50	2	Quart + Gallon bags	6020, 901.1	
	M8-SB103-018096-01-092618	Soil Short	Soil	9/26/2018	15:55	2	Quart + Gallon bags	6020, 901.1	
	M8-SB116-006036-01-092618	Soil Short	Soil	9/26/2018	15:05	2	Quart + Gallon bags	6020, 901.1	
	M8-SS100-01-092618	Soil Short	Soil	9/26/2018	14:25	2	Quart + Gallon bags	6020, 901.1	
	M8-SS103-01-092618	Soil Short	Soil	9/26/2018	15:45	2	Quart + Gallon bags	6020, 901.1	Y
	M8-SS103-02-092618	Soil Short	Soil	9/26/2018	15:45	2	Quart + Gallon bags	6020, 901.1	
	M8-SS116-01-092618	Soil Short	Soil	9/26/2018	15:00	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: I

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0129**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M1-XSG4-01-092818	XRF Conf Short	Soil	9/28/2018	08:29	2	Quart + Gallon bags	6020, 901.1	
	M27-XS116-01-092618	XRF Conf Short	Soil	9/26/2018	13:05	2	Quart + Gallon bags	6020, 901.1	
	M27-XS149-01-092618	XRF Conf Short	Soil	9/26/2018	12:55	2	Quart + Gallon bags	6020, 901.1	
	M27-XS150-01-092618	XRF Conf Short	Soil	9/26/2018	13:00	2	Quart + Gallon bags	6020, 901.1	Y
	M27-XS163-01-092618	XRF Conf Short	Soil	9/26/2018	14:05	2	Quart + Gallon bags	6020, 901.1	
	M27-XSG28-01-092618	XRF Conf Short	Soil	9/26/2018	11:14	2	Quart + Gallon bags	6020, 901.1	
	M27-XSG28-02-092618	XRF Conf Short	Soil	9/26/2018	11:14	2	Quart + Gallon bags	6020, 901.1	
	M27-XSG48-01-092618	XRF Conf Short	Soil	9/26/2018	14:37	2	Quart + Gallon bags	6020, 901.1	
	M27-XSG6-01-092618	XRF Conf Short	Soil	9/26/2018	12:15	2	Quart + Gallon bags	6020, 901.1	
	M32-XSG23-01-092918	XRF Conf Short	Soil	9/29/2018	15:10	2	Quart + Gallon bags	6020, 901.1	
	M32-XSG26-01-092918	XRF Conf Short	Soil	9/29/2018	15:35	2	Quart + Gallon bags	6020, 901.1	
	M32-XSG34-01-092918	XRF Conf Short	Soil	9/29/2018	14:10	2	Quart + Gallon bags	6020, 901.1	
	M32-XSG46-01-092918	XRF Conf Short	Soil	9/29/2018	13:20	2	Quart + Gallon bags	6020, 901.1	
	M32-XSG9-01-092918	XRF Conf Short	Soil	9/29/2018	15:58	2	Quart + Gallon bags	6020, 901.1	
	M34-XSG15-01-092718	XRF Conf Short	Soil	9/27/2018	14:05	2	Quart + Gallon bags	6020, 901.1	
	M35-XSG20-01-092718	XRF Conf Short	Soil	9/27/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M35-XSG4-01-092718	XRF Conf Short	Soil	9/27/2018	12:50	2	Quart + Gallon bags	6020, 901.1	
	M36-XSG1-01-092718	XRF Conf Short	Soil	9/27/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	T5-XSG3-01-092818	XRF Conf Short	Soil	9/28/2018	09:35	2	Quart + Gallon bags	6020, 901.1	
	T5-XSG3-02-092818	XRF Conf Short	Soil	9/28/2018	09:35	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: J

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0130**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Num b Cont	Container	Analytical_Method	Lab QC
	M6-SB109-006018-01-092718	Soil Short	Soil	9/27/2018	13:00	2	Quart + Gallon bags	6020, 901.1	
	M6-SB109-018072-01-092718	Soil Short	Soil	9/27/2018	13:05	2	Quart + Gallon bags	6020, 901.1	
	M6-SB140-006018-01-092718	Soil Short	Soil	9/27/2018	12:45	2	Quart + Gallon bags	6020, 901.1	
	M6-SB140-018054-01-092718	Soil Short	Soil	9/27/2018	12:50	2	Quart + Gallon bags	6020, 901.1	
	M6-SB142-006018-01-092718	Soil Short	Soil	9/27/2018	12:05	2	Quart + Gallon bags	6020, 901.1	
	M6-SB142-018096-01-092718	Soil Short	Soil	9/27/2018	12:10	2	Quart + Gallon bags	6020, 901.1	Y
	M6-SB142-096144-01-092718	Soil Short	Soil	9/27/2018	12:15	2	Quart + Gallon bags	6020, 901.1	
	M6-SB157-006018-01-092718	Soil Short	Soil	9/27/2018	11:45	2	Quart + Gallon bags	6020, 901.1	
	M6-SB157-018060-01-092718	Soil Short	Soil	9/27/2018	11:50	2	Quart + Gallon bags	6020, 901.1	
	M6-SB159-006012-01-092718	Soil Short	Soil	9/27/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	M6-SB159-012018-01-092718	Soil Short	Soil	9/27/2018	11:50	2	Quart + Gallon bags	6020, 901.1	
	M6-SB174-006018-01-092718	Soil Short	Soil	9/27/2018	11:25	2	Quart + Gallon bags	6020, 901.1	
	M6-SB174-018062-01-092718	Soil Short	Soil	9/27/2018	11:30	2	Quart + Gallon bags	6020, 901.1	
	M6-SB190-006018-01-092718	Soil Short	Soil	9/27/2018	10:55	2	Quart + Gallon bags	6020, 901.1	
	M6-SB190-006018-02-092718	Soil Short	Soil	9/27/2018	10:55	2	Quart + Gallon bags	6020, 901.1	
	M6-SB190-018084-01-092718	Soil Short	Soil	9/27/2018	11:00	2	Quart + Gallon bags	6020, 901.1	
	M6-SS109-01-092718	Soil Short	Soil	9/27/2018	12:55	2	Quart + Gallon bags	6020, 901.1	
	M6-SS140-01-092718	Soil Short	Soil	9/27/2018	12:40	2	Quart + Gallon bags	6020, 901.1	
	M6-SS142-01-092718	Soil Short	Soil	9/27/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M6-SS157-01-092718	Soil Short	Soil	9/27/2018	11:40	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: K

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0131**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M8-SB104-006018-01-092718	Soil Short	Soil	9/27/2018	09:00	2	Quart + Gallon bags	6020, 901.1	
	M8-SB104-006018-02-092718	Soil Short	Soil	9/27/2018	09:00	2	Quart + Gallon bags	6020, 901.1	
	M8-SB104-048096-01-092718	Soil Short	Soil	9/27/2018	09:05	2	Quart + Gallon bags	6020, 901.1	
	M8-SB104-096144-01-092718	Soil Short	Soil	9/27/2018	09:10	2	Quart + Gallon bags	6020, 901.1	
	M8-SB104-144192-01-092718	Soil Short	Soil	9/27/2018	09:15	2	Quart + Gallon bags	6020, 901.1	Y
	M8-SB106-006018-01-092718	Soil Short	Soil	9/27/2018	09:50	2	Quart + Gallon bags	6020, 901.1	
	M8-SB120-006018-01-092718	Soil Short	Soil	9/27/2018	10:05	2	Quart + Gallon bags	6020, 901.1	
	M8-SB120-018060-01-092718	Soil Short	Soil	9/27/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	M8-SB65-006012-01-092718	Soil Short	Soil	9/27/2018	09:50	2	Quart + Gallon bags	6020, 901.1	
	M8-SB65-012018-01-092718	Soil Short	Soil	9/27/2018	10:50	2	Quart + Gallon bags	6020, 901.1	
	M8-SB79-006012-01-092718	Soil Short	Soil	9/27/2018	09:10	2	Quart + Gallon bags	6020, 901.1	
	M8-SB79A-006012-01-092718	Soil Short	Soil	9/27/2018	10:20	2	Quart + Gallon bags	6020, 901.1	
	M8-SB79A-012018-01-092718	Soil Short	Soil	9/27/2018	10:30	2	Quart + Gallon bags	6020, 901.1	
	M8-SS104-01-092718	Soil Short	Soil	9/27/2018	08:55	2	Quart + Gallon bags	6020, 901.1	
	M8-SS106-01-092718	Soil Short	Soil	9/27/2018	09:45	2	Quart + Gallon bags	6020, 901.1	
	M8-SS120-01-092718	Soil Long	Soil	9/27/2018	10:00	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M8-SS65-01-092718	Soil Short	Soil	9/27/2018	09:40	2	Quart + Gallon bags	6020, 901.1	
	M8-SS65-02-092718	Soil Short	Soil	9/27/2018	09:40	2	Quart + Gallon bags	6020, 901.1	
	M8-SS79-01-092718	Soil Short	Soil	9/27/2018	09:00	2	Quart + Gallon bags	6020, 901.1	
	M8-SS79-02-092718	Soil Short	Soil	9/27/2018	09:00	2	Quart + Gallon bags	6020, 901.1	
	M8-SS79A-01-092718	Soil Short	Soil	9/27/2018	10:10	2	Quart + Gallon bags	6020, 901.1	

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: L

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0132**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M34-SB60-0612-01-092718	Soil Short	Soil	9/27/2018	14:05	2	Quart + Gallon bags	6020, 901.1	
	M34-SB68-0612-01-092718	Soil Short	Soil	9/27/2018	14:15	2	Quart + Gallon bags	6020, 901.1	
	M34-SB92-0612-01-092718	Soil Short	Soil	9/27/2018	14:55	2	Quart + Gallon bags	6020, 901.1	
	M34-SS109-01-092718	Soil Short	Soil	9/27/2018	14:40	2	Quart + Gallon bags	6020, 901.1	
	M34-SS60-01-092718	Soil Short	Soil	9/27/2018	14:00	2	Quart + Gallon bags	6020, 901.1	
	M34-SS68-01-092718	Soil Short	Soil	9/27/2018	14:10	2	Quart + Gallon bags	6020, 901.1	
	M34-SS80-01-092718	Soil Short	Soil	9/27/2018	15:00	2	Quart + Gallon bags	6020, 901.1	
	M34-SS92-01-092718	Soil Short	Soil	9/27/2018	14:50	2	Quart + Gallon bags	6020, 901.1	Y
	M34-SS92-02-092718	Soil Short	Soil	9/27/2018	14:50	2	Quart + Gallon bags	6020, 901.1	
	M34-SS97-01-092718	Soil Long	Soil	9/27/2018	14:25	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M35-SB19-0612-01-092718	Soil Short	Soil	9/27/2018	11:35	2	Quart + Gallon bags	6020, 901.1	
	M35-SB22-0612-01-092718	Soil Long	Soil	9/27/2018	12:15	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M35-SB26-0612-01-092718	Soil Short	Soil	9/27/2018	12:05	2	Quart + Gallon bags	6020, 901.1	
	M35-SB35-0612-01-092718	Soil Short	Soil	9/27/2018	11:50	2	Quart + Gallon bags	6020, 901.1	
	M35-SB35-1218-01-092718	Soil Short	Soil	9/27/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M35-SS19-01-092718	Soil Short	Soil	9/27/2018	11:30	2	Quart + Gallon bags	6020, 901.1	
	M35-SS22-01-092718	Soil Long	Soil	9/27/2018	12:10	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M35-SS26-01-092718	Soil Short	Soil	9/27/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M35-SS35-01-092718	Soil Short	Soil	9/27/2018	11:45	2	Quart + Gallon bags	6020, 901.1	
	M35-SS35-02-092718	Soil Short	Soil	9/27/2018	11:45	2	Quart + Gallon bags	6020, 901.1	

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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: M

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0133**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M23-SB132-0612-01-092718	Soil Short	Soil	9/27/2018	16:00	2	Quart + Gallon bags	6020, 901.1	
	M23-SB54-0612-01-092718	Soil Long	Soil	9/27/2018	16:40	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M23-SB54-1218-01-092718	Soil Long	Soil	9/27/2018	16:45	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M23-SS132-01-092718	Soil Short	Soil	9/27/2018	15:55	2	Quart + Gallon bags	6020, 901.1	Y
	M23-SS54-01-092718	Soil Long	Soil	9/27/2018	16:35	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M23-SS71-01-092718	Soil Short	Soil	9/27/2018	16:20	2	Quart + Gallon bags	6020, 901.1	
	M36-SB3-0612-01-092718	Soil Short	Soil	9/27/2018	12:25	2	Quart + Gallon bags	6020, 901.1	
	M36-SS24-01-092718	Soil Long	Soil	9/27/2018	12:40	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M36-SS30-01-092718	Soil Short	Soil	9/27/2018	12:45	2	Quart + Gallon bags	6020, 901.1	
	M36-SS3-01-092718	Soil Short	Soil	9/27/2018	12:20	2	Quart + Gallon bags	6020, 901.1	
	M36-SS8-01-092718	Soil Short	Soil	9/27/2018	12:30	2	Quart + Gallon bags	6020, 901.1	
	M38-SB20-0612-01-092818	Soil Short	Soil	9/28/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M38-SB2-0612-01-092818	Soil Long	Soil	9/28/2018	12:15	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M38-SB2-1218-01-092818	Soil Long	Soil	9/28/2018	12:20	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M38-SB8-0612-01-092818	Soil Short	Soil	9/28/2018	11:15	2	Quart + Gallon bags	6020, 901.1	
	M38-SS20-01-092818	Soil Short	Soil	9/28/2018	11:50	2	Quart + Gallon bags	6020, 901.1	
	M38-SS2-01-092818	Soil Long	Soil	9/28/2018	12:10	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M38-SS8-01-092818	Soil Short	Soil	9/28/2018	11:10	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: O

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0135**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M10-XSG2-01-092818	XRF Conf Short	Soil	9/28/2018	11:20	2	Quart + Gallon bags	6020, 901.1	
	M10-XSG4-01-092818	XRF Conf Short	Soil	9/28/2018	11:47	2	Quart + Gallon bags	6020, 901.1	
	M11-XS47-01-092818	XRF Conf Short	Soil	9/28/2018	14:20	2	Quart + Gallon bags	6020, 901.1	
	M11-XSG2-01-092818	XRF Conf Short	Soil	9/28/2018	13:30	2	Quart + Gallon bags	6020, 901.1	
	M11-XSG25-01-092818	XRF Conf Long2	Soil	9/28/2018	14:08	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	Y
	M11-XSG28-01-092818	XRF Conf Short	Soil	9/28/2018	13:15	2	Quart + Gallon bags	6020, 901.1	
	M11-XSG33-01-092818	XRF Conf Short	Soil	9/28/2018	14:05	2	Quart + Gallon bags	6020, 901.1	
	M12-XSG26-01-092818	XRF Conf Short	Soil	9/28/2018	12:15	2	Quart + Gallon bags	6020, 901.1	
	M12-XSG3-01-092818	XRF Conf Short	Soil	9/28/2018	11:10	2	Quart + Gallon bags	6020, 901.1	
	M25-XSG12-01-092818	XRF Conf Short	Soil	9/28/2018	13:10	2	Quart + Gallon bags	6020, 901.1	
	M25-XSG19-01-092818	XRF Conf Short	Soil	9/28/2018	11:44	2	Quart + Gallon bags	6020, 901.1	
	M25-XSG19-02-092818	XRF Conf Short	Soil	9/28/2018	11:44	2	Quart + Gallon bags	6020, 901.1	
	M25-XSG5-01-092818	XRF Conf Short	Soil	9/28/2018	13:37	2	Quart + Gallon bags	6020, 901.1	
	M28-XS162-01-092818	XRF Conf Long2	Soil	9/28/2018	15:58	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: P

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0136**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M10-SB10-0612-01-092818	Soil Long	Soil	9/28/2018	11:20	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M10-SB58-0612-01-092818	Soil Short	Soil	9/28/2018	11:45	2	Quart + Gallon bags	6020, 901.1	
	M10-SS10-01-092818	Soil Long	Soil	9/28/2018	11:15	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M10-SS46-01-092818	Soil Short	Soil	9/28/2018	11:30	2	Quart + Gallon bags	6020, 901.1	
	M10-SS58-01-092818	Soil Short	Soil	9/28/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	M10-SS58-02-092818	Soil Short	Soil	9/28/2018	11:40	2	Quart + Gallon bags	6020, 901.1	
	M12-SB3-0612-01-092818	Soil Short	Soil	9/28/2018	13:30	2	Quart + Gallon bags	6020, 901.1	
	M12-SB5-0612-01-092818	Soil Short	Soil	9/28/2018	13:20	2	Quart + Gallon bags	6020, 901.1	Y
	M12-SS3-01-092818	Soil Short	Soil	9/28/2018	13:25	2	Quart + Gallon bags	6020, 901.1	
	M12-SS33-01-092818	Soil Long	Soil	9/28/2018	13:45	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M12-SS5-01-092818	Soil Short	Soil	9/28/2018	13:15	2	Quart + Gallon bags	6020, 901.1	
	M25-SB29-0612-01-092818	Soil Short	Soil	9/28/2018	15:20	2	Quart + Gallon bags	6020, 901.1	
	M25-SB50-0612-01-092818	Soil Long	Soil	9/28/2018	14:20	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M25-SB50-1218-01-092818	Soil Long	Soil	9/28/2018	14:25	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M25-SB75-0612-01-092818	Soil Short	Soil	9/28/2018	14:45	2	Quart + Gallon bags	6020, 901.1	
	M25-SB8-0612-01-092818	Soil Short	Soil	9/28/2018	15:10	2	Quart + Gallon bags	6020, 901.1	
	M25-SD1-01-092818	Surf Sed Short	Sed	9/28/2018	13:40	2	Gallon bags	6020, 7471, 901.1	
	M25-SS29-01-092818	Soil Short	Soil	9/28/2018	15:15	2	Quart + Gallon bags	6020, 901.1	
	M25-SS50-01-092818	Soil Long	Soil	9/28/2018	14:15	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M25-SS75-01-092818	Soil Short	Soil	9/28/2018	14:40	2	Quart + Gallon bags	6020, 901.1	
	M25-SS8-01-092818	Soil Short	Soil	9/28/2018	15:05	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #: Q

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0137**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Num b Cont	Container	Analytical_Method	Lab QC
	DC3E-SD10-01-093018	Surf Sed Short	Sed	9/30/2018	13:40	2	Gallon bag	6020, 7471, 901.1	
	DC3E-SD14-01-093018	Surf Sed Short	Sed	9/30/2018	13:00	2	Gallon bag	6020, 7471, 901.1	
	M11-SB35-0612-01-092818	Soil Long	Soil	9/28/2018	14:40	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M11-SB45-0612-01-092818	Soil Short	Soil	9/28/2018	14:20	2	Quart + Gallon bags	6020, 901.1	
	M11-SS24-01-092818	Soil Short	Soil	9/28/2018	15:05	2	Quart + Gallon bags	6020, 901.1	Y
	M11-SS35-01-092818	Soil Long	Soil	9/28/2018	14:35	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M11-SS40-01-092818	Soil Short	Soil	9/28/2018	15:20	2	Quart + Gallon bags	6020, 901.1	
	M11-SS4-01-092818	Soil Short	Soil	9/28/2018	15:00	2	Quart + Gallon bags	6020, 901.1	
	M11-SS45-01-092818	Soil Short	Soil	9/28/2018	14:15	2	Quart + Gallon bags	6020, 901.1	
	M5-SB149-0612-01-093018	Soil Long	Soil	9/30/2018	13:10	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M5-SB185-0612-01-093018	Soil Short	Soil	9/30/2018	12:35	2	Quart + Gallon bags	6020, 901.1	
	M5-SB277-0612-01-093018	Soil Short	Soil	9/30/2018	14:10	2	Quart + Gallon bags	6020, 901.1	
	M5-SB479-0612-01-093018	Soil Long	Soil	9/30/2018	11:30	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M5-SS149-01-093018	Soil Long	Soil	9/30/2018	13:05	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M5-SS185-01-093018	Soil Short	Soil	9/30/2018	12:30	2	Quart + Gallon bags	6020, 901.1	
	M5-SS277-01-093018	Soil Short	Soil	9/30/2018	14:05	2	Quart + Gallon bags	6020, 901.1	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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**Tetra Tech**

3801 Automation Way, Ste. 100  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0138**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M28-XS19-01-092918	XRF Conf Short	Soil	9/29/2018	13:45	2	Quart + Gallon bags	6020, 901.1	Y
	M28-XSG18-01-092918	XRF Conf Short	Soil	9/29/2018	13:05	2	Quart + Gallon bags	6020, 901.1	
	M28-XSG54-01-092918	XRF Conf Short	Soil	9/29/2018	10:05	2	Quart + Gallon bags	6020, 901.1	
	M28-XSG76-01-092918	XRF Conf Short	Soil	9/29/2018	11:15	2	Quart + Gallon bags	6020, 901.1	
	M30-XS144-01-092918	XRF Conf Short	Soil	9/29/2018	13:32	2	Quart + Gallon bags	6020, 901.1	
	M30-XS185-01-092918	XRF Conf Short	Soil	9/29/2018	11:38	2	Quart + Gallon bags	6020, 901.1	
	M30-XS62-01-092918	XRF Conf Short	Soil	9/29/2018	13:41	2	Quart + Gallon bags	6020, 901.1	
	M30-XSG18-01-092918	XRF Conf Short	Soil	9/29/2018	12:55	2	Quart + Gallon bags	6020, 901.1	
	M30-XSG29-01-092918	XRF Conf Short	Soil	9/29/2018	12:05	2	Quart + Gallon bags	6020, 901.1	
	M30-XSG43-01-092918	XRF Conf Short	Soil	9/29/2018	10:15	2	Quart + Gallon bags	6020, 901.1	
	M30-XSG45-01-092918	XRF Conf Short	Soil	9/29/2018	11:15	2	Quart + Gallon bags	6020, 901.1	
	M30-XSG6-01-092918	XRF Conf Short	Soil	9/29/2018	14:33	2	Quart + Gallon bags	6020, 901.1	
	M30-XSG61-01-092918	XRF Conf Long2	Soil	9/29/2018	10:50	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M31-XS1-01-092918	XRF Conf Short	Soil	9/29/2018	12:00	2	Quart + Gallon bags	6020, 901.1	
	M31-XS39-01-092918	XRF Conf Long2	Soil	9/29/2018	11:45	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M31-XS8-01-092918	XRF Conf Long2	Soil	9/29/2018	11:35	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M31-XSG1-01-092918	XRF Conf Short	Soil	9/29/2018	11:02	2	Quart + Gallon bags	6020, 901.1	
	M31-XSG12-01-092918	XRF Conf Short	Soil	9/29/2018	10:00	2	Quart + Gallon bags	6020, 901.1	
	M31-XSG17-01-092918	XRF Conf Short	Soil	9/29/2018	10:20	2	Quart + Gallon bags	6020, 901.1	
	M31-XSG9-01-092918	XRF Conf Short	Soil	9/29/2018	10:35	2	Quart + Gallon bags	6020, 901.1	

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**Tetra Tech**

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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0139**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M30-SB208-0615-01-092918	Soil Short	Soil	9/29/2018	14:05	2	Quart + Gallon bags	6020, 901.1	
	M30-SS138-01-092918	Soil Short	Soil	9/29/2018	13:55	2	Quart + Gallon bags	6020, 901.1	Y
	M30-SS167-01-092918	Soil Short	Soil	9/29/2018	14:15	2	Quart + Gallon bags	6020, 901.1	
	M30-SS180-01-092918	Soil Long	Soil	9/29/2018	14:30	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M30-SS208-01-092918	Soil Short	Soil	9/29/2018	14:00	2	Quart + Gallon bags	6020, 901.1	
	M31-SB23-0612-01-092918	Soil Short	Soil	9/29/2018	15:35	2	Quart + Gallon bags	6020, 901.1	
	M31-SB37-0612-01-092918	Soil Long	Soil	9/29/2018	15:50	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M31-SS23-01-092918	Soil Short	Soil	9/29/2018	15:30	2	Quart + Gallon bags	6020, 901.1	
	M31-SS37-01-092918	Soil Long	Soil	9/29/2018	15:45	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M31-SS9-01-092918	Soil Long	Soil	9/29/2018	15:15	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M32-SB89-0612-01-092918	Soil Long	Soil	9/29/2018	11:35	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M32-SB96-0612-01-092918	Soil Short	Soil	9/29/2018	10:45	2	Quart + Gallon bags	6020, 901.1	
	M32-SD1-01-092918	Surf Sed Short	Sed	9/29/2018	11:45	1	Gallon bag	6020, 7471, 901.1	
	M32-SS113-01-092918	Soil Short	Soil	9/29/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	M32-SS113-02-092918	Soil Short	Soil	9/29/2018	10:10	2	Quart + Gallon bags	6020, 901.1	
	M32-SS22-01-092918	Soil Short	Soil	9/29/2018	11:55	2	Quart + Gallon bags	6020, 901.1	
	M32-SS56-01-092918	Soil Long	Soil	9/29/2018	11:00	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M32-SS89-01-092918	Soil Long	Soil	9/29/2018	11:30	3	Quart + Gallon bags	6020, HF, 901.1, Eichrom, D3972 (Th), SPLP, TCLP, paste pH, ABA	
	M32-SS96-01-092918	Soil Short	Soil	9/29/2018	10:40	2	Quart + Gallon bags	6020, 901.1	

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**Tetra Tech**

3801 Automation Way, Ste. 100  
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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0140**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M14-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	13:33	2	Quart + Gallon bags	6020, 901.1	
	M15-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	13:25	2	Quart + Gallon bags	6020, 901.1	Y
	M16-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	13:00	2	Quart + Gallon bags	6020, 901.1	
	M16-XSR6-01-093018	XRF Conf Short	Soil	9/30/2018	15:40	2	Quart + Gallon bags	6020, 901.1	
	M17-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	12:25	2	Quart + Gallon bags	6020, 901.1	
	M19-XSR2-01-093018	XRF Conf Long2	Soil	9/30/2018	11:50	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M19-XSR2-02-093018	XRF Conf Long2	Soil	9/30/2018	11:50	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M20-XSR2-01-093018	XRF Conf Short	Soil	9/30/2018	14:06	2	Quart + Gallon bags	6020, 901.1	
	M23-XSR4-01-093018	XRF Conf Short	Soil	9/30/2018	14:50	2	Quart + Gallon bags	6020, 901.1	
	M24-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	10:17	2	Quart + Gallon bags	6020, 901.1	
	M28-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	13:00	2	Quart + Gallon bags	6020, 901.1	
	M28-XSR1-02-093018	XRF Conf Short	Soil	9/30/2018	13:00	2	Quart + Gallon bags	6020, 901.1	
	M29-XSR4-01-093018	XRF Conf Short	Soil	9/30/2018	11:05	2	Quart + Gallon bags	6020, 901.1	
	M29-XSR7-01-093018	XRF Conf Short	Soil	9/30/2018	11:38	2	Quart + Gallon bags	6020, 901.1	
	M2-XSR3-01-093018	XRF Conf Short	Soil	9/30/2018	10:48	2	Quart + Gallon bags	6020, 901.1	
	M30-XSR5-01-093018	XRF Conf Short	Soil	9/30/2018	12:30	2	Quart + Gallon bags	6020, 901.1	
	M6-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	10:30	2	Quart + Gallon bags	6020, 901.1	
	M7-XSR1-01-093018	XRF Conf Long2	Soil	9/30/2018	09:55	2	Quart + Gallon bags	6020, 901.1, Eichrom, D3972 (Th)	
	M7-XSR1-02-093018	XRF Conf Short	Soil	9/30/2018	09:55	2	Quart + Gallon bags	6020, 901.1	
	M8-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	10:18	2	Quart + Gallon bags	6020, 901.1	
	T17-XSR1-01-093018	XRF Conf Short	Soil	9/30/2018	10:10	2	Quart + Gallon bags	6020, 901.1	Y

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**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0142**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M11-XSC11-38	Soil Cup Short	Soil	7/11/2018		1	Soil Cup	6020, Uranium by HF	
	M14-XSC64-16	Soil Cup Short	Soil	5/24/2018		1	Soil Cup	6020, Uranium by HF	
	M15-XS73-01-052118	Soil Cup Rad	Soil	5/21/2018	11:00	1	Quart Bag	Radium by Alpha	
	M15-XSC73-13	Soil Cup Long	Soil	5/21/2018		1	Soil Cup	6020, Uranium by HF, Radium by Alpha	
	M15-XSC82-4	Soil Cup Short	Soil	5/21/2018		1	Soil Cup	6020, Uranium by HF	
	M15-XSC93-37	Soil Cup Short	Soil	5/21/2018		1	Soil Cup	6020, Uranium by HF	
	M16-XSC191-28	Soil Cup Short	Soil	5/26/2018		1	Soil Cup	6020, Uranium by HF	
	M17-XSC55-39	Soil Cup Short	Soil	5/26/2018		1	Soil Cup	6020, Uranium by HF	Y
	M18-XSC155-42	Soil Cup Short	Soil	5/25/2018		1	Soil Cup	6020, Uranium by HF	
	M1-XSC32-31	Soil Cup Short	Soil	5/12/2018		1	Soil Cup	6020, Uranium by HF	
	M20-XSC166-32	Soil Cup Short	Soil	6/5/2018		1	Soil Cup	6020, Uranium by HF	
	M21-XSC302-11	Soil Cup Short	Soil	6/9/2018		1	Soil Cup	6020, Uranium by HF	
	M21-XSC377-43	Soil Cup Short	Soil	6/9/2018		1	Soil Cup	6020, Uranium by HF	
	M21-XSC403-19	Soil Cup Short	Soil	6/8/2018		1	Soil Cup	6020, Uranium by HF	
	M21-XSC596-30	Soil Cup Short	Soil	6/5/2018		1	Soil Cup	6020, Uranium by HF	
	M23-XSC102-41	Soil Cup Short	Soil	6/10/2018		1	Soil Cup	6020, Uranium by HF	
	M24-XSC115-3	Soil Cup Short	Soil	7/14/2018		1	Soil Cup	6020, Uranium by HF	
	M25-XSC16-17	Soil Cup Short	Soil	7/17/2018		1	Soil Cup	6020, Uranium by HF	
	M26-XSC13-9	Soil Cup Short	Soil	6/18/2018		1	Soil Cup	6020, Uranium by HF	
	M26-XSC25-14	Soil Cup Short	Soil	6/18/2018		1	Soil Cup	6020, Uranium by HF	
	M27-XSC38-21	Soil Cup Short	Soil	6/19/2018		1	Soil Cup	6020, Uranium by HF	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
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Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



**Tetra Tech**

3801 Automation Way, Ste. 100  
 Fort Collins, CO 80525  
 Cooler #:

**CHAIN OF CUSTODY RECORD**

RAES-TO001 - Northern Agency Tronox Mines  
 Contact Name: Aaron Orechwa, 970-420-9395  
 Project Code: 103G5440001.06.01

**No: RAES1-0142**

Lab: ALS Laboratory Group - Fort Collins  
 Lab Phone: 970-490-1511  
 Lab\_Remark: SUBC: #1150778 PO #1

Lab #	Sample #	Analyses	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analytical_Method	Lab QC
	M28-XS155-01-062018	Soil Cup Rad	Soil	6/20/2018	11:18	1	Quart Bag	Radium by Alpha	
	M28-XSC155-5	Soil Cup Long	Soil	6/1/2018		1	Soil Cup	6020, Uranium by HF, Radium by Alpha	
	M2-XSC15-40	Soil Cup Short	Soil	4/24/2018		1	Soil Cup	6020, Uranium by HF	
	M2-XSC32-1	Soil Cup Short	Soil	4/24/2018		1	Soil Cup	6020, Uranium by HF	
	M30-XSC127-27	Soil Cup Short	Soil	7/16/2018		1	Soil Cup	6020, Uranium by HF	
	M33-XSC85-7	Soil Cup Short	Soil	7/12/2018		1	Soil Cup	6020, Uranium by HF	
	M35-XSC20-12	Soil Cup Short	Soil	8/13/2018		1	Soil Cup	6020, Uranium by HF	
	M36-XSC31-22	Soil Cup Short	Soil	8/12/2018		1	Soil Cup	6020, Uranium by HF	
	M37-XSC124A-25	Soil Cup Short	Soil	8/13/2018		1	Soil Cup	6020, Uranium by HF	Y
	M5-XSC207A-18	Soil Cup Short	Soil	8/20/2018		1	Soil Cup	6020, Uranium by HF	
	M5-XSC263-20	Soil Cup Short	Soil	8/20/2018		1	Soil Cup	6020, Uranium by HF	
	M6-XSC159-15	Soil Cup Short	Soil	4/26/2018		1	Soil Cup	6020, Uranium by HF	
	M6-XSC269-8	Soil Cup Short	Soil	4/26/2018		1	Soil Cup	6020, Uranium by HF	
	M6-XSC285-24	Soil Cup Short	Soil	4/27/2018		1	Soil Cup	6020, Uranium by HF	
	M7-XS162A-01-081518	Soil Cup Rad	Soil	8/15/2018	12:10	1	Quart Bag	Radium by Alpha	
	M7-XSC162A-26	Soil Cup Long	Soil	8/15/2018		1	Soil Cup	6020, Uranium by HF, Radium by Alpha	
	M8-XSC102-29	Soil Cup Short	Soil	5/9/2018		1	Soil Cup	6020, Uranium by HF	
	M8-XSC110-36	Soil Cup Short	Soil	5/9/2018		1	Soil Cup	6020, Uranium by HF	
	M9-XS28A-01-081718	Soil Cup Rad	Soil	8/17/2018	12:30	1	Quart Bag	Radium by Alpha	
	M9-XSC28A-23	Soil Cup Long	Soil	8/17/2018		1	Soil Cup	6020, Uranium by HF, Radium by Alpha	
	T17-XS208-01-042818	Soil Cup Rad	Soil	4/28/2018	14:52	1	Quart Bag	Radium by Alpha	

Special Instructions:	<b>SAMPLES TRANSFERRED FROM</b>
	<b>CHAIN OF CUSTODY #</b>

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt







**ATTACHMENT G4**

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**CHAIN-OF-CUSTODY FORMS FOR RADON SAMPLES**

**FILL IN DETECTOR AND COMMISSION INFORMATION** Please note the time format used is International Standard.

**Rapidos® High-Sensitivity Test Data**

Fill in detector number	Start Date/Time	End Date/Time	+	Location	Detector comment	Location type
(bottom of the detector)	M M D D Y Y H H M M	M M D D Y Y H H M M				
1	7 0 6 7 7 4 7 0 9 1 5 1 8 1 0 5 4	1 2 1 0 1 8 0 8 5 5		B 10	B10-RN01-01-091518	0
2	1 9 8 8 3 5 1 0 9 1 5 1 0 1 1 2 0	1 2 1 0 1 8 0 9 1 0		M 8	M8-RN01-01-091518	0
3	1 6 6 2 2 9 5 0 9 1 5 1 8 1 2 5 9	1 2 1 0 1 8 0 9 5 0		M 7	M7-RN01-01-091518	0
4	7 7 5 5 4 6 5 0 9 1 6 1 8 1 2 1 3	1 2 1 0 1 8 1 1 5 2		B 2	B2-RN01-01-091618	0
5	9 7 9 0 8 6 8 0 9 1 5 1 8 1 3 5 6	1 2 1 0 1 8 0 8 1 5		M 6	M6-RN01-01-091518	0
6	4 1 4 7 8 1 5 0 9 1 3 1 8 1 1 0 2	1 2 1 1 1 8 1 0 1 0		M 17	M17-RN01-01-091318	0
7	4 6 8 3 7 8 5 0 9 1 4 1 8 1 4 3 1	1 2 1 1 1 8 0 9 0 0		M 16	M16-RN02-01-091418	0
8	3 5 5 6 9 9 0 0 9 1 4 1 8 1 4 0 9	1 2 1 1 1 8 0 9 1 0		M 15	M15-RN01-01-091418	0
9	4 6 7 4 8 2 6 0 9 1 4 1 8 1 4 2 2	1 2 1 1 1 8 0 9 0 5		M 16	M16-RN01-01-091418	0
10	3 3 8 8 3 7 8 0 9 1 3 1 8 1 4 5 6	1 2 1 1 1 8 0 8 3 0		M 17	M17-RN02-01-091318	0

**FILL IN THE COMMISSION ADDRESS**

Commission number: 4856279

Site: ER6  
 Address: 809 Washington St. NE  
Suite 150  
 City: Albuquerque  
 State: NM  
 Postal code: 87113  
 Building id: \_\_\_\_\_

**FILL IN THE TRANSIT CONTROL DETECTORS**

1 5 3 1 6 3 5 1  
 2 1 7 8 4 7 3 5  
 3 7 3 3 9 3 9 3

If the measurement was performed by a certified measurement specialist, certification license no: \_\_\_\_\_

Test data given by (signature): [Signature]

Printed name: BRYAN ERDMAN

Use this character  
 0= Out-door  
 1= In-door  
 2= Under ground



**FILL IN DETECTOR AND COMMISSION INFORMATION** Please note the time format used is International Standard.

**Rapidos® High-Sensitivity Test Data**

Fill in detector number    Start Date/Time    End Date/Time    +    Location    Detector comment    Location type

(bottom of the detector)		M M D D Y Y H H M M	M M D D Y Y H H M M			
1	1,0,3,2,4,7,3	09,14,18,15,21	12,11,18,09,40	M14	M14-RN01-01-091418	0
2	4,9,1,4,8,4,2	09,14,18,09,02	12,11,18,09,40	M18	M18-RN01-01-091418	0
3	2,8,6,9,7,3,3	09,15,18,09,52	12,11,18,08,55	B18	B18-RN01-01-091518	0
4	3,7,0,7,1,9,7	09,15,18,08,49	12,11,18,10,50	B16	B16-RN01-01-091518	0
5	1,5,3,6,8,5,3	09,14,18,15,30	12,11,18,08,45	M14	M14-RN02-01-091418	0
6	5,6,6,3,2,3,2	09,14,18,09,16	12,11,18,09,35	M18	M18-RN02-01-091418	0
7						
8						
9						
10						

**FILL IN THE COMMISSION ADDRESS**

Commission number: **4856279**

Site: ERL

Address: 8809 Washington St NE

Suite 150

City: Albuquerque

State: NM

Postal code: 87113

Building id: \_\_\_\_\_

**FILL IN THE TRANSIT CONTROL DETECTORS**

1 5,3,1,6,3,5,1

2 1,7,8,4,7,3,5

3 7,2,3,9,3,9,3

Use this character  
 0= Out-door  
 1= In-door  
 2= Under ground

If the measurement was performed by a certified measurement specialist, certification license no: \_\_\_\_\_

Test data given by (signature): [Signature]

Printed name: BRYAN EADMAN