

Phase I Response Sampling and Analysis Report

Rangely C-4 Incident
Rangely, Colorado



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Sign-off Sheet


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INTRODUCTION

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1.0 INTRODUCTION

On March 5, 2017, Chevron Pipe Line Company (CPL) was notified of a release of crude oil near Rangely, Colorado, approximately 7.1 miles west-northwest of Rangely, Colorado in Rio Blanco County from the Rangely C-4 pad (Site). Product flowed overland approximately 1.8 miles from Rangely C-4 through a dry drainage feature from coordinates 40° 7' 51.86" N, -108° 55' 11.05" W to the Siphon V dam at coordinates 40° 7' 48.76" N, -108° 53' 30.87" W, where it was contained by a permanent siphon dam. The general location of the Site is presented in **Figure 1**.

To assist with focusing response and remediation efforts during this event, the Site was divided into operational units (i.e., Divisions), as presented in **Figure 1**. Of note, the site map was updated in mid-March to sub-divide Division 3 to include Division 4 and Division 5. **Figure 1** is the updated site map.

Three phases of activity are being implemented in response to this release event, which the has been assigned Remediation Project #10149 by the Colorado Oil and Gas Conservation Commission (COGCC). The three phases are defined below.

- Phase I (Emergency Response Phase) – This phase was initiated when the release was detected on March 5, 2017, was concluded on April 30, 2017, and focused on removal of recoverable oil.
- Phase II (Site Remediation Phase) – This phase began May 1, 2017, and is focused on remediation of areas exceeding Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 analyte limits, as determined primarily based on sampling and laboratory analysis s. Phase II will conclude when Table 910-1 remediation limits are achieved in concurrence with COGCC.
- Phase III (Site Restoration) – This activity is expected to begin in July 2017 following Bureau of Land Management (BLM) approval of a site restoration plan. Some early restoration activities may occur before July 2017 with BLM approval. Completion of the Site Restoration scope will be based on approved criteria established in the site restoration plan for meeting restoration goals.

Activities conducted at the site during Phase I of the response are outlined in detail in the submittal to the COGCC of *Form 27: Remediation Workplan, Rangely C-4 Incident, Rangely, Colorado* dated April 14, 2017 (Remediation Workplan).

This *Phase I Response Sampling and Analysis Report* details all samples collected during the initial phase I of the response (March 5 through April 30, 2017) for the Rangely C-4 Incident. Sampling during Phase I included a crude oil sample, initial samples near the source of the release, screening samples for total petroleum hydrocarbons (TPH) only, and background samples.

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2.0 PHASE I RESPONSE SAMPLE COLLECTION

2.1 INITIAL SITE SAMPLING TO VALIDATE SAMPLING AND ANALYTICAL METHODOLOGY

CPL performed preliminary sampling of environmental media (dry drainage feature and associated soils) on March 9 to 12, 2017 to validate the sampling and analyses procedures.

Analytical results from samples collected during the response phase from March 9 to 12, 2017, have been previously presented in the April 14, 2017, Remediation Workplan, and are also presented in **Table 1** and **Table 2**. Sampling locations are shown on **Figure 2-1** through **Figure 2-8**. Laboratory reports and chain of custody documentation are included in **Appendix A**.

As previously described in the April 14, 2017, Remediation Workplan, CPL outlined the following conditions for samples collected between March 9 and March 12:

- Sampling locations designated as HER (Horizontal Extent, Right Bank Descending) and HEL (Horizontal Extent, Left Bank Descending) should serve as surrogate background samples for determining background levels as to Table 910-1 constituents based on lack of hydrocarbon impacts as these samples were located outside the zone of incident exposure to oil. CUL (centerline) samples were collected from the centerline of the dry drainage feature and represent hydrocarbon impacted areas.
- Arsenic concentrations in surrogate background samples were detected at concentrations which exceed the Table 910-1 limits which is expected due to natural geological conditions at the site. Arsenic concentrations ranged from 5.7 to 7.8 milligrams per kilogram (mg/kg) in all samples with no apparent increase for samples with hydrocarbon impacts.
- Benzo(a)pyrene and Dibenzo(a,h)anthracene are not likely to be a driver for site remediation, rather TPH thresholds will be the key constituent determining additional remediation. Reporting limits for these two polycyclic aromatic hydrocarbons (PAH) will be targeted for improvement by the analytical laboratory for future confirmation sampling; however, due to the lack of J-flagged data, these constituents are not expected to exceed Table 910-1 limits once final remediation activities are completed.

2.2 SOURCE AREA SOIL EXCAVATION SAMPLES

Oil impacted soils at the release location were excavated at three isolated excavation areas (immediately under release pipeline, adjacent to the release pipeline, and one area approximately 200 feet from the release area). Post-excavation soil samples were collected on March 18 and 19, 2017, and submitted for analysis for COGCC Table 910-1 analytes. The excavation areas were then backfilled with clean fill material before results were available to ensure safe site conditions. One sample was collected from each excavation area as RC4-EX-15, RC4-EX-16, and RC4-EX-17. Sampling locations are shown on **Figure 2-1**. Results of the post-

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excavation soil samples are presented in **Table 1** and **Table 2**, and laboratory reports and chain of custody documentation are included as **Appendix A**.

2.3 PERIODIC SCREENING SAMPLES

Screening samples were collected between March 20 and April 30, 2017 to evaluate the extent of impacts from the Rangely C-4 release, and progress of the response activities. Qualitative visual oiling observations consistent with Shoreline Assessment and Cleanup Training (SCAT, NOAA 2013) principles were used to evaluate the site and support the sample location selection to characterize areas most likely to be impacted above the COGCC Table 910-1 allowable limits. Sampling locations are shown on **Figure 2-1** through **Figure 2-8**, and in **Table 2**.

2.4 BACKGROUND SAMPLES

To understand site background conditions, CPL collected soil samples from 10 non-contaminated locations near the release. The locations were selected to represent non-release affected background locations. Background samples were collected on April 11, 2017, at the locations shown on **Figure 3**. The samples were collected from approximately 0 to 3 inches below ground surface and followed the sampling guidelines as outlined in the *Response Sampling Plan*.

Samples were submitted to TestAmerica Laboratories, Inc. (Denver, Colorado) for analysis of Table 910 parameters. Results are summarized on **Table 3**. Laboratory reports and chain of custody documentation are included in **Appendix B**.

2.5 CRUDE OIL SAMPLE ANALYSES

One source sample was collected by CPL Operations personnel following pigging of the compromised pipeline for forensic fingerprint analysis. A sample of the crude oil was submitted to Pace Analytical Energy Services (Pittsburgh, Pennsylvania) on March 27, 2017, for characterization. Volatile hydrocarbon (C3-C12) and polyaromatic hydrocarbon (PAH) results are included in **Appendix C**. Of note, Benz(a)anthracene and Benzo(a)pyrene were not detected in the Rangely C4 crude oil (i.e. less than 7.5 mg/kg in crude oil).

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3.0 PHASE I SOIL SAMPLING ANALYTICAL RESULTS

The Phase I Response sampling activities were conducted in accordance with the *Response Sampling Plan*, which was included in the April 14, 2017 Remediation Workplan, and as outlined in the methodologies in Section 4.0. Sample naming convention is further defined in the *Response Sampling Plan*. A summary of the response sampling schedule is provided below:

Initial Sampling and Excavation Sampling

- Week of March 6th:
 - Collected initial soil samples based on oiling observations (SCAT) – RC4-HEL02-0.25, RC4-HEL03-0.25, RC4-HEL06-0.25, RC4-HEL08-0.25, RC4-HEL10-0.25, RC4-HER04-0.25, RC4-HER05-0.25, RC4-HER12-0.25, RC4-HER13-0.25, RC4-HER14-0.25, RC4-CLU07-0.25, RC4-CLU09-0.25, RC4-CLU11-0.25.
 - Results for initial sampling between March 9 and March 12, 2017, were previously discussed in the April 14, 2017, Remediation Workplan, and are summarized above in Section 2.1 and **Table 1**.
- Week of March 13th
 - Collected soil samples from source area excavation – RC4-EX-15-0.25, RC4-EX-16-0.25, RC4-EX-17-0.25
 - Analytical results for excavation sampling between March 18 and March 19, 2017, were previously discussed in the April 14, 2017, Remediation Workplan, and are summarized in **Table 1**.

Screening and Background Sampling

- Week of March 20th:
 - Collected Screening samples RC4-SC-18 through RC4-SC-37
- Week of March 27th:
 - Collected Screening samples RC4-SC-38 through RC4-SC-122
 - A source sample for forensic fingerprint analysis was collected by CPL Operations personnel following pigging of the compromised pipeline.
- Week of April 3rd
 - Collected Screening samples RC4-SC-123 through RC4-SC-136
- Week of April 10th:
 - Collected Screening samples RC4-SC-137 through RC4-SC-147
 - Collected Background soil samples RC4-BA-01 through RC4-BA-10
- Week of May 1st:
 - Collected Screening soil samples RC4-SC-148 through RC4-SC-177 and collect Screening soil samples for the second time at locations RC4-SC-93, 110, 111, 121, and 122
 - Collected Screening soil samples for the second time from locations RC4-SC-40, 41 and 44
 - These sampling results will be presented in the next progress status report.

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Analytical results for the screening samples collected beginning on March 20, 2017, and located along the spill pathway are presented in **Table 2**, shown on **Figure 2-1** through **Figure 2-8**, and can be summarized as follows:

- 17 samples were collected adjacent to the three excavation sites (RC4-SC38 through RC4-SC-54) and will aid in the development of a remediation plan for Division 1 around the leak site. TPH concentrations exceeded the Table 910-1 limit of 500 mg/kg in 16 of the 17 samples located in this area. Additionally, 8 soils samples were greater than 5,000 mg/kg for TPH.
- 26 samples were collected within the drainage and along the spill pathway within Division 1. TPH concentrations exceeded the Table 910-1 limit of 500 mg/kg in 13 samples with 1 soil sample greater than 5,000 mg/kg for TPH.
- 21 samples were collected within the drainage and along the spill pathway within Division 2. TPH concentrations exceeded the Table 910-1 limit of 500 mg/kg in 20 samples with 6 soil sample greater than 5,000 mg/kg for TPH.
- 26 samples were collected within the drainage and along the spill pathway within Division 3. TPH concentrations exceeded the Table 910-1 limit of 500 mg/kg in 17 samples with 6 soil sample greater than 5,000 mg/kg for TPH.
- 32 samples were collected within the drainage and along the spill pathway within Division 4. TPH concentrations exceeded the Table 910-1 limit of 500 mg/kg in 8 samples with 2 soil sample greater than 5,000 mg/kg for TPH.
- 11 samples were collected within and around Siphon 5 within Division 5. TPH values did not exceed the Table 910-1 limit of 500 mg/kg in the 11 soil samples collected in this division.

Analytical results for the background samples collected April 11, 2017, are presented in **Table 3**, and shown on **Figure 3**. A total of 10 samples were collected from non-contaminated dry drainage features. TPH values did not exceed the Table 910-1 limit of 500 mg/kg in the 10 soil samples collected in these areas, and ranged from less than the reporting limit to 440 mg/kg. Arsenic was detected in all 10 samples at concentrations ranging from 6.0 to 9.2 mg/kg. All other results were below reporting limits or Table 910-1 limits, except for a minor exceedance of benzo(a)pyrene (0.028 mg/kg) in sample RC4-BA-05.

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4.0 PHASE I SOIL SAMPLING AND ANALYSIS PROCEDURES

4.1 SAMPLING AND ANALYSIS PROCEDURES

Phase I soil sampling was conducted in accordance with the *Response Sampling Plan* included in the April 14, 2017, Remediation Workplan. Generally, samples were collected by hand approximately 0 to 3 inches below ground surface using clean nitrile gloves that were replaced between each sample location. However, for samples RC4-SC-36 and RC4-SC-37, a composite sample was collected at 12 inches below ground surface, by placing the soil in a clean stainless bowl and fully mixing the soils so they were homogeneous.

Soil was placed in laboratory supplied sample containers appropriate for the intended analysis (40 milliliter volatile organic analysis (VOA) vials using a Terracore sampler or 4 oz. clear glass jars), labeled with sample identification number, sample depth, sampler name, sample date, analysis and methodology requested, and time of sample collection. Sample containers were immediately placed in a cooler with ice. Prior to being transported to the laboratory, the samples were packaged, labeled, and retained on ice. Custody seals were placed on each containing cooler, and chain-of-custody procedures were maintained from the time of sample collection until they arrived at the laboratory. Samples were transported via courier to TestAmerica Laboratories in Denver, Colorado.

The crude oil source sample was placed in two 40 mL VOA vials, placed in a cooler under chain-of-custody procedures and shipped via Fed Ex to Pace Analytical Energy Services in Pittsburgh, Pennsylvania. The results are included in Appendix C.

4.2 QUALITY ASSURANCE

Sampling was carried out in accordance with the *Response Sampling Plan*, which included quality assurance (QA) procedures. The goal of the field QA is to document that samples are collected without the effects of accidental cross- or systematic contamination and refers to the sampling, analysis, and data validation procedures for generating valid and defensible data. The following QA sampling was conducted for this incident:

- Field Duplicates – Duplicates samples were collected at a rate of approximately 1 for every 10 analytical samples collected. Each duplicate set was collected for each analysis to be run at that sampling location.
- MS/MSD – Matrix spike/matrix spike duplicate (MS/MSD) samples were collected at a rate of approximately 1 for every 20 samples collected per analysis.

In addition, for the background sampling results (RC4-BA-1 through RC4-BA-10), Data Validation Reports/Checklists summarize compounds that were qualified, and are included in **Appendix B**. Data was validated based on Regional EPA and U.S. EPA National Functional Guidelines. Level II Data validation was performed in accordance with the Scope of Work. Data validation was performed to ensure the quality of project data. One analytical report and associated addenda were validated. The data were validated and reviewed for the following:

- Completeness of data deliverables (chain of custody records, laboratory data, laboratory quality assurance and quality control (QA/QC) data);
- Sample holding time;
- Sample preservation;
- Blank data (method, trip, and equipment);

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- Surrogate recovery;
- Laboratory control sample (LCS) recovery;
- Laboratory duplicate sample precision;
- MS/MSD recovery; and
- Overall data assessment.

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ADDITIONAL SAMPLING AND REPORTING
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5.0 ADDITIONAL SAMPLING AND REPORTING

Response phase sampling has been completed and was conducted to assist operations staff in determining additional excavation areas. Sample results outlined within this report are no longer representative of current site conditions as additional stained or impacted soil was removed and is no longer located at the incident site. Further sampling and reporting under Phase II of the response (remediation phase) will be conducted in accordance with the April 14, 2017, Remediation Workplan. The next full site soil sampling event is planned for May 30 through June 1, 2017, to characterize TPH concentrations and evaluate further remediation activities which may be required.

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6.0 References

Form 27: Remediation Workplan, Rangely C-4 Incident, Rangely, Colorado, April 14, 2017

Colorado Oil and Gas Conservation Commission. 900 Series rules, January 30, 2015

Colorado Department of Public Health and Environment. Emergency Petroleum Spill Waste Management Guidance, First Edition, January 2014

National Oceanic and Atmospheric Administration, 2013 Shoreline Assessment Manual, April

Stantec Standard Operating Procedure for Soil Sampling, ESPA-001, Most Recent Version

Stantec Standard Operating Procedure for Field Notebook, ESPA-011, Most Recent Version

Tables

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
RANGELY C-4 INCIDENT
RANGELY, COLORADO

| Sample Location | | | RC4-SOURCE-TRUCK 6-Mar-17 RC4-SOURCE-TRUCK | RC4-HEL02-0.25 9-Mar-17 | RC4-HEL03-0.25 9-Mar-17 | RC4-HEL06-0.25 10-Mar-17 | RC4-HEL08-0.25 10-Mar-17 | RC4-HEL10-0.25 11-Mar-17 | RC4-HER04-0.25 9-Mar-17 | RC4-HER05-0.25 9-Mar-17 | RC4-HER12-0.25 12-Mar-17 | RC4-HER13-0.25 12-Mar-17 | RC4-HER14-0.25 12-Mar-17 | RC4-CLU07-0.25 10-Mar-17 | RC4-CLU09-0.25 10-Mar-17 | RC4-CLU09-0.25 10-Mar-17 | RC4-CLU11-0.25 11-Mar-17 | RC4-EX-15-0.25 18-Mar-17 | RC4-EX-16-0.25 18-Mar-17 | RC4-EX-17-0.25 19-Mar-17 |
|--|----------|--------------------------------|--|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Sample Date | | | RC4-SOURCE-TRUCK | RC4-HEL02-0.25 | RC4-HEL03-0.25 | RC4-HEL06-0.25 | RC4-HEL08-0.25 | RC4-HEL10-0.25 | RC4-HER04-0.25 | RC4-HER05-0.25 | RC4-HER12-0.25 | RC4-HER13-0.25 | RC4-HER14-0.25 | RC4-CLU07-0.25 | RC4-CLU09-0.25 | RC4-CLU09-0.25 | RC4-CLU11-0.25 | RC4-EX-15-0.25 | RC4-EX-16-0.25 | RC4-EX-17-0.25 |
| Sample ID | | | RC4-SOURCE-TRUCK | RC4-HEL02-0.25 | RC4-HEL03-0.25 | RC4-HEL06-0.25 | RC4-HEL08-0.25 | RC4-HEL10-0.25 | RC4-HER04-0.25 | RC4-HER05-0.25 | RC4-HER12-0.25 | RC4-HER13-0.25 | RC4-HER14-0.25 | RC4-CLU07-0.25 | RC4-CLU09-0.25 | RC4-CLU09-0.25 | RC4-CLU11-0.25 | RC4-EX-15-0.25 | RC4-EX-16-0.25 | RC4-EX-17-0.25 |
| Sample Depth | | | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| Relative Organic Vapor, with PID (ppmv-as-iso-b) | | | | 1.8 | 0.3 | 0.0 | 2.5 | 1.9 | 0.4 | 0.0 | 0.5 | 0.4 | 1.0 | 2317 | 635.9 | -- | 1217 | -- | -- | -- |
| Electrical Conductivity, Field (ms/cm) | | | | 0.090 | 0.074 | 0.163 | 0.078 | 0.068 | 0.078 | 0.128 | 0.097 | 0.119 | 0.093 | 0.080 | 0.120 | -- | 0.057 | -- | -- | -- |
| Sampling Company | | | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC | STANTEC |
| Laboratory | | | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN | TALDEN |
| Laboratory Sample ID | | | 280-94601-1 | 280-94682-1 | 280-94682-2 | 280-94768-1 | 280-94768-3 | 280-94768-5 | 280-94682-3 | 280-94682-4 | 280-94790-1 | 280-94790-2 | 280-94790-3 | 280-94768-2 | 280-94768-4 | 280-94768-7 DUPLICATE | 280-94768-6 | 280-95013-1 | 280-95013-2 | 280-95013-3 |
| | Units | Table 910-1 Limit ¹ | | | | | | | | | | | | | | | | | | |
| General Chemistry | | | | | | | | | | | | | | | | | | | | |
| Electrical Conductivity, Lab | mmhos/cm | < 4 or 2x BG | 7.7 | 0.42 | 0.55 | 0.38 | 0.84 | 0.48 | 0.29 | 0.51 | 0.39 | 0.29 | 0.23 | 0.38 | 0.53 | 0.47 | 0.32 | 7.0 | 4.0 | 4.9 |
| Percent Moisture | % | -- | 10.6 | 12.1 | 14.9 | 19.2 | 14.2 | 7.2 | 15.0 | 21.0 | 20.0 | 24.0 | 16.8 | 18.7 | 23.6 | 22.7 | 17.7 | 4.5 | 13.7 | 9.6 |
| Percent Solids | % | -- | 89.4 | 87.9 | 85.1 | 80.8 | 85.8 | 79.0 | 80.0 | 79.0 | 80.0 | 76.0 | 83.2 | 81.3 | 76.4 | 77.3 | 82.3 | 95.5 | 86.3 | 90.4 |
| pH adj. to 25 deg C | S.U. | -- | 7.9 HF | 8.5 HF | 8.3 HF | 8.4 HF | 9.1 HF | 9.5 HF | 8.4 HF | 8.1 HF | 8.3 HF | 8.5 HF | 8.6 HF | 8.5 HF | 8.0 HF | 8.2 HF | 8.5 HF | 8.0 HF | 7.9 HF | 8.0 HF |
| Sodium Adsorption Ratio (SAR) | none | < 12 | 0.80 | 2.8 | 4.2 | 3.1 | 9.1 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | 1.2 | 1.5 | 6.8 | 1.5 | 5.1 | 2.0 | 7.0 |
| Sodium | mg/kg | -- | 110 | 86 | 130 | 91 | 380 | 36 | 32 | <10 | 39 | 12 | 29 | 87 | 130 | 250 | 130 | 680 | 210 | 660 |
| Calcium | mg/kg | -- | 96 | 53 | 59 | 52 | 97 | 260 | 64 | 110 | 87 | 89 | 66 | 310 | 430 | 75 | 390 | 870 | 610 | 520 |
| Magnesium | mg/kg | -- | 29 | 11 | 7.6 | 8.6 | 20 | 50 | 12 | 11 | 13 | 13 | 9.7 | 57 | 89 | 16 | 78 | 290 | 120 | 84 |
| Temperature, Lab | deg C | -- | 20.8 HF | 21.5 HF | 21.2 HF | 21.5 HF | 21.3 HF | 21.3 HF | 21.9 HF | 21.7 HF | 24.3 HF | 24.1 HF | 24.1 HF | 21.9 HF | 22.1 HF | 22.5 HF | 22.2 HF | 19.5 HF | 19.7 HF | 19.8 HF |
| Petroleum Hydrocarbons | | | | | | | | | | | | | | | | | | | | |
| GRO - Gasoline Range Organics (C6-C10) | mg/kg | 500 | 2,700 | <0.59 | <0.47 | <1.1 | <1.4 | <1.2 | <0.56 | <0.42 | <1.3 | 0.45 J | <1.3 | 7,800 | 5,000 | 8,300 | 280 | 860 | 220 | 340 |
| DRO - Diesel Range Organics (C10-C28) | mg/kg | | 9,200 | 4.2 | 2.5 J | 1.5 J | 2.9 J F2 | 7.6 | 5.5 | 2.5 J | 1.6 J | 3.7 J | 1.8 J | 20,000 | 24,000 | 18,000 | 7,100 | 22,000 | 7,900 | 12,000 |
| DRO - Oil Range Organics (C20-C38) | mg/kg | | 4,100 | 6.5 J | 5.6 J | <15 | 6.1 J | 13 | 10 J | < 14 | <15 | <16 | 7.1 J | 8,500 | 9,900 | 7,600 | 3,200 | 7,600 E | 3,600 E | 4,700 E |
| Metals | | | | | | | | | | | | | | | | | | | | |
| Arsenic ² | mg/kg | 0.39 | 7.8 | 6.9 | 7.2 | 7.1 | 7.2 | 6.3 | 7.6 | 7.0 | 7.0 F2 | 6.7 | 6.4 | 5.7 | 5.9 | 6.8 | 6.4 | 7.6 | 7.2 | 7.6 |
| Berium | mg/kg | 15,000 | 240 B | 310 | 120 | 130 B | 120 B | 120 B | <1.1 | 150 | 100 | 110 | 110 | 100 B | 91 B | 89 B | 110 B | 290 F1 | 970 | 150 |
| Boron ¹ | mg/kg | 15 | 15 | 12.8 F2 | 14.8 | 13.8 | 11.8 | 10.8 | 19.1 B | 17.8 | 12 | 8.4 J | 10.8 | 10.8 | 10.8 | 9.4 B | 9.0 B | 14 | 14 | 12 |
| Cadmium | mg/kg | 70 | 0.51 | 0.38 J F2 | 0.39 J | 0.22 J F2 | 0.21 J | 0.17 J | <0.53 | 0.43 J | 0.31 J | 0.29 J | 0.25 J | 0.20 J | 0.17 J | 0.17 J | 0.19 J | 0.57 | 0.60 | 0.46 |
| Calcium | mg/kg | -- | 28,000 B | 22,000 B | 22,000 B | 22,000 B | 23,000 B | 17,000 B | <53 | 26,000 B | 22,000 B | 19,000 B | 17,000 B | 19,000 B | 19,000 B | 21,000 B | 17,000 B | 30,000 B | 27,000 B | 29,000 B |
| Chromium | mg/kg | -- | - | 14 B | 17 B | 15 | 14 | 12 | 0.063 J.B | 19 B | 13 B | 11 B | 9.3 B | 12 | 12 | 13 | 11 | 18 | 18 | 16 |
| Chromium, hex | mg/kg | 23 | 7.3 J | 3.8 J | 3.2 J | 5.8 J | 7.3 F1 | 5.5 | <5.8 | 3.0 J | 6.7 | 6.0 J | 6.1 | 5.8 J | 6.2 J | 5.8 J | 4.6 J | 2.2 J | 3.4 J | 2.6 J |
| Chromium, trivalent | mg/kg | 120,000 | 11 | 10 | 14 | 9.2 | 6.7 | 6.5 | <5.9 | 16 | 6.3 | 5.0 J | 3.2 J | 6.2 | 5.8 J | 7.2 | 6.4 | 16 | 15 | 13 |
| Copper | mg/kg | 3,100 | 17 B | 13 F2 | 14 | 13 | 13 | 10 | <2.1 | 16 | 13 | 12 | 9.9 | 11 | 11 | 12 | 9.8 | 18 | 18 | 17 |
| Lead | mg/kg | 400 | 18 | 14 F2 | 15 | 15 | 14 | 12 | <0.96 | 18 | 14 F2 | 13 | 12 | 12 | 12 | 13 | 12 | 20 F1 | 27 | 19 |
| Magnesium | mg/kg | -- | 11,000 B | 11,000 B | 11,000 B | 9,500 B | 10,000 B | 7,500 B | <21 | 12,000 B | 9,300 B | 8,000 B | 7,000 B | 8,600 B | 8,500 B | 9,600 B | 7,700 B | 12,000 F1.B | 11,000 B | 12,000 B |
| Mercury | mg/kg | 23 | 0.018 J | 0.020 J F2.F1 | 0.018 J | 0.024 | 0.013 J | 0.018 J | 0.013 J | 0.028 | 0.025 | 0.023 J | 0.018 J | 0.017 J | 0.012 J | 0.017 J | 0.0078 J | 0.029 | 0.039 | 0.035 |
| Nickel | mg/kg | 1,600 | 18 B | 13 F2 | 15 | 15 | 13 | 12 | <4.3 | 17 | 15 | 14 | 12 | 11 | 13 | 12 | 19 F1 | 19 | 18 | 18 |
| Selenium | mg/kg | 390 | 1.7 | 0.86 J F2 | 1.1 J | <1.3 F2 | <1.5 | <1.5 | <1.6 | <1.7 | <1.6 F2 | <1.4 | <1.3 | <1.3 | <1.5 | <1.4 | <1.3 | 1.6 F1 | 1.5 J | 0.97 J |
| Silver | mg/kg | 390 | < 0.82 | <1.0 F2 | <0.85 | <0.84 F2 | <0.97 | <0.98 | <1.1 | <1.1 | <1.0 F2 | <0.91 * | <0.86 * | <0.89 | <1.0 | <0.91 | <0.87 | <0.96 | <1.0 | <0.83 |
| Sodium | mg/kg | -- | 840 | 250 J.F2 | 290 J | 250 J.B.F2 | 550 B | 400 J.B | <530 | 140 J | 180 J.F2 | 130 J | 130 J | 200 J.B | 250 J.B | 270 J.B | 130 J.B | 960 | 330 J | 570 |
| Zinc | mg/kg | 23,000 | 80 | 62 | 67 | 62 | 57 | 49 | <3.2 | 77 | 66 | 60 | 57 | 51 | 49 | 54 | 50 | 77 F1 | 73 | 74 |
| Semi - Volatile Organic Compounds | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | mg/kg | 1,000 | <0.22 F1 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | <0.0053 | <0.0057 | <0.0060 | <0.0057 | <0.0063 | 0.0066 | <0.24 | <0.26 | <0.25 | <0.12 | <0.42 | <0.23 | <0.22 |
| Acenaphthylene | mg/kg | 1,000 | <0.22 F1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | -- | -- | -- |
| Anthracene | mg/kg | 1,000 | <0.22 F1 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | <0.0053 | <0.0057 | <0.0060 | <0.0057 | <0.0063 | 0.0017 J | <0.24 | <0.26 | <0.25 | <0.12 | <0.42 | <0.23 | <0.22 |
| Benzo(a)anthracene | mg/kg | 0.22 | <0.22 | 0.0012 J | <0.0059 | <0.0059 | <0.0056 | 0.00096 J | <0.0057 | 0.0029 J | <0.0057 | <0.0063 | 0.027 B | <0.24 | <0.26 | <0.25 | <0.12 | <0.42 | <0.23 | <0.22 |
| Benzo(a)pyrene | mg/kg | 0.022 | <0.22 F1.F2 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | 0.0014 J | <0.0057 | <0.0060 | <0.0057 | <0.0063 | 0.048 B | <0.24 | <0.26 | <0.25 | <0.12 | <0.42 | <0.23 | <0.22 |
| Benzo(b)fluoranthene | mg/kg | 0.22 | 0.063 J.F1.F2 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | 0.0029 J | <0.0057 | <0.0060 | <0.0057 | <0.0063 | 0.071 B | 0.13 J | 0.074 J | 0.098 J | <0.12 | <0.42 | <0.23 | 0.053 J |
| Benzo(g,h,i)perylene | mg/kg | -- | <0.22 F2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Benzo(k)fluoranthene | mg/kg | 2.2 | <0.22 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | 0.0014 J | <0.0057 | <0.0060 | <0.0057 | <0.0063 | 0.026 | <0.24 | <0.26 | <0.25 | <0.12 | <0.42 | <0.23 | <0.22 |
| Chrysene | mg/kg | 22 | 0.81 | 0.0012 J | <0.0059 | <0.0059 | <0.0056 | 0.0032 J | 0.0011 J | 0.0012 J | <0.0057 | 0.0018 J.B | 0.072 B | 1.5 | 1.0 | 1.2 | 0.23 | 1.5 | 0.45 | 0.73 |
| Dibenz (a,h)anthracene | mg/kg | 0.022 | <0.22 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | <0.0053 | <0.0057 | <0.0060 | <0.0057 | <0.0063 | 0.0086 | <0.24 | <0.26 | <0.25 | <0.12 | <0.42 | <0.23 | <0.22 |
| Fluoranthene | mg/kg | 1,000 | <0.22 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | 0.0021 J.B | <0.0057 | <0.0060 | <0.0057 | <0.0063 | 0.14 B | <0.24 | <0.26 | <0.25 | <0.12 | <0.42 | <0.23 | <0.22 |
| Fluorene | mg/kg | 1,000 | 1.3 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | 0.0013 J | <0.0057 | <0.0060 | <0.0057 | <0.0063 | 0.0050 J | 1.9 | 1.3 | 1.5 | 0.31 | 1.6 | 0.67 | 0.93 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.22 | <0.22 | <0.0055 | <0.0059 | <0.0059 | <0.0056 | 0.0023 J | <0.0057 | <0.0060 | <0.00. | | | | | | | | | |

TABLE 2
SUMMARY OF TPH ANALYTICAL RESULTS IN SOIL
RANGELY C-4 INCIDENT
RANGELY, COLORADO

| Sample ID | Sampled By | Description | Division/Area (per 4/14/17 Remediation Plan) | Date Collected | Latitude | Longitude | Visible Product in Sample | Visible Product in Vicinity of Sample | Headspace Screening (ppm) | Analytical Sample Results (GRO, mg/kg) | Analytical Sample Results (DRO, mg/kg) | Total TPH (mg/kg) |
|------------|---------------------------|--------------------------------------|---|-------------------|-------------|--------------|------------------------------|--|---------------------------------|--|--|----------------------|
| RC4-CLU-7 | Stantec | centerline of drainage | 2 | 3/10/2017 | 40.132968 | -108.915992 | Yes | Yes | 2317 | 7800 | 20000 | 27800 |
| RC4-CLU-9 | Stantec | centerline of drainage | 2 | 3/11/2017 | 40.13295 | -108.915416 | Yes | Yes | 654 | 5000 | 24000 | 29000 |
| RC4-CLU-11 | Stantec | centerline of drainage | 2 | 3/11/2017 | 40.133269 | -108.913718 | Yes | Yes | 1217 | 280 | 7100 | 7380 |
| RC4-EX-15 | Eggert/CTEH | confirmation samples from excavation | 1 | 3/18/2017 | 40.131031 | -108.920174 | No | No | NM | 860 | 19000 | 19860 |
| RC4-EX-16 | Eggert/CTEH | confirmation samples from excavation | 1 | 3/18/2017 | 40.131143 | -108.920229 | No | No | NM | 270 | 7800 | 8070 |
| RC4-EX-17 | Eggert/CTEH | confirmation samples from excavation | 1 | 3/19/2017 | 40.131358 | -108.91973 | No | No | NM | 400 | 11000 | 11400 |
| RC4-SC-18 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.131209 | -108.899186 | No | Yes | 122 | 230 | 15000 | 15230 |
| RC4-SC-19 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.131267 | -108.899535 | Yes | Yes | 165 | 590 | 44000 | 44590 |
| RC4-SC-20 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.131291 | -108.899656 | No | No | 125 | 140 | 2600 | 2740 |
| RC4-SC-21 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.131202 | -108.900491 | No | No | 53 | ND (77) | 670 | 670 |
| RC4-SC-22 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.131158 | -108.901228 | No | No | 46 | 34 | 940 | 974 |
| RC4-SC-23 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.131556 | -108.901654 | No | No | 11 | ND (74) | 160 | 160 |
| RC4-SC-24 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.1317 | -108.9022 | No | No | 1 | ND (75) | 5.3 | 5 |
| RC4-SC-25 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.131394 | -108.902627 | No | No | 36 | 27 | 770 | 797 |
| RC4-SC-26 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.1317 | -108.9031 | No | No | 1 | ND (69) | 7 | 7 |
| RC4-SC-27 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.131938 | -108.903647 | No | Yes | 56 | ND (77) | 18 | 18 |
| RC4-SC-28 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.132286 | -108.904163 | Yes | Yes | 192 | 46 | 2500 | 2546 |
| RC4-SC-29 | Eggert/CTEH | screening samples | 4 | 3/20/2017 | 40.1327 | -108.9045 | No | Yes | 27 | ND (170) | 600 | 600 |
| RC4-SC-30 | Eggert/CTEH | screening samples | 4 | 3/21/2017 | 40.132863 | -108.905567 | No | No | 2 | ND (1.5) | 6.6 | 7 |
| RC4-SC-31 | Eggert/CTEH | screening samples | 4 | 3/21/2017 | 40.133111 | -108.906415 | No | No | 2 | 4.4 | 44 | 48 |
| RC4-SC-32 | Eggert/CTEH | screening samples | 3 | 3/21/2017 | 40.133573 | -108.912806 | Yes | Yes | 270 | 1300 | 23000 | 24300 |
| RC4-SC-33 | Eggert/CTEH | screening samples | 3 | 3/21/2017 | 40.134135 | -108.911534 | Yes (light staining) | Yes | 26 | 5.9 | 260 | 266 |
| RC4-SC-34 | Eggert/CTEH | screening samples | 4 | 3/21/2017 | 40.133674 | -108.90899 | No | Yes | 36 | 11 | 400 | 411 |
| RC4-SC-35 | Eggert/CTEH | screening samples | 4 | 3/21/2017 | 40.133056 | -108.907741 | No | No | 4 | 2.6 | 160 | 163 |
| RC4-SC-36 | M.Stauthamer | homogenized screening samples 12" | 4 | 3/22/2017 | 40.131249 | -108.89961 | No | Yes | NM | 4.3 | 170 | 174 |
| RC4-SC-37 | M.Stauthamer | homogenized screening samples 12" | 4 | 3/22/2017 | 40.131065 | -108.898729 | No | Yes | NM | 27 | 220 | 247 |
| RC4-SC-38 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13115772 | -108.920198 | NA | NA | NM | 11 | 750* | 761 |
| RC4-SC-39 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13119642 | -108.920201 | NA | NA | NM | 5.8 | 1600* | 1606 |
| RC4-SC-40 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13119185 | -108.9201603 | NA | NA | NM | 550 | 6000* | 6550 |
| RC4-SC-41 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13115395 | -108.9201093 | NA | NA | NM | 2000 | 42000 | 44000 |
| RC4-SC-42 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13110326 | -108.9201203 | NA | NA | NM | 420 | 2100* | 2520 |
| RC4-SC-43 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13117843 | -108.9200643 | NA | NA | NM | 22 | 1300* | 1322 |
| RC4-SC-44 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13116205 | -108.9199962 | NA | NA | NM | 140 | 7000* | 7140 |
| RC4-SC-45 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13119765 | -108.9199251 | NA | NA | NM | 130 | 2300* | 2430 |
| RC4-SC-46 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13123407 | -108.9199522 | NA | NA | NM | 51 | 2100* | 2151 |

TABLE 2
SUMMARY OF TPH ANALYTICAL RESULTS IN SOIL
RANGELY C-4 INCIDENT
RANGELY, COLORADO

| Sample ID | Sampled By | Description | Division/Area (per 4/14/17 Remediation Plan) | Date Collected | Latitude | Longitude | Visible Product in Sample | Visible Product in Vicinity of Sample | Headspace Screening (ppm) | Analytical Sample Results (GRO, mg/kg) | Analytical Sample Results (DRO, mg/kg) | Total TPH (mg/kg) |
|-------------|---------------------------|-------------------|---|-------------------|-------------|--------------|------------------------------|--|---------------------------------|--|--|----------------------|
| RC4-SC-47 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13121829 | -108.9199033 | NA | NA | NM | 1500 | 5500* | 7000 |
| RC4-SC-48 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13123025 | -108.9198561 | NA | NA | NM | 44 | 2700* | 2744 |
| RC4-SC-49 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13126301 | -108.9198197 | NA | NA | NM | 170 | 7000* | 7170 |
| RC4-SC-50 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13127099 | -108.9197584 | NA | NA | NM | 680 | 14000 | 14680 |
| RC4-SC-51 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13127100 | -108.9197402 | NA | NA | NM | 980 | 16000 | 16980 |
| RC4-SC-52 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13125562 | -108.9196955 | NA | NA | NM | ND (1.4) | 160 | 160 |
| RC4-SC-53 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13128704 | -108.9196888 | NA | NA | NM | 160 | 4600 | 4760 |
| RC4-SC-54 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13128814 | -108.9197029 | NA | NA | NM | 9.7 | 5700 | 5710 |
| RC4-SC-55 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13141971 | -108.9195732 | NA | NA | NM | 140 | 40000 | 40140 |
| RC4-SC-56 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13144994 | -108.9194756 | NA | NA | NM | 18 | 530 | 548 |
| RC4-SC-57 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13149225 | -108.9193363 | NA | NA | NM | 370 | 1400 | 1770 |
| RC4-SC-58 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13155788 | -108.9191833 | NA | NA | NM | 15 | 110 | 125 |
| RC4-SC-59 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13155893 | -108.9190016 | NA | NA | NM | 19 | 350 | 369 |
| RC4-SC-60 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13160684 | -108.9187985 | NA | NA | NM | 98 | 2800 | 2898 |
| RC4-SC-61 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13168676 | -108.9186352 | NA | NA | NM | 460 | 4500 | 4960 |
| RC4-SC-62 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13166933 | -108.9184531 | NA | NA | NM | 33 | 780 | 813 |
| RC4-SC-63 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13171842 | -108.9182517 | NA | NA | NM | 14 | 3600 | 3614 |
| RC4-SC-64 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13178792 | -108.9179793 | NA | NA | NM | 2.2 | 320 | 322 |
| RC4-SC-65 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13198951 | -108.9176244 | NA | NA | NM | ND (1.5) | 20 | 20 |
| RC4-SC-66 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13212917 | -108.9174771 | NA | NA | NM | 2.5 | 1100 | 1103 |
| RC4-SC-67 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13220735 | -108.9171491 | NA | NA | NM | 27 | 390 | 417 |
| RC4-SC-68 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13233440 | -108.9169834 | NA | NA | NM | ND (1.4) | 100 | 100 |
| RC4-SC-69 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13242075 | -108.9168435 | NA | NA | NM | 0.86 J | 59 F1 | 60 |
| RC4-SC-70 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13257064 | -108.9167371 | NA | NA | NM | 0.45 J | 12 | 12 |
| RC4-SC-DUP1 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | | | NA | NA | NM | ND (1.5) | 6.9 | 7 |
| RC4-SC-71 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13270029 | -108.9166054 | NA | NA | NM | 280 | 1100 | 1380 |
| RC4-SC-72 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13280229 | -108.9164232 | NA | NA | NM | 14 | 140 | 154 |
| RC4-SC-73 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13280795 | -108.9168653 | NA | NA | NM | 36 | 1000 | 1036 |
| RC4-SC-74 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13280354 | -108.9167925 | NA | NA | NM | 270 | 3200 | 3470 |
| RC4-SC-75 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13285152 | -108.9167263 | NA | NA | NM | 36 | 330 F2 | 366 |
| RC4-SC-76 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13289166 | -108.9166932 | NA | NA | NM | 70 | 720 | 790 |
| RC4-SC-DUP2 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | | | NA | NA | NM | 97 | 780 | 877 |
| RC4-SC-77 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13292371 | -108.9166645 | NA | NA | NM | 20 | 94 | 114 |
| RC4-SC-78 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13293668 | -108.9165731 | NA | NA | NM | 6.3 | 80 | 86 |
| RC4-SC-79 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13290222 | -108.9165763 | NA | NA | NM | 490 | 800 | 1290 |

TABLE 2
SUMMARY OF TPH ANALYTICAL RESULTS IN SOIL
RANGELY C-4 INCIDENT
RANGELY, COLORADO




































| Sample ID | Sampled By | Description | Division/Area (per 4/14/17 Remediation Plan) | Date Collected | Latitude | Longitude | Visible Product in Sample | Visible Product in Vicinty of Sample | Headspace Screening (ppm) | Analytical Sample Results (GRO, mg/kg) | Analytical Sample Results (DRO, mg/kg) | Total TPH (mg/kg) |
|-------------|---------------------------|-------------------|---|-------------------|-------------|--------------|------------------------------|---|---------------------------------|--|--|---|
| RC4-SC-80 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | 40.13294899 | -108.9164299 | NA | NA | NM | 0.92 J | 45 |  46 |
| RC4-SC-DUP3 | Stantec(Stauthamer/Jones) | screening samples | 1 | 3/30/2017 | | | NA | NA | NM | 0.50 J | 170 |  171 |
| RC4-SC-81 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13293684 | -108.9160956 | NA | NA | NM | 650 | 8900 |  9550 |
| RC4-SC-82 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13297629 | -108.9159934 | NA | NA | NM | 4.7 | 840 |  845 |
| RC4-SC-83 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13299816 | -108.9158969 | NA | NA | NM | 16 | 1800 B |  1816 |
| RC4-SC-84 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13301085 | -108.915735 | NA | NA | NM | 14 | 1800 B |  1814 |
| RC4-SC-85 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13298651 | -108.9155423 | NA | NA | NM | 3.3 | 450 B |  453 |
| RC4-SC-86 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13296355 | -108.9154023 | NA | NA | NM | 89 | 2700 B |  2789 |
| RC4-SC-87 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13292187 | -108.915306 | NA | NA | NM | 32 | 2600 B |  2632 |
| RC4-SC-DUP4 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | | | NA | NA | NM | 34 | 3100 B |  3134 |
| RC4-SC-88 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13294206 | -108.9151284 | NA | NA | NM | 450 | 1200 B |  1650 |
| RC4-SC-89 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13295485 | -108.9148686 | NA | NA | NM | 91 | 6100 B |  6191 |
| RC4-SC-90 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13300722 | -108.9146238 | NA | NA | NM | 400 | 700 B |  1100 |
| RC4-SC-91 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13294953 | -108.9143687 | NA | NA | NM | 120 | 1100 B |  1220 |
| RC4-SC-92 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13300452 | -108.9142437 | NA | NA | NM | 32 F2 | 1100 F2 B |  1132 |
| RC4-SC-93 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13316154 | -108.9138486 | NA | NA | NM | 210 | 5400 B |  5610 |
| RC4-SC-94 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13326456 | -108.9137489 | NA | NA | NM | 1.1 J | 2700 B |  2701 |
| RC4-SC-95 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13327646 | -108.9137031 | NA | NA | NM | 19 | 1900 B |  1919 |
| RC4-SC-96 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13327592 | -108.913608 | NA | NA | NM | 1.5 | 2000 B |  2002 |
| RC4-SC-DUP5 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | | | NA | NA | NM | 16 | 1800 B |  1816 |
| RC4-SC-97 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13325262 | -108.9135491 | NA | NA | NM | 140 F2 | 2500 B |  2640 |
| RC4-SC-98 | Stantec(Stauthamer/Jones) | screening samples | 2 | 3/30/2017 | 40.13313798 | -108.9132972 | NA | NA | NM | 92 | 1100 B |  1192 |
| RC4-SC-99 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13351578 | -108.9128362 | NA | NA | NM | 88 | 440 B |  528 |
| RC4-SC-100 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13352778 | -108.9127868 | NA | NA | NM | 71 | 580 B |  651 |
| RC4-SC-101 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13355411 | -108.9127373 | NA | NA | NM | 420 | 280 |  700 |
| RC4-SC-102 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13356208 | -108.9126956 | NA | NA | NM | 190 | 840 |  1030 |
| RC4-SC-103 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13363559 | -108.9125238 | NA | NA | NM | 27 | 1200 |  1227 |
| RC4-SC-104 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13367875 | -108.912515 | NA | NA | NM | 23 | 740 |  763 |
| RC4-SC-105 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13372155 | -108.9124864 | NA | NA | NM | 26 | 2200 |  2226 |
| RC4-SC-106 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13372953 | -108.912411 | NA | NA | NM | 32 | 950 |  982 |
| RC4-SC-DUP6 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | | | NA | NA | NM | 28 F2 | 500 |  528 |
| RC4-SC-107 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13379113 | -108.9123146 | NA | NA | NM | 6.9 | 270 |  277 |
| RC4-SC-108 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13391297 | -108.9123077 | NA | NA | NM | 26 | 740 |  766 |
| RC4-SC-109 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13401860 | -108.9122965 | NA | NA | NM | 160 | 1600 |  1760 |
| RC4-SC-110 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13403416 | -108.9122817 | NA | NA | NM | 480 | 7600 |  8080 |

TABLE 2
SUMMARY OF TPH ANALYTICAL RESULTS IN SOIL
RANGELY C-4 INCIDENT
RANGELY, COLORADO

| Sample ID | Sampled By | Description | Division/Area (per 4/14/17 Remediation Plan) | Date Collected | Latitude | Longitude | Visible Product in Sample | Visible Product in Vicinty of Sample | Headspace Screening (ppm) | Analytical Sample Results (GRO, mg/kg) | Analytical Sample Results (DRO, mg/kg) | Total TPH (mg/kg) |
|-------------|-----------------------------|------------------------------------|---|-------------------|-------------|--------------|------------------------------|---|---------------------------------|--|--|------------------------------|
| RC4-SC-111 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13402878 | -108.9122599 | NA | NA | NM | 1900 | 12000 | <div><div></div></div> 13900 |
| RC4-SC-112 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13405288 | -108.912054 | NA | NA | NM | 16 | 320 | <div><div></div></div> 336 |
| RC4-SC-113 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13408292 | -108.9119752 | NA | NA | NM | 7.2 | 150 | <div><div></div></div> 157 |
| RC4-SC-114 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13414203 | -108.9119238 | NA | NA | NM | 74 | 400 | <div><div></div></div> 474 |
| RC4-SC-115 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13410098 | -108.9116847 | NA | NA | NM | 5.3 | 91 | <div><div></div></div> 96 |
| RC4-SC-DUP7 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | | | NA | NA | NM | 7.1 | 100 | <div><div></div></div> 107 |
| RC4-SC-116 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13412157 | -108.9114858 | NA | NA | NM | 3.5 F1 | 52 F1 | <div><div></div></div> 56 |
| RC4-SC-117 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13417888 | -108.9113188 | NA | NA | NM | 3.4 | 53 | <div><div></div></div> 56 |
| RC4-SC-118 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13428029 | -108.9111883 | NA | NA | NM | 28 | 8000 | <div><div></div></div> 8028 |
| RC4-SC-119 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13430337 | -108.9110413 | NA | NA | NM | 3.4 | 150 | <div><div></div></div> 153 |
| RC4-SC-120 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13420600 | -108.9107574 | NA | NA | NM | 69 | 2900 | <div><div></div></div> 2969 |
| RC4-SC-121 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13418681 | -108.9106519 | NA | NA | NM | 840 | 9800 | <div><div></div></div> 10640 |
| RC4-SC-122 | Stantec(Stauthamer/Jones) | screening samples | 3 | 3/30/2017 | 40.13415651 | -108.9105702 | NA | NA | NM | 760 | 9100 | <div><div></div></div> 9860 |
| RC4-SC-123 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13394107 | -108.9099972 | NA | NA | NM | 5.5 | 62 | <div><div></div></div> 68 |
| RC4-SC-124 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13372096 | -108.9095146 | NA | NA | NM | 1.8 | 8 | <div><div></div></div> 10 |
| RC4-SC-125 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13368033 | -108.9086433 | NA | NA | NM | 19 | 43 | <div><div></div></div> 62 |
| RC4-SC-126 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13321814 | -108.9080873 | NA | NA | NM | 33 | 52 | <div><div></div></div> 85 |
| RC4-SC-127 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13308178 | -108.9073585 | NA | NA | NM | 8.2 | 6.4 | <div><div></div></div> 15 |
| RC4-SC-128 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13294178 | -108.9066876 | NA | NA | NM | 51 | 300 | <div><div></div></div> 351 |
| RC4-SC-DUP8 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | | | NA | NA | NM | 93 | 470 | <div><div></div></div> 563 |
| RC4-SC-129 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13302365 | -108.9060154 | NA | NA | NM | 60 F2 | 370 F2 | <div><div></div></div> 430 |
| RC4-SC-130 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13284847 | -108.9051904 | NA | NA | NM | 1.3 J | 33 | <div><div></div></div> 34 |
| RC4-SC-131 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13262609 | -108.9044607 | NA | NA | NM | 1.2 J | 160 | <div><div></div></div> 161 |
| RC4-SC-132 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13229645 | -108.9039114 | NA | NA | NM | 0.40 J | 190 | <div><div></div></div> 190 |
| RC4-SC-133 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13215396 | -108.9037163 | NA | NA | NM | 8.9 | 61 | <div><div></div></div> 70 |
| RC4-SC-134 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13184754 | -108.903699 | NA | NA | NM | 5.6 | 350 | <div><div></div></div> 356 |
| RC4-SC-135 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13157188 | -108.902793 | NA | NA | NM | 4.1 | 22 | <div><div></div></div> 26 |
| RC4-SC-136 | Stantec(Stauthamer/Fendler) | screening samples | 4 | 4/4/2017 | 40.13140262 | -108.902532 | NA | NA | NM | ND (1.4) | 14 | <div><div></div></div> 14 |
| RC4-SC-137 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130219 | -108.892122 | NA | NA | NM | ND (1.4) | 13 F1 | <div><div></div></div> 13 |
| RC4-SC-138 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130216 | -108.892007 | NA | NA | NM | ND (1.5) | 11 | <div><div></div></div> 11 |
| RC4-SC-139 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130173 | -108.891964 | NA | NA | NM | 2.3 | 5.8 | <div><div></div></div> 8 |
| RC4-SC-140 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130208 | -108.891954 | NA | NA | NM | 3.3 | 9.2 | <div><div></div></div> 13 |
| RC4-SC-141 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130237 | -108.891936 | NA | NA | NM | ND (1.5) | 33 | <div><div></div></div> 33 |
| RC4-SC-142 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130202 | -108.891916 | NA | NA | NM | ND (1.4) | 27 | <div><div></div></div> 27 |
| RC4-SC-143 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130264 | -108.891923 | NA | NA | NM | 51 | 320 | <div><div></div></div> 371 |

TABLE 2
SUMMARY OF TPH ANALYTICAL RESULTS IN SOIL
RANGELY C-4 INCIDENT
RANGELY, COLORADO

| Sample ID | Sampled By | Description | Division/Area (per 4/14/17 Remediation Plan) | Date Collected | Latitude | Longitude | Visible Product in Sample | Visible Product in Vicinty of Sample | Headspace Screening (ppm) | Analytical Sample Results (GRO, mg/kg) | Analytical Sample Results (DRO, mg/kg) | Total TPH (mg/kg) |
|------------|---------------------------|------------------------------------|---|-------------------|-----------|-------------|------------------------------|---|---------------------------------|--|--|----------------------|
| RC4-SC-144 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130233 | -108.891863 | NA | NA | NM | ND (1.4) | 110 | <div></div> 110 |
| RC4-SC-145 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130193 | -108.891871 | NA | NA | NM | ND (1.4) | 100 | <div></div> 100 |
| RC4-SC-146 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130160 | -108.891899 | NA | NA | NM | ND (1.5) | 70 | <div></div> 70 |
| RC4-SC-147 | Stantec (Stauthamer/Foye) | screening samples - Siphon V basin | 5 | 4/11/2017 | 40.130146 | -108.891951 | NA | NA | NM | ND (1.3) | 3.2 J | <div></div> 3 |

Notes:

ppm

GRO

DRO

Total TPH

mg/kg

15.2

ND

NA

*

B

J

F1

F2

parts per million

Gasoline Range Organics (C6- C10)

Diesel Range Organics (C10-C28)

Total Petroluem Hydrocarbons (values rounded to nearest integer for better display of data).

milligram per kilogram

Concentration was detected.

Analyte was not detected at a concentration greater than the laboratory reportable detection limit.

Parameter not analyzed / not available.

LCS or LCSD is outside the acceptable limits

Indicates analyte was found in associated blank, as well as in the sample.

The reported result is an estimated value.

MS and/or MSD recovery is outside acceptance limits

MS/MSD RPD exceeds control limits

Total TPH > 5000 mg/kg

Total TPH > 500 and <= 5000 mg/kg

Total TPH <= 500

TABLE 3
SUMMARY OF BACKGROUND SAMPLE SOIL ANALYTICAL RESULTS
RANGELY C-4 INCIDENT
RANGELY, COLORADO

| Sample Location Sample Date Sample ID Sampling Company Laboratory Laboratory Sample ID | | | RC4-BA-01 11-Apr-17 RC4-BA-1 STANTEC TALDEN 280-95791-1 | RC4-BA-02 11-Apr-17 RC4-BA-02 STANTEC TALDEN 280-95791-2 | RC4-BA-DUP01 11-Apr-17 RC4-BA-DUP01 STANTEC TALDEN 280-95791-11 | RC4-BA-03 11-Apr-17 RC4-BA-03 STANTEC TALDEN 280-95791-3 | RC4-BA-04 11-Apr-17 RC4-BA-04 STANTEC TALDEN 280-95791-4 | RC4-BA-05 11-Apr-17 RC4-BA-05 STANTEC TALDEN 280-95791-5 | RC4-BA-06 11-Apr-17 RC4-BA-06 STANTEC TALDEN 280-95791-6 | RC4-BA-07 11-Apr-17 RC4-BA-07 STANTEC TALDEN 280-95791-7 | RC4-BA-08 11-Apr-17 RC4-BA-08 STANTEC TALDEN 280-95791-8 | RC4-BA-09 11-Apr-17 RC4-BA-09 STANTEC TALDEN 280-95791-9 | RC4-BA-10 11-Apr-17 RC4-BA-10 STANTEC TALDEN 280-95791-10 | |
|---|----------|-----------------------------------|--|---|--|---|---|---|---|---|---|---|--|--|
| | Units | Table 910-1 Limit ¹ | | | | | | | | | | | | |
| General Chemistry | | | | | | | | | | | | | | |
| Electrical Conductivity, Lab | mmhos/cm | < 4 or 2x BG | 11 | 0.57 | 0.59 | 0.57 | 1.8 | 0.68 | 0.61 | 0.72 | 1.7 | 1.2 | 5.2 | |
| Percent Moisture | % | -- | 21.1 | 10.6 | 10.4 | 14.8 | 4.5 | 20.6 | 18.9 | 26.7 | 12.1 | 17.2 | 12.0 | |
| Percent Solids | % | -- | 78.9 | 89.4 | 89.6 | 85.2 | 95.5 | 79.4 | 81.1 | 73.3 | 87.9 | 82.8 | 88.0 | |
| pH adj. to 25 deg C | S.U. | -- | 7.9 HF | 7.9 HF | 8.0 HF | 8.3 HF | 8.7 HF | 8.2 HF | 8.1 HF | 7.9 HF | 8.8 HF | 9.3 HF | 7.9 HF | |
| Sodium Adsorption Ratio (SAR) | none | < 12 | 19 | <1.2 | <1.2 | <1.2 | 20 | <1.2 | <1.2 | <1.2 | 14 | 16 | 22 | |
| Sodium | mg/kg | -- | 2,900 | 52 | 62 | 13 | 670 | 38 | 53 | 19 | 640 | 470 | 2,700 | |
| Calcium | mg/kg | -- | 1,200 | 120 | 200 | 65 | 67 | 100 | 130 | 87 | 77 | 30 | 500 | |
| Magnesium | mg/kg | -- | 330 | 22 | 36 | 10 | 11 | 15 | 25 | 15 | 45 | 20 | 350 | |
| Temperature, Lab | deg C | -- | 22.1 HF | 22.1 HF | 22.4 HF | 22.3 HF | 22.4 HF | 22.4 HF | 22.4 HF | 22.2 HF | 22.3 HF | 22.0 HF | 22.1 HF | |
| Petroleum Hydrocarbons | | | | | | | | | | | | | | |
| GRO - Gasoline Range Organics (C6-C10) | mg/kg | 500 | <1.3 | <1.3 | <1.2 | <1.2 | <1.2 | <1.3 | 0.74 J | <1.4 | <1.1 | 6.1 | 0.62 J | |
| DRO - Diesel Range Organics (C10-C28) | mg/kg | | 2.9 J | 440 | 580 | 46 | 4.8 | 39 | 15 | 34 | 77 | 12 | 38 | |
| Metals | | | | | | | | | | | | | | |
| Arsenic ² | mg/kg | 0.39 | 6.9 | 9.2 | 9.1 | 7.6 | 8.0 | 6.8 | 7.1 | 6.0 | 7.2 | 6.8 | 6.7 | |
| Barium | mg/kg | 15,000 | 440 F1 | 220 | 200 | 220 | 220 | 200 | 140 | 210 | 190 | 130 | 130 | |
| Boron ³ | mg/kg | -- | 15 | 12 | 10 J | 14 | 14 | 14 | 13 | 19 | 11 | 12 | 12 | |
| Cadmium | mg/kg | 70 | 0.35 J | 0.37 J | 0.36 J | 0.47 J | 0.43 J | 0.40 J | 0.35 J | 0.41 J | 0.29 J | 0.29 J | 0.30 J | |
| Calcium | mg/kg | -- | 22,000 B | 25,000 B | 25,000 B | 23,000 B | 24,000 B | 22,000 B | 22,000 B | 23,000 B | 23,000 B | 23,000 B | 25,000 B | |
| Chromium | mg/kg | -- | 16 | 14 | 13 | 18 | 14 | 16 | 17 | 23 | 12 | 13 | 13 | |
| Chromium, hex | mg/kg | 23 | <6.1 | <5.6 | <5.5 | <57 | <5.1 | <6.2 | <6.1 | <6.7 | <5.7 | <5.9 | <5.5 | |
| Chromium, trivalent | mg/kg | 120,000 | 16 | 14 | 13 | 18 | 14 | 16 | 17 | 23 | 12 | 13 | 13 | |
| Copper | mg/kg | 3,100 | 16 B | 14 B | 14 B | 18 B | 15 B | 20 B | 16 B | 18 B | 14 B | 14 B | 14 B | |
| Lead | mg/kg | 400 | 18 | 15 | 15 | 18 | 16 | 16 | 16 | 19 | 14 | 15 | 15 | |
| Magnesium | mg/kg | -- | 12,000 B | 10,000 B | 11,000 B | 12,000 B | 12,000 B | 11,000 B | 11,000 B | 12,000 B | 11,000 B | 14,000 B | 14,000 B | |
| Mercury | mg/kg | 23 | 0.024 | 0.023 | 0.024 | 0.034 | 0.019 | 0.090 | 0.022 J | 0.065 | 0.024 | 0.020 J | 0.020 J | |
| Nickel | mg/kg | 1,600 | 17 | 16 | 16 | 20 | 16 | 18 | 17 | 21 | 16 | 15 | 15 | |
| Selenium | mg/kg | 390 | <1.9 | 0.97 J | <1.6 | 1.3 J | <1.3 | 0.79 J | <1.9 | <2.0 | 0.97 J | <1.5 | <1.7 | |
| Silver | mg/kg | 390 | <1.3 | <1.0 | <1.1 | <1.1 | <0.90 | <0.84 | <1.2 | <1.3 | <0.88 | <0.99 | <1.1 | |
| Sodium | mg/kg | -- | 2,000 | 360 J | 350 J | 240 J | 870 | 330 J | 240 J | 280 J | 800 | 790 | 1,900 | |
| Zinc | mg/kg | 23,000 | 76 | 130 | 110 | 90 | 75 | 100 | 75 | 94 | 72 | 71 | 71 | |
| Semi - Volatile Organic Compounds | | | | | | | | | | | | | | |
| Acenaphthene | mg/kg | 1,000 | 0.0013 J | <0.11 | <0.11 | <0.0058 | <0.0052 | 0.0012 J | <0.0061 | <0.0067 | <0.0056 | <0.0058 | <0.0054 | |
| Anthracene | mg/kg | 1,000 | 0.0015 J | <0.11 | <0.11 | <0.0058 | 0.0023 J | 0.0028 J | <0.0061 | <0.0067 | <0.0056 | <0.0058 | <0.0054 | |
| Benzo(a)anthracene | mg/kg | 0.22 | 0.0011 J | <0.11 | <0.11 | <0.0058 | <0.0052 | 0.016 | <0.0061 | <0.0067 | <0.0056 | <0.0058 | <0.0054 | |
| Benzo(a)pyrene | mg/kg | 0.022 | <0.0063 | <0.11 | <0.11 | <0.0058 | <0.0052 | 0.028 | <0.0061 | <0.0067 | <0.0056 | <0.0058 | <0.0054 | |
| Benzo(b)fluoranthene | mg/kg | 0.22 | 0.0018 J | <0.11 | <0.11 | 0.0039 J | 0.0025 J | 0.031 | 0.0025 J | 0.0036 J | 0.0027 J | 0.0032 J | 0.0028 J | |
| Benzo(k)fluoranthene | mg/kg | 2.2 | <0.0063 | <0.11 | <0.11 | <0.0058 | <0.0052 | 0.0090 | <0.0061 | <0.0067 | <0.0056 | <0.0058 | <0.0054 | |
| Chrysene | mg/kg | 22 | 0.0027 J | <0.11 | <0.11 | <0.0058 | 0.0037 J | 0.035 | 0.0026 J | <0.0067 | 0.010 | 0.0057 J | 0.0060 | |
| Dibenz (a,h)anthracene | mg/kg | 0.022 | <0.0063 | <0.11 | <0.11 | <0.0058 | <0.0052 | 0.0043 J | <0.0061 | <0.0067 | 0.0034 J | <0.0058 | <0.0054 | |
| Fluoranthene | mg/kg | 1,000 | 0.0052 J | <0.11 | <0.11 | 0.0014 J | 0.0022 J | 0.043 | 0.0016 J | 0.0020 J | 0.0020 J | 0.0023 J | 0.0025 J | |
| Fluorene | mg/kg | 1,000 | 0.0013 J | <0.11 | <0.11 | <0.0058 | <0.0052 | 0.0011 J | <0.0061 | <0.0067 | <0.0056 | 0.00073 J | <0.0054 | |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.22 | <0.0063 | <0.11 | <0.11 | 0.0017 J | <0.0052 | 0.018 | <0.0061 | <0.0067 | 0.0017 J | 0.0021 J | <0.0054 | |
| Naphthalene | mg/kg | 23 | 0.0024 J | <0.11 | <0.11 | 0.0020 J | <0.0052 | 0.0028 J | 0.0013 J | 0.0034 J | 0.0014 J | 0.0036 J | 0.0016 J | |
| Pyrene | mg/kg | 1,000 | 0.0038 J | <0.11 | <0.11 | 0.0014 J | 0.0017 J | 0.037 | 0.0018 J | 0.0025 J | 0.0031 J | 0.0024 J | 0.0028 J | |

TABLE 3
SUMMARY OF BACKGROUND SAMPLE SOIL ANALYTICAL RESULTS
RANGELY C-4 INCIDENT
RANGELY, COLORADO

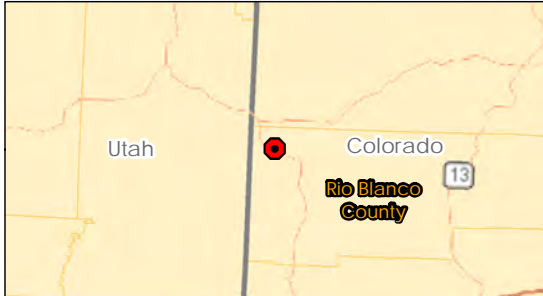
| Sample Location Sample Date Sample ID Sampling Company Laboratory Laboratory Sample ID | | | RC4-BA-01 11-Apr-17 RC4-BA-1 STANTEC TALDEN 280-95791-1 | RC4-BA-02 11-Apr-17 RC4-BA-02 STANTEC TALDEN 280-95791-2 | RC4-BA-DUP01 11-Apr-17 RC4-BA-DUP01 STANTEC TALDEN 280-95791-11 | RC4-BA-03 11-Apr-17 RC4-BA-03 STANTEC TALDEN 280-95791-3 | RC4-BA-04 11-Apr-17 RC4-BA-04 STANTEC TALDEN 280-95791-4 | RC4-BA-05 11-Apr-17 RC4-BA-05 STANTEC TALDEN 280-95791-5 | RC4-BA-06 11-Apr-17 RC4-BA-06 STANTEC TALDEN 280-95791-6 | RC4-BA-07 11-Apr-17 RC4-BA-07 STANTEC TALDEN 280-95791-7 | RC4-BA-08 11-Apr-17 RC4-BA-08 STANTEC TALDEN 280-95791-8 | RC4-BA-09 11-Apr-17 RC4-BA-09 STANTEC TALDEN 280-95791-9 | RC4-BA-10 11-Apr-17 RC4-BA-10 STANTEC TALDEN 280-95791-10 |
|---|-------|-----------------------------------|--|---|--|---|---|---|---|---|---|---|--|
| | Units | Table 910-1 Limit ¹ | | | | | | | | | | | |
| Volatile Organic Compounds | | | | | | | | | | | | | |
| Benzene | mg/kg | 0.17 | 0.0025 J F1 F2 | 0.0023 J | 0.0019 J | 0.0019 J | 0.0026 J | 0.0026 J | 0.0016 J | 0.0023 J | 0.0019 J | 0.0030 J | 0.0027 J |
| Ethylbenzene | mg/kg | 100 | <0.0057 F1 F2 | <0.0053 | <0.0052 | <0.0052 | <0.0049 | <0.0053 | <0.0051 | <0.0063 | <0.0048 | 0.00074 J | <0.0053 |
| Toluene | mg/kg | 85 | 0.0031 J F1 F2 | 0.0031 J | 0.0027 J | 0.0020 J | 0.0033 J | 0.0030 J | 0.0019 J | 0.0027 J | 0.0026 J | 0.0044 J | 0.0032 J |
| Xylenes, Total | mg/kg | 175 | <0.0057 | 0.0015 J | 0.0011 J | <0.0052 | 0.0013 J | <0.0053 | <0.0051 | <0.0063 | 0.0011 J | 0.0030 J | 0.0013 J |

Notes:

ppmv-as-iso-b
ms/cm
mmhos/cm
%
S.U
deg C
mg/kg
mg/l
15.2
<0.03
-
>
B
E
J
F1
F2
HF
1
2
3

parts per million volume as isobutylene
milliSiemens per centimeter
millimhos per centimeter
percent
standard unit
degrees Celsius
milligram per kilogram
milligram per liter
Concentration was detected.
Analyte was not detected at a concentration greater than the laboratory reportable detection limit.
Parameter not analyzed / not available.
Greater than.
Indicates analyte was found in associated blank, as well as in the sample.
Result exceeded calibration range.
The reported result is an estimated value.
MS and/or MSD recovery is outside acceptance limits
MS/MSD RPD exceeds control limits
Field parameter with a holding time of 15 minutes. Test Performed by laboratory at client's request.
Concentrations for the Colorado Oil and Gas Conservation Comission (COGCC) Table 910-1 are taken from the Colorado Department of Public Health and the Environment, Hazardous Materials and Waste Management Division (CDPHE-HMWMD) Table 1 Colorado Soil Evaluation Values (December 2007)
Consideration shall be given to background levels in native soils and ground water.
Pursuant to Rule 910.b.(3).(C) and consistent with its prior practice, the COGCC typically will not require operators to sample for Hot Water Soluble Boron in soils. The current reference to Hot Water Soluble Boron in Table 910-1 is an artifact from the previous version of the Table. The Commission amended the threshold concentrations for metals in soils in December 2008 to conform them to the CDPHE-HMWMD's Table 1 Colorado Soil Evaluation Values (December 2007) (http://www.cdphe.state.co.us/hm/csev.pdf) (CSEV).

Figures



Legend

- Spill Location
- Spill Pathway
- Operational Divisions

Notes

1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

0 700 1,400 Feet
1:8,400 (At original document size of 11x17)



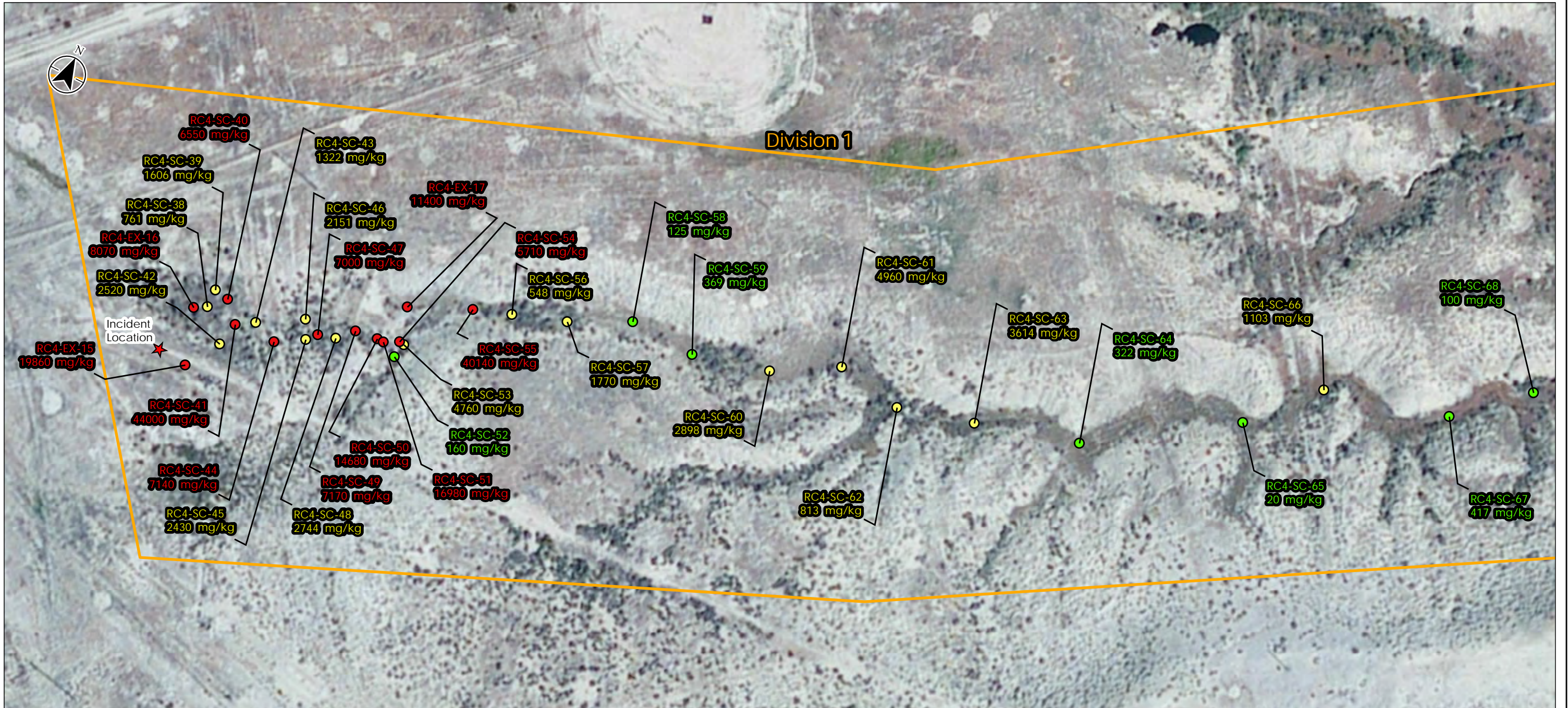
Project Location
Near Rangely
Rio Blanco County, Colorado

Client/Project
Rangely C-4 Spill - Confidential

Figure No.
1

Title
Rangely C-4
Site Layout

Rangely C-4
Site Layout



Legend

- Operational Divisions
- ★ Approximate Spill Location
- TPH Soil Sample Results**
 - Total TPH <= 500
 - Total TPH > 500 and <= 5000 mg/kg
 - Total TPH > 5000 mg/kg

Notes
1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

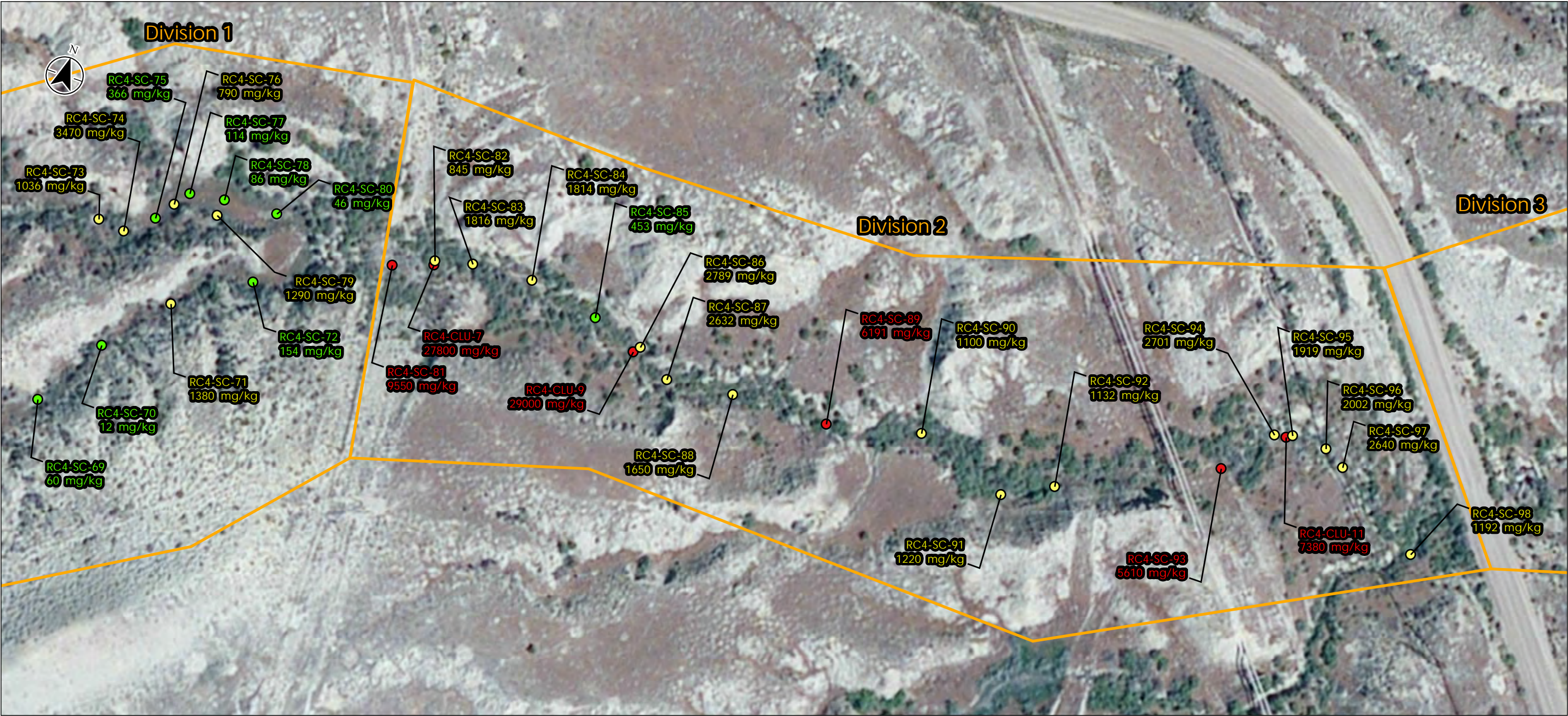
*Rounding of the Total TPH value was conducted to better display data.

0 75 150 Feet
1:900 (At original document size of 11x17)



Project Location
Near Rangely
Rio Blanco County, Colorado
Prepared by LMB on 2017-05-17
Technical Review by TR on 2017-05-17
Independent Review by TM on 2017-05-17
Client/Project
Rangely C-4 Spill - Confidential
Figure No.
2-1
Title

Rangely C-4 TPH Soil Sample Results

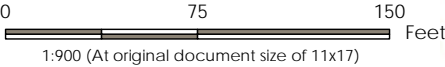


Legend

- Operational Divisions
- Approximate Spill Location
- TPH Soil Sample Results
 - Total TPH <= 500
 - Total TPH > 500 and <= 5000 mg/kg
 - Total TPH > 5000 mg/kg

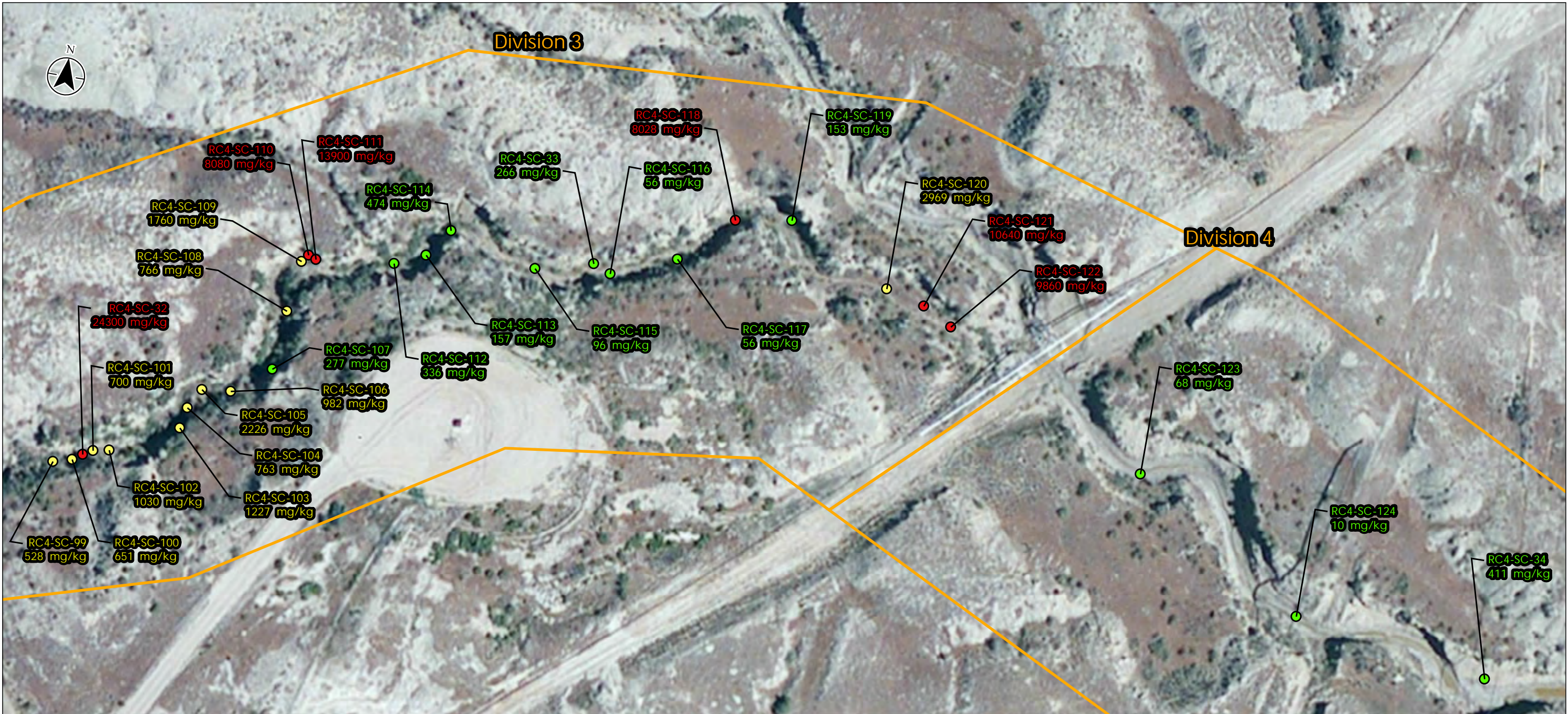
Notes
1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

*Rounding of the Total TPH value was conducted to better display data.



Project Location
Near Rangely
Rio Blanco County, Colorado
Prepared by LMB on 2017-05-17
Technical Review by TR on 2017-05-17
Independent Review by TM on 2017-05-17
Client/Project
Rangely C-4 Spill - Confidential
Figure No.
2-2
Title

Rangely C-4
TPH Soil Sample Results

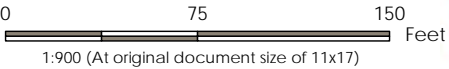


Legend

- Operational Divisions
- Approximate Spill Location
- TPH Soil Sample Results
 - Total TPH <= 500
 - Total TPH > 500 and <= 5000 mg/kg
 - Total TPH > 5000 mg/kg

Notes
1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

*Rounding of the Total TPH value was conducted to better display data.



| | |
|----------------------------------|--|
| Project Location | |
| Near Rangely | |
| Rio Blanco County, Colorado | |
| Client/Project | |
| Rangely C-4 Spill - Confidential | |
| Figure No. | |
| 2-3 | |
| Title | |

Rangely C-4
TPH Soil Sample Results

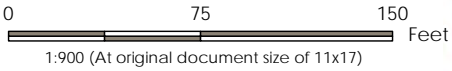


Legend

- Operational Divisions
- Approximate Spill Location
- TPH Soil Sample Results
 - Total TPH <= 500
 - Total TPH > 500 and <= 5000 mg/kg
 - Total TPH > 5000 mg/kg

Notes
1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

*Rounding of the Total TPH value was conducted to better display data.



| | |
|----------------------------------|--|
| Project Location | |
| Near Rangely | |
| Rio Blanco County, Colorado | |
| Client/Project | |
| Rangely C-4 Spill - Confidential | |
| Figure No. | |
| 2-4 | |
| Title | |

Rangely C-4
TPH Soil Sample Results



Legend

- Operational Divisions
- Approximate Spill Location
- TPH Soil Sample Results
 - Total TPH \leq 500
 - Total TPH $>$ 500 and \leq 5000 mg/kg
 - Total TPH $>$ 5000 mg/kg

Notes

- Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
- Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

*Rounding of the Total TPH value was conducted to better display data.

0 75 150 Feet
1:900 (At original document size of 11x17)



Project Location
Near Rangely
Rio Blanco County, Colorado

Prepared by LMB on 2017-05-17
Technical Review by TR on 2017-05-17
Independent Review by TM on 2017-05-17

Client/Project
Rangely C-4 Spill - Confidential

Figure No.
2-5

Title

Rangely C-4 TPH Soil Sample Results

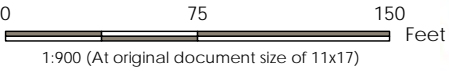


Legend

- Operational Divisions
- Approximate Spill Location
- TPH Soil Sample Results**
 - Total TPH <= 500
 - Total TPH > 500 and <= 5000 mg/kg
 - Total TPH > 5000 mg/kg

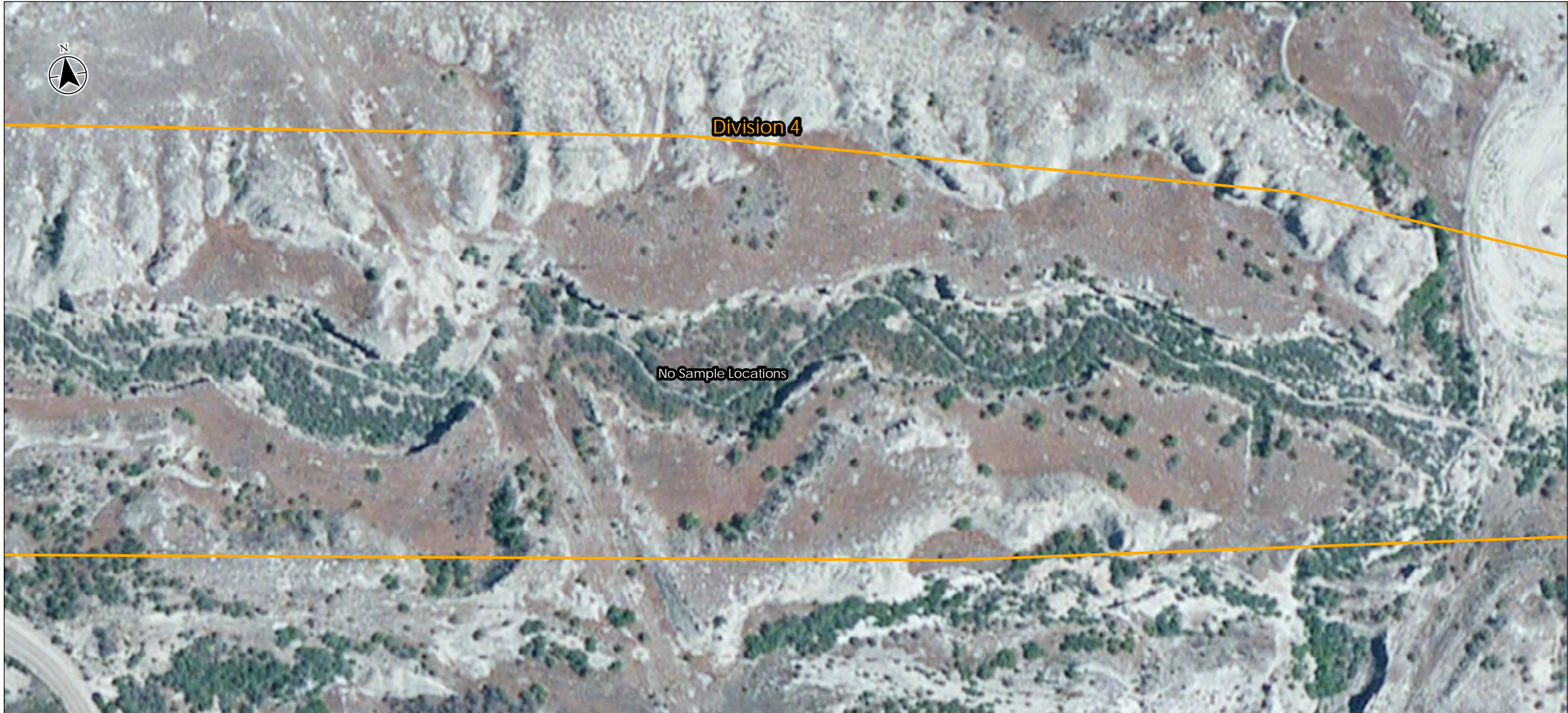
Notes
1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

*Rounding of the Total TPH value was conducted to better display data.



| | |
|----------------------------------|--|
| Project Location | |
| Near Rangely | |
| Rio Blanco County, Colorado | |
| Client/Project | |
| Rangely C-4 Spill - Confidential | |
| Figure No. | |
| 2-6 | |
| Title | |

Rangely C-4
TPH Soil Sample Results

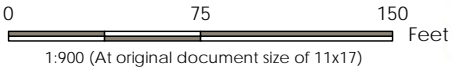


Legend

- Operational Divisions
- ★ Approximate Spill Location
- TPH Soil Sample Results
 - Total TPH <= 500
 - Total TPH > 500 and <= 5000 mg/kg
 - Total TPH > 5000 mg/kg

Notes
1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

*Rounding of the Total TPH value was conducted to better display data.



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| Project Location | |
| Near Rangely | |
| Rio Blanco County, Colorado | |
| Client/Project | |
| Rangely C-4 Spill - Confidential | |
| Figure No. | |
| 2-7 | |
| Title | |

Rangely C-4
TPH Soil Sample Results



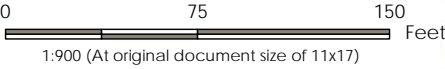
Legend

- Operational Divisions
- Approximate Spill Location
- TPH Soil Sample Results**
 - Total TPH <= 500
 - Total TPH > 500 and <= 5000 mg/kg
 - Total TPH > 5000 mg/kg

Notes

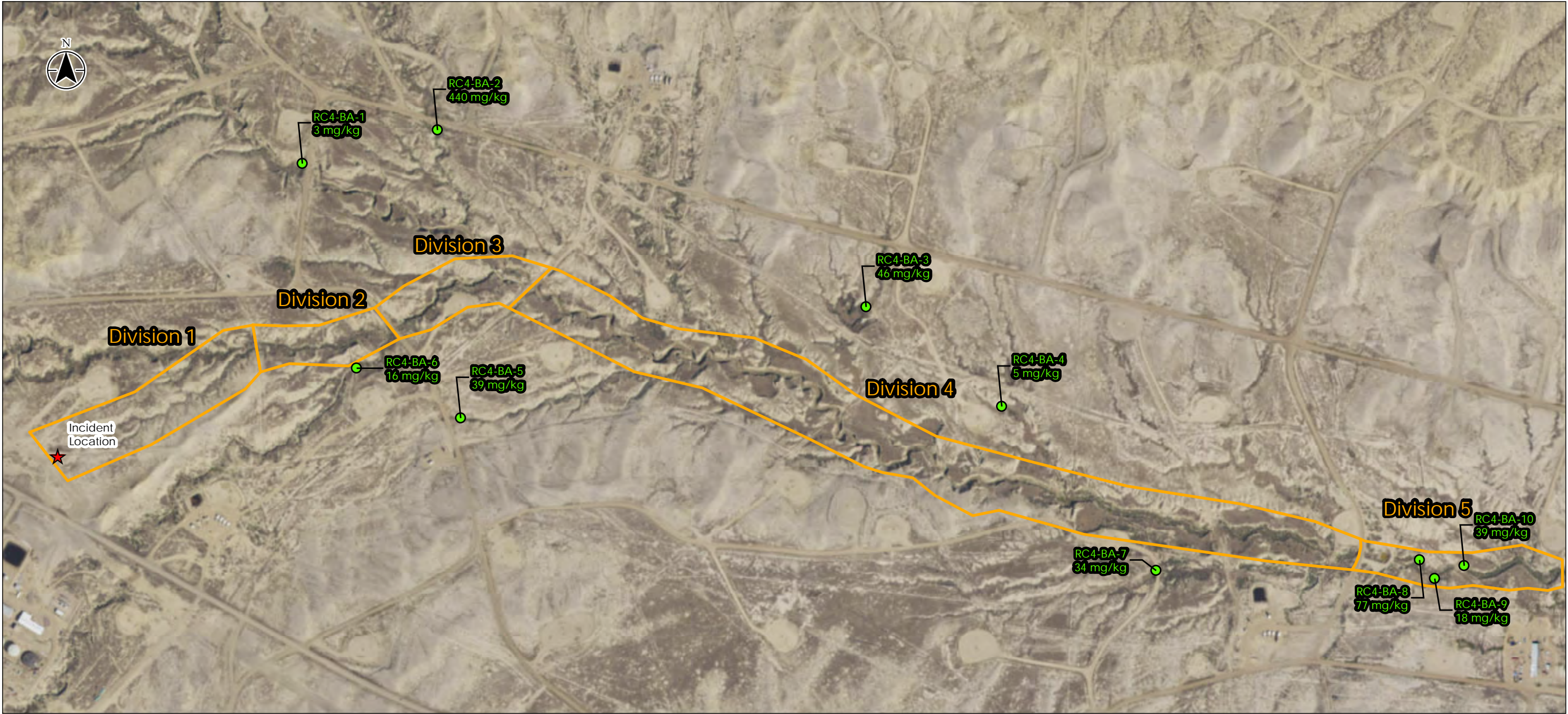
1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

*Rounding of the Total TPH value was conducted to better display data.



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| Project Location | |
| Near Rangely | |
| Rio Blanco County, Colorado | |
| Client/Project | |
| Rangely C-4 Spill - Confidential | |
| Figure No. | |
| 2-8 | |
| Title | |

Rangely C-4 TPH Soil Sample Results



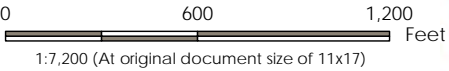
Legend

- Operational Divisions
- Approximate Spill Location

TPH Soil Sample Results

- Total TPH <= 500
- Total TPH > 500 and <= 5000 mg/kg
- Total TPH > 5000 mg/kg

*Rounding of the Total TPH value was conducted to better display data.



Project Location
Near Rangely
Rio Blanco County, Colorado

Prepared by LMB on 2017-05-17
Technical Review by TM on 2017-05-17
Independent Review by TR on 2017-05-17

Client/Project
Rangely C-4 Spill - Confidential

Figure No.
3

Title
**Rangely C-4
TPH Soil Sample Results -
Background Samples**

Notes
1. Coordinate System: NAD 1983 StatePlane Colorado North FIPS 0501 Feet
2. Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendix A

Soil Sample Laboratory Analytical Reports

Appendix B

Background Soil Sample Laboratory Analytical Report

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-95791-1

Client Project/Site: Chevron Rangely, CO C-4

For:

Stantec Consulting Corp.

2000 South Colorado Blvd

Suite 2-300

Denver, Colorado 80222

Attn: Ms. Bethany Lucente



Authorized for release by:

4/26/2017 4:12:37 PM

Jamie Ide, Project Manager I

(303)736-0126

jamie.ide@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|--|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| F2 | MS/MSD RPD exceeds control limits |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| X | Surrogate is outside control limits |

GC/MS Semi VOA

| Qualifier | Qualifier Description |
|-----------|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| D | Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples. |
| X | Surrogate is outside control limits |

GC VOA

| Qualifier | Qualifier Description |
|-----------|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| X | Surrogate is outside control limits |

GC Semi VOA

| Qualifier | Qualifier Description |
|-----------|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| X | Surrogate is outside control limits |

Metals

| Qualifier | Qualifier Description |
|-----------|--|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| B | Compound was found in the blank and sample. |

General Chemistry

| Qualifier | Qualifier Description |
|-----------|--|
| HF | Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |

TestAmerica Denver

Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|--------------|---|
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

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Case Narrative

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Job ID: 280-95791-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Stantec Consulting Corp.
Project: Chevron Rangely, CO C-4
Report Number: 280-95791-1

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

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

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

RECEIPT

The samples were received on 4/12/2017 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.0° C, 3.1° C and 4.1° C.

Per client instructions received on 4/12/2017, the requested 8015B TEPH ORO analyses were not logged.

The laboratory will perform the requested Mercury analyses by method 7471A and Arsenic analysis by method 6020 was logged for each sample per project specifications for metals analytes and historical logging for this project site. The laboratory will proceed as indicated unless instructed otherwise. The client was notified on 4/12/2017.

The requested 7196A CrIII/CrVI analyses were subcontracted to TestAmerica's Nashville laboratory.

The chain of custody requests MS/MSD analysis for 9045D pH, 9050 Conductivity, SAR, and 7196A CrIII. The laboratory does not perform MS/MSD analysis for certain wet chemistry tests and/or calculation methods; therefore, the analyses were not performed and will not be found in this report.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

1,2-Dichloroethane-d4, 4-Bromofluorobenzene and Dibromofluoromethane failed the surrogate recovery criteria high for RC-BA-02 (280-95791-2).

1,2-Dichloroethane-d4 and Dibromofluoromethane failed the surrogate recovery criteria high for RC-BA-05 (280-95791-5).

Internal standard, 1,4-Dichlorobenzene-d4, response was outside of acceptance limits less than 50% recovery for the following samples: RC-BA-02 (280-95791-2), RC-BA-07 (280-95791-7) and RC-BA-08 (280-95791-8). The samples were re-analyzed and exhibited similar results; therefore, the data has been reported from the original analysis.

Internal standards, 1,4-Dichlorobenzene-d4, Fluorobenzene, and Chlorobenzene-d5, responses were outside of acceptance limits less than 50% recovery causing high recovery of surrogates, 4-Bromofluorobenzene, Dibromofluoromethane, and 1,2-Dichloroethane-d4, for the following sample: RC-BA-05 (280-95791-5). The sample was re-analyzed and exhibited similar results; therefore, the data has been reported from the original analysis.

Several analytes failed the recovery criteria for the MS/MSD of sample RC-BA-01 (280-95791-1). The associated LCS was in control; therefore, corrective action was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS - SELECTED ION MODE (SIM)

Nitrobenzene-d5 failed the surrogate recovery criteria high for RC-BA-07 (280-95791-7). The associated sample was non-detect for the affected analytes; therefore, corrective action was not performed.

Case Narrative

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Job ID: 280-95791-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Samples RC-BA-02 (280-95791-2)[20X] and RC-BA-DUP01 (280-95791-11)[20X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GASOLINE RANGE ORGANICS (GRO)

a,a,a-Trifluorotoluene failed the surrogate recovery criteria low for RC-BA-05 (280-95791-5) and RC-BA-07 (280-95791-7). Evidence of matrix interference is present; therefore, corrective action was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL RANGE ORGANICS

The following samples could not be thoroughly homogenized prior to sub-sampling was performed due to the nature of sample matrix: RC-BA-01 (280-95791-1), RC-BA-01 (280-95791-1[MS]), RC-BA-01 (280-95791-1[MSD]), RC-BA-05 (280-95791-5), RC-BA-06 (280-95791-6), RC-BA-07 (280-95791-7) and RC-BA-09 (280-95791-9).

The initial aliquot and surrogate aliquot used for extraction of the following samples was split between two extraction vessels with the routine volume of solvent added to each vessel: RC-BA-01 (280-95791-1), RC-BA-01 (280-95791-1[MS]), RC-BA-01 (280-95791-1[MSD]) and RC-BA-05 (280-95791-5). After the extraction, the extracts from both vessels were combined and concentrated. This was done as the sample matrix was a clay.

o-Terphenyl failed the surrogate recovery criteria high for RC-BA-DUP01 (280-95791-11). Evidence of matrix interference is present; therefore, corrective action was not performed.

o-Terphenyl failed the surrogate recovery criteria low for RC-BA-07 (280-95791-7). Matrix interference was not obvious, and additional re-extraction would be performed outside of analytical holding time.

o-Terphenyl failed the surrogate recovery criteria high for MB 280-369968/1-A, LCS 280-369203/2-A and LCS 280-369968/2-A. The associated analyte recoveries were in control for the MB and LCS. Additionally, re-extraction would be performed outside of analytical holding time; therefore, corrective action was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SODIUM ABSORPTION RATIO

The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: RC-BA-01 (280-95791-1), RC-BA-05 (280-95791-5), RC-BA-06 (280-95791-6), RC-BA-07 (280-95791-7), RC-BA-09 (280-95791-9) and (280-95791-B-1 DU). The samples were clay.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Calcium, Magnesium and Copper were detected in method blank MB 280-369080/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Barium failed the recovery criteria low for the MS/MSD of sample RC-BA-01 (280-95791-1). The associated LCs was in control; therefore, corrective action was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Case Narrative

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Job ID: 280-95791-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

The following sample could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: RC-BA-07 (280-95791-7). The samples could not be completely removed from their containers due to their consistency.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM

Sample RC-BA-03 (280-95791-3)[10X] required dilution prior to analysis due to color. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PH

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ELECTRICAL CONDUCTIVITY

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-01

Lab Sample ID: 280-95791-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|--------|---------|-----------|-----|-----|---|-----------|-----------|
| Benzene | 0.0025 | J F1 F2 | 0.0057 | 0.00054 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Toluene | 0.0031 | J F1 F2 | 0.0057 | 0.00079 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Acenaphthene | 0.0013 | J | 0.0063 | 0.00020 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Anthracene | 0.0015 | J | 0.0063 | 0.00091 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Benzo[a]anthracene | 0.0011 | J | 0.0063 | 0.0011 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Benzo[b]fluoranthene | 0.0018 | J | 0.0063 | 0.0015 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Chrysene | 0.0027 | J | 0.0063 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluoranthene | 0.0052 | J | 0.0063 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluorene | 0.0013 | J | 0.0063 | 0.00060 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Naphthalene | 0.0024 | J | 0.0063 | 0.00041 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Pyrene | 0.0038 | J | 0.0063 | 0.0014 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| DRO (C10-C28) | 2.9 | J | 5.0 | 0.85 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 2900 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 1200 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 330 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Sodium Adsorption Ratio | 19 | | 1.2 | 1.2 | No Unit | 10 | | | 20B | Soluble |
| Barium | 440 | F1 | 1.3 | 0.13 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.35 | J | 0.63 | 0.052 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 16 | | 1.9 | 0.073 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Lead | 18 | | 1.1 | 0.39 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Boron | 15 | | 13 | 1.2 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Calcium | 22000 | B | 63 | 18 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Copper | 16 | B | 2.5 | 0.27 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Magnesium | 12000 | B | 25 | 4.7 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Nickel | 17 | | 5.0 | 0.17 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Sodium | 2000 | | 630 | 74 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Zinc | 76 | | 3.8 | 0.50 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Arsenic | 6.9 | | 0.68 | 0.057 | mg/Kg | 1 | | ✱ | 6020A | Total/NA |
| Mercury | 0.024 | | 0.023 | 0.0074 | mg/Kg | 1 | | ✱ | 7471A | Total/NA |
| Chromium, trivalent | 16 | | 6.3 | 2.5 | mg/Kg | 1 | | ✱ | 7196A | Total/NA |
| pH adj. to 25 deg C | 7.8 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.1 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 11 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

Client Sample ID: RC-BA-02

Lab Sample ID: 280-95791-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|---------------------|--------|-----------|--------|---------|-------|-----|-----|---|--------|-----------|
| Benzene | 0.0023 | J | 0.0053 | 0.00050 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Toluene | 0.0031 | J | 0.0053 | 0.00073 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| m-Xylene & p-Xylene | 0.0015 | J | 0.0026 | 0.0011 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Xylenes, Total | 0.0015 | J | 0.0053 | 0.00064 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| DRO (C10-C28) | 440 | | 4.4 | 0.74 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 52 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 120 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 22 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Barium | 220 | | 1.0 | 0.10 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.37 | J | 0.50 | 0.041 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 14 | | 1.5 | 0.058 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Lead | 15 | | 0.90 | 0.31 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Boron | 12 | | 10 | 0.98 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-02 (Continued)

Lab Sample ID: 280-95791-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|-------|--------|-----------|-----|-----|---|--------|-----------|
| Selenium | 0.97 | J | 1.5 | 0.86 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Calcium | 25000 | B | 50 | 14 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Copper | 14 | B | 2.0 | 0.22 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Magnesium | 10000 | B | 20 | 3.7 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Nickel | 16 | | 4.0 | 0.13 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Sodium | 360 | J | 500 | 59 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Zinc | 130 | | 3.0 | 0.40 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Arsenic | 9.2 | | 0.58 | 0.049 | mg/Kg | 1 | | ✱ | 6020A | Total/NA |
| Mercury | 0.023 | | 0.021 | 0.0069 | mg/Kg | 1 | | ✱ | 7471A | Total/NA |
| Chromium, trivalent | 14 | | 5.6 | 2.2 | mg/Kg | 1 | | ✱ | 7196A | Total/NA |
| pH adj. to 25 deg C | 7.9 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.1 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 0.57 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

Client Sample ID: RC-BA-03

Lab Sample ID: 280-95791-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|--------|---------|-----------|-----|-----|---|-----------|-----------|
| Benzene | 0.0019 | J | 0.0052 | 0.00049 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Toluene | 0.0020 | J | 0.0052 | 0.00072 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Benzo[b]fluoranthene | 0.0039 | J | 0.0058 | 0.0014 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluoranthene | 0.0014 | J | 0.0058 | 0.0012 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.0017 | J | 0.0058 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Naphthalene | 0.0020 | J | 0.0058 | 0.00038 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Pyrene | 0.0014 | J | 0.0058 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| DRO (C10-C28) | 46 | | 4.7 | 0.79 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 13 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 65 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 10 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Barium | 220 | | 1.1 | 0.12 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.47 | J | 0.56 | 0.046 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 18 | | 1.7 | 0.065 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Lead | 18 | | 1.0 | 0.35 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Boron | 14 | | 11 | 1.1 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Selenium | 1.3 | J | 1.7 | 0.96 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Calcium | 23000 | B | 56 | 16 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Copper | 18 | B | 2.2 | 0.24 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Magnesium | 12000 | B | 22 | 4.1 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Nickel | 20 | | 4.5 | 0.15 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Sodium | 240 | J | 560 | 66 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Zinc | 90 | | 3.4 | 0.44 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Arsenic | 7.6 | | 0.67 | 0.056 | mg/Kg | 1 | | ✱ | 6020A | Total/NA |
| Mercury | 0.034 | | 0.022 | 0.0072 | mg/Kg | 1 | | ✱ | 7471A | Total/NA |
| Chromium, trivalent | 18 | | 5.9 | 2.3 | mg/Kg | 1 | | ✱ | 7196A | Total/NA |
| pH adj. to 25 deg C | 8.3 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.3 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 0.57 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

Client Sample ID: RC-BA-04

Lab Sample ID: 280-95791-4

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-04 (Continued)

Lab Sample ID: 280-95791-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|--------|---------|-----------|-----|-----|---|-----------|-----------|
| Benzene | 0.0026 | J | 0.0049 | 0.00046 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Toluene | 0.0033 | J | 0.0049 | 0.00067 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| m-Xylene & p-Xylene | 0.0013 | J | 0.0024 | 0.0010 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Xylenes, Total | 0.0013 | J | 0.0049 | 0.00059 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Anthracene | 0.0023 | J | 0.0052 | 0.00075 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Benzo[b]fluoranthene | 0.0025 | J | 0.0052 | 0.0012 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Chrysene | 0.0037 | J | 0.0052 | 0.0010 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluoranthene | 0.0022 | J | 0.0052 | 0.0010 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Pyrene | 0.0017 | J | 0.0052 | 0.0011 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| DRO (C10-C28) | 4.8 | | 4.0 | 0.68 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 670 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 67 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 11 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Sodium Adsorption Ratio | 20 | | 1.2 | 1.2 | No Unit | 10 | | | 20B | Soluble |
| Barium | 220 | | 0.90 | 0.093 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.43 | J | 0.45 | 0.037 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 14 | | 1.3 | 0.052 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Lead | 16 | | 0.81 | 0.28 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Boron | 14 | | 9.0 | 0.88 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Calcium | 24000 | B | 45 | 13 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Copper | 15 | B | 1.8 | 0.19 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Magnesium | 12000 | B | 18 | 3.3 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Nickel | 16 | | 3.6 | 0.12 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Sodium | 870 | | 450 | 53 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Zinc | 75 | | 2.7 | 0.36 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Arsenic | 8.0 | | 0.50 | 0.042 | mg/Kg | 1 | | ✱ | 6020A | Total/NA |
| Mercury | 0.019 | | 0.019 | 0.0062 | mg/Kg | 1 | | ✱ | 7471A | Total/NA |
| Chromium, trivalent | 14 | | 5.2 | 2.1 | mg/Kg | 1 | | ✱ | 7196A | Total/NA |
| pH adj. to 25 deg C | 8.7 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.4 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 1.8 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

Client Sample ID: RC-BA-05

Lab Sample ID: 280-95791-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|---------|-------|-----|-----|---|-----------|-----------|
| Benzene | 0.0026 | J | 0.0053 | 0.00050 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Toluene | 0.0030 | J | 0.0053 | 0.00073 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Acenaphthene | 0.0012 | J | 0.0063 | 0.00020 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Anthracene | 0.0028 | J | 0.0063 | 0.00090 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Benzo[a]anthracene | 0.016 | | 0.0063 | 0.0011 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Benzo[a]pyrene | 0.028 | | 0.0063 | 0.00093 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Benzo[b]fluoranthene | 0.031 | | 0.0063 | 0.0015 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Benzo[k]fluoranthene | 0.0090 | | 0.0063 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Chrysene | 0.035 | | 0.0063 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Dibenz(a,h)anthracene | 0.0043 | J | 0.0063 | 0.0016 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluoranthene | 0.043 | | 0.0063 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluorene | 0.0011 | J | 0.0063 | 0.00059 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.018 | | 0.0063 | 0.0014 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Naphthalene | 0.0028 | J | 0.0063 | 0.00041 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Pyrene | 0.037 | | 0.0063 | 0.0014 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-05 (Continued)

Lab Sample ID: 280-95791-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|-------|--------|-----------|-----|-----|---|--------|-----------|
| DRO (C10-C28) | 39 | | 4.6 | 0.78 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 38 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 100 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 15 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Barium | 200 | | 0.84 | 0.088 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.40 | J | 0.42 | 0.035 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 16 | | 1.3 | 0.049 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Lead | 16 | | 0.76 | 0.26 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Boron | 14 | | 8.4 | 0.83 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Selenium | 0.79 | J | 1.3 | 0.72 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Calcium | 22000 | B | 42 | 12 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Copper | 20 | B | 1.7 | 0.18 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Magnesium | 11000 | B | 17 | 3.1 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Nickel | 18 | | 3.4 | 0.11 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Sodium | 330 | J | 420 | 50 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Zinc | 100 | | 2.5 | 0.34 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Arsenic | 6.8 | | 0.52 | 0.044 | mg/Kg | 1 | | ✱ | 6020A | Total/NA |
| Mercury | 0.090 | | 0.023 | 0.0076 | mg/Kg | 1 | | ✱ | 7471A | Total/NA |
| Chromium, trivalent | 16 | | 6.3 | 2.5 | mg/Kg | 1 | | ✱ | 7196A | Total/NA |
| pH adj. to 25 deg C | 8.2 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.4 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 0.68 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

Client Sample ID: RC-BA-06

Lab Sample ID: 280-95791-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|----------------------|--------|-----------|--------|---------|-------|-----|-----|---|-----------|-----------|
| Benzene | 0.0016 | J | 0.0051 | 0.00048 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Toluene | 0.0019 | J | 0.0051 | 0.00070 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Benzo[b]fluoranthene | 0.0025 | J | 0.0061 | 0.0015 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Chrysene | 0.0026 | J | 0.0061 | 0.0012 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluoranthene | 0.0016 | J | 0.0061 | 0.0012 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Naphthalene | 0.0013 | J | 0.0061 | 0.00040 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Pyrene | 0.0018 | J | 0.0061 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| GRO (C6-C10) | 0.74 | J | 1.4 | 0.39 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| DRO (C10-C28) | 15 | | 4.8 | 0.81 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 53 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 130 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 25 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Barium | 140 | | 1.2 | 0.13 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.35 | J | 0.62 | 0.051 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 17 | | 1.9 | 0.072 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Lead | 16 | | 1.1 | 0.38 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Boron | 13 | | 12 | 1.2 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Calcium | 22000 | B | 62 | 17 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Copper | 16 | B | 2.5 | 0.27 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Magnesium | 11000 | B | 25 | 4.6 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Nickel | 17 | | 4.9 | 0.16 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Sodium | 240 | J | 620 | 73 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Zinc | 75 | | 3.7 | 0.49 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Arsenic | 7.1 | | 0.69 | 0.058 | mg/Kg | 1 | | ✱ | 6020A | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-06 (Continued)

Lab Sample ID: 280-95791-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|-------|--------|-----------|-----|-----|---|--------|-----------|
| Mercury | 0.022 | J | 0.024 | 0.0077 | mg/Kg | 1 | | ✖ | 7471A | Total/NA |
| Chromium, trivalent | 17 | | 6.2 | 2.5 | mg/Kg | 1 | | ✖ | 7196A | Total/NA |
| pH adj. to 25 deg C | 8.1 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.4 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 0.61 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

Client Sample ID: RC-BA-07

Lab Sample ID: 280-95791-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|--------|---------|-----------|-----|-----|---|-----------|-----------|
| Benzene | 0.0023 | J | 0.0063 | 0.00059 | mg/Kg | 1 | | ✖ | 8260B | Total/NA |
| Toluene | 0.0027 | J | 0.0063 | 0.00087 | mg/Kg | 1 | | ✖ | 8260B | Total/NA |
| Benzo[b]fluoranthene | 0.0036 | J | 0.0067 | 0.0016 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| Fluoranthene | 0.0020 | J | 0.0067 | 0.0013 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| Naphthalene | 0.0034 | J | 0.0067 | 0.00044 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| Pyrene | 0.0025 | J | 0.0067 | 0.0015 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| DRO (C10-C28) | 34 | | 5.3 | 0.90 | mg/Kg | 1 | | ✖ | 8015C | Total/NA |
| Na | 19 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 87 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 15 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Barium | 210 | | 1.3 | 0.14 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Cadmium | 0.41 | J | 0.67 | 0.055 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Chromium | 23 | | 2.0 | 0.077 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Lead | 19 | | 1.2 | 0.41 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Boron | 19 | | 13 | 1.3 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Calcium | 23000 | B | 67 | 19 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Copper | 18 | B | 2.7 | 0.29 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Magnesium | 12000 | B | 27 | 4.9 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Nickel | 21 | | 5.3 | 0.18 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Sodium | 280 | J | 670 | 78 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Zinc | 94 | | 4.0 | 0.53 | mg/Kg | 1 | | ✖ | 6010C | Total/NA |
| Arsenic | 6.0 | | 0.73 | 0.062 | mg/Kg | 1 | | ✖ | 6020A | Total/NA |
| Mercury | 0.065 | | 0.026 | 0.0084 | mg/Kg | 1 | | ✖ | 7471A | Total/NA |
| Chromium, trivalent | 23 | | 6.8 | 2.7 | mg/Kg | 1 | | ✖ | 7196A | Total/NA |
| pH adj. to 25 deg C | 7.9 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.2 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 0.72 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

Client Sample ID: RC-BA-08

Lab Sample ID: 280-95791-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|---------|-------|-----|-----|---|-----------|-----------|
| Benzene | 0.0019 | J | 0.0048 | 0.00045 | mg/Kg | 1 | | ✖ | 8260B | Total/NA |
| Toluene | 0.0026 | J | 0.0048 | 0.00066 | mg/Kg | 1 | | ✖ | 8260B | Total/NA |
| m-Xylene & p-Xylene | 0.0011 | J | 0.0024 | 0.00099 | mg/Kg | 1 | | ✖ | 8260B | Total/NA |
| Xylenes, Total | 0.0011 | J | 0.0048 | 0.00058 | mg/Kg | 1 | | ✖ | 8260B | Total/NA |
| Benzo[b]fluoranthene | 0.0027 | J | 0.0056 | 0.0014 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| Chrysene | 0.010 | | 0.0056 | 0.0011 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| Dibenz(a,h)anthracene | 0.0034 | J | 0.0056 | 0.0015 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| Fluoranthene | 0.0020 | J | 0.0056 | 0.0011 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.0017 | J | 0.0056 | 0.0012 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |
| Naphthalene | 0.0014 | J | 0.0056 | 0.00037 | mg/Kg | 1 | | ✖ | 8270D SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-08 (Continued)

Lab Sample ID: 280-95791-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|--------|--------|-----------|-----|-----|---|-----------|-----------|
| Pyrene | 0.0031 | J | 0.0056 | 0.0012 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| DRO (C10-C28) | 77 | | 4.3 | 0.74 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 640 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 77 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 45 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Sodium Adsorption Ratio | 14 | | 1.2 | 1.2 | No Unit | 10 | | | 20B | Soluble |
| Barium | 190 | | 0.88 | 0.091 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.29 | J | 0.44 | 0.036 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 12 | | 1.3 | 0.051 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Lead | 14 | | 0.79 | 0.27 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Boron | 11 | | 8.8 | 0.86 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Selenium | 0.97 | J | 1.3 | 0.75 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Calcium | 23000 | B | 44 | 12 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Copper | 14 | B | 1.8 | 0.19 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Magnesium | 11000 | B | 18 | 3.2 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Nickel | 16 | | 3.5 | 0.12 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Sodium | 800 | | 440 | 52 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Zinc | 72 | | 2.6 | 0.35 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Arsenic | 7.2 | | 0.60 | 0.051 | mg/Kg | 1 | | ✱ | 6020A | Total/NA |
| Mercury | 0.024 | | 0.020 | 0.0066 | mg/Kg | 1 | | ✱ | 7471A | Total/NA |
| Chromium, trivalent | 12 | | 5.7 | 2.3 | mg/Kg | 1 | | ✱ | 7196A | Total/NA |
| pH adj. to 25 deg C | 8.8 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.3 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 1.7 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

Client Sample ID: RC-BA-09

Lab Sample ID: 280-95791-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|---------|-----------|--------|---------|---------|-----|-----|---|-----------|-----------|
| Benzene | 0.0030 | J | 0.0053 | 0.00050 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Ethylbenzene | 0.00074 | J | 0.0053 | 0.00072 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Toluene | 0.0044 | J | 0.0053 | 0.00074 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| m-Xylene & p-Xylene | 0.0021 | J | 0.0027 | 0.0011 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| o-Xylene | 0.00086 | J | 0.0027 | 0.00065 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Xylenes, Total | 0.0030 | J | 0.0053 | 0.00065 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Benzo[b]fluoranthene | 0.0032 | J | 0.0058 | 0.0014 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Chrysene | 0.0057 | J | 0.0058 | 0.0012 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluoranthene | 0.0023 | J | 0.0058 | 0.0012 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Fluorene | 0.00073 | J | 0.0058 | 0.00055 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.0021 | J | 0.0058 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Naphthalene | 0.0036 | J | 0.0058 | 0.00038 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| Pyrene | 0.0024 | J | 0.0058 | 0.0013 | mg/Kg | 1 | | ✱ | 8270D SIM | Total/NA |
| GRO (C6-C10) | 6.1 | | 1.5 | 0.41 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| DRO (C10-C28) | 12 | | 4.6 | 0.79 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 470 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 30 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 20 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Sodium Adsorption Ratio | 16 | | 1.2 | 1.2 | No Unit | 10 | | | 20B | Soluble |
| Barium | 130 | | 0.99 | 0.10 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.29 | J | 0.49 | 0.041 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 13 | | 1.5 | 0.057 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-09 (Continued)

Lab Sample ID: 280-95791-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|-------|--------|-----------|---------|---|--------|-----------|
| Lead | 15 | | 0.89 | 0.31 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Boron | 12 | | 9.9 | 0.97 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Calcium | 23000 | B | 49 | 14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Copper | 14 | B | 2.0 | 0.21 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Magnesium | 14000 | B | 20 | 3.7 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Nickel | 15 | | 4.0 | 0.13 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Sodium | 790 | | 490 | 58 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Zinc | 71 | | 3.0 | 0.39 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Arsenic | 6.8 | | 0.60 | 0.051 | mg/Kg | 1 | ☼ | 6020A | Total/NA |
| Mercury | 0.020 | J | 0.023 | 0.0076 | mg/Kg | 1 | ☼ | 7471A | Total/NA |
| Chromium, trivalent | 13 | | 6.0 | 2.4 | mg/Kg | 1 | ☼ | 7196A | Total/NA |
| pH adj. to 25 deg C | 9.3 | HF | 0.1 | 0.1 | SU | 1 | | 9045D | Soluble |
| Temperature | 22.0 | HF | 1.0 | 1.0 | Degrees C | 1 | | 9045D | Soluble |
| Electrical Conductivity | 1.2 | | 0.010 | 0.010 | mmhos/cm | 1 | | 9050A | Soluble |

Client Sample ID: RC-BA-10

Lab Sample ID: 280-95791-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|--------|---------|-----------|---------|---|-----------|-----------|
| Benzene | 0.0027 | J | 0.0053 | 0.00050 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Toluene | 0.0032 | J | 0.0053 | 0.00073 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| m-Xylene & p-Xylene | 0.0013 | J | 0.0027 | 0.0011 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Xylenes, Total | 0.0013 | J | 0.0053 | 0.00065 | mg/Kg | 1 | ☼ | 8260B | Total/NA |
| Benzo[b]fluoranthene | 0.0028 | J | 0.0054 | 0.0013 | mg/Kg | 1 | ☼ | 8270D SIM | Total/NA |
| Chrysene | 0.0060 | | 0.0054 | 0.0011 | mg/Kg | 1 | ☼ | 8270D SIM | Total/NA |
| Fluoranthene | 0.0025 | J | 0.0054 | 0.0011 | mg/Kg | 1 | ☼ | 8270D SIM | Total/NA |
| Naphthalene | 0.0016 | J | 0.0054 | 0.00035 | mg/Kg | 1 | ☼ | 8270D SIM | Total/NA |
| Pyrene | 0.0028 | J | 0.0054 | 0.0012 | mg/Kg | 1 | ☼ | 8270D SIM | Total/NA |
| GRO (C6-C10) | 0.62 | J | 1.6 | 0.43 | mg/Kg | 1 | ☼ | 8015C | Total/NA |
| DRO (C10-C28) | 38 | | 4.5 | 0.77 | mg/Kg | 1 | ☼ | 8015C | Total/NA |
| Na | 2700 | | 10 | 10 | mg/Kg | 10 | | 20B | Soluble |
| Ca | 500 | | 2.0 | 2.0 | mg/Kg | 10 | | 20B | Soluble |
| Mg | 350 | | 2.0 | 2.0 | mg/Kg | 10 | | 20B | Soluble |
| Sodium Adsorption Ratio | 22 | | 1.2 | 1.2 | No Unit | 10 | | 20B | Soluble |
| Barium | 130 | | 1.1 | 0.12 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.30 | J | 0.56 | 0.046 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 13 | | 1.7 | 0.065 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 15 | | 1.0 | 0.35 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Boron | 12 | | 11 | 1.1 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Calcium | 25000 | B | 56 | 16 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Copper | 14 | B | 2.2 | 0.24 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Magnesium | 14000 | B | 22 | 4.1 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Nickel | 15 | | 4.5 | 0.15 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Sodium | 1900 | | 560 | 66 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Zinc | 71 | | 3.4 | 0.45 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Arsenic | 6.7 | | 0.59 | 0.050 | mg/Kg | 1 | ☼ | 6020A | Total/NA |
| Mercury | 0.020 | J | 0.023 | 0.0075 | mg/Kg | 1 | ☼ | 7471A | Total/NA |
| Chromium, trivalent | 13 | | 5.7 | 2.3 | mg/Kg | 1 | ☼ | 7196A | Total/NA |
| pH adj. to 25 deg C | 7.9 | HF | 0.1 | 0.1 | SU | 1 | | 9045D | Soluble |
| Temperature | 22.1 | HF | 1.0 | 1.0 | Degrees C | 1 | | 9045D | Soluble |
| Electrical Conductivity | 5.2 | | 0.010 | 0.010 | mmhos/cm | 1 | | 9050A | Soluble |

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-DUP01

Lab Sample ID: 280-95791-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------------------|--------|-----------|--------|---------|-----------|-----|-----|---|--------|-----------|
| Benzene | 0.0019 | J | 0.0052 | 0.00048 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Toluene | 0.0027 | J | 0.0052 | 0.00071 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| m-Xylene & p-Xylene | 0.0011 | J | 0.0026 | 0.0011 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| Xylenes, Total | 0.0011 | J | 0.0052 | 0.00063 | mg/Kg | 1 | | ✱ | 8260B | Total/NA |
| DRO (C10-C28) | 580 | | 4.3 | 0.73 | mg/Kg | 1 | | ✱ | 8015C | Total/NA |
| Na | 62 | | 10 | 10 | mg/Kg | 10 | | | 20B | Soluble |
| Ca | 200 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Mg | 36 | | 2.0 | 2.0 | mg/Kg | 10 | | | 20B | Soluble |
| Barium | 200 | | 1.1 | 0.11 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Cadmium | 0.36 | J | 0.55 | 0.045 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Chromium | 13 | | 1.6 | 0.063 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Lead | 15 | | 0.98 | 0.34 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Boron | 10 | J | 11 | 1.1 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Calcium | 25000 | B | 55 | 15 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Copper | 14 | B | 2.2 | 0.24 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Magnesium | 11000 | B | 22 | 4.0 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Nickel | 16 | | 4.4 | 0.14 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Sodium | 350 | J | 550 | 65 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Zinc | 110 | | 3.3 | 0.44 | mg/Kg | 1 | | ✱ | 6010C | Total/NA |
| Arsenic | 9.1 | | 0.51 | 0.043 | mg/Kg | 1 | | ✱ | 6020A | Total/NA |
| Mercury | 0.024 | | 0.020 | 0.0064 | mg/Kg | 1 | | ✱ | 7471A | Total/NA |
| Chromium, trivalent | 13 | | 5.6 | 2.2 | mg/Kg | 1 | | ✱ | 7196A | Total/NA |
| pH adj. to 25 deg C | 8.0 | HF | 0.1 | 0.1 | SU | 1 | | | 9045D | Soluble |
| Temperature | 22.4 | HF | 1.0 | 1.0 | Degrees C | 1 | | | 9045D | Soluble |
| Electrical Conductivity | 0.59 | | 0.010 | 0.010 | mmhos/cm | 1 | | | 9050A | Soluble |

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

| Method | Method Description | Protocol | Laboratory |
|-----------|--|----------|------------|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL DEN |
| 8270D SIM | Semivolatile Organic Compounds (GC/MS SIM) | SW846 | TAL DEN |
| 8015C | Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics) | SW846 | TAL DEN |
| 8015C | Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) | SW846 | TAL DEN |
| 20B | Sodium Adsorption Ratio | USDA | TAL DEN |
| 6010C | Metals (ICP) | SW846 | TAL DEN |
| 6020A | Metals (ICP/MS) | SW846 | TAL DEN |
| 7471A | Mercury (CVAA) | SW846 | TAL DEN |
| 7196A | Chromium, Hexavalent | SW846 | TAL NSH |
| 7196A | Chromium, Trivalent (Colorimetric) | SW846 | TAL NSH |
| 9045D | pH | SW846 | TAL DEN |
| 9050A | Specific Conductance | SW846 | TAL NSH |
| Moisture | Percent Moisture | EPA | TAL DEN |

Protocol References:

EPA = US Environmental Protection Agency

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

USDA = "USDA Agriculture Handbook 60, section 20B".

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Sample Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 280-95791-1 | RC-BA-01 | Solid | 04/11/17 10:00 | 04/12/17 08:45 |
| 280-95791-2 | RC-BA-02 | Solid | 04/11/17 10:45 | 04/12/17 08:45 |
| 280-95791-3 | RC-BA-03 | Solid | 04/11/17 12:00 | 04/12/17 08:45 |
| 280-95791-4 | RC-BA-04 | Solid | 04/11/17 12:08 | 04/12/17 08:45 |
| 280-95791-5 | RC-BA-05 | Solid | 04/11/17 11:30 | 04/12/17 08:45 |
| 280-95791-6 | RC-BA-06 | Solid | 04/11/17 11:10 | 04/12/17 08:45 |
| 280-95791-7 | RC-BA-07 | Solid | 04/11/17 12:15 | 04/12/17 08:45 |
| 280-95791-8 | RC-BA-08 | Solid | 04/11/17 12:50 | 04/12/17 08:45 |
| 280-95791-9 | RC-BA-09 | Solid | 04/11/17 12:40 | 04/12/17 08:45 |
| 280-95791-10 | RC-BA-10 | Solid | 04/11/17 12:30 | 04/12/17 08:45 |
| 280-95791-11 | RC-BA-DUP01 | Solid | 04/11/17 10:50 | 04/12/17 08:45 |

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0025 | J F1 F2 | 0.0057 | 0.00054 | mg/Kg | ☼ | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| Ethylbenzene | ND | F1 F2 | 0.0057 | 0.00077 | mg/Kg | ☼ | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| Toluene | 0.0031 | J F1 F2 | 0.0057 | 0.00079 | mg/Kg | ☼ | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| m-Xylene & p-Xylene | ND | F1 F2 | 0.0029 | 0.0012 | mg/Kg | ☼ | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| o-Xylene | ND | F1 F2 | 0.0029 | 0.00070 | mg/Kg | ☼ | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| Xylenes, Total | ND | F1 F2 | 0.0057 | 0.00070 | mg/Kg | ☼ | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 136 | | 58 - 140 | | | | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| Toluene-d8 (Surr) | 104 | | 80 - 126 | | | | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| 4-Bromofluorobenzene (Surr) | 108 | | 76 - 127 | | | | 04/11/17 10:00 | 04/17/17 18:55 | 1 |
| Dibromofluoromethane (Surr) | 116 | | 75 - 121 | | | | 04/11/17 10:00 | 04/17/17 18:55 | 1 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0023 | J | 0.0053 | 0.00050 | mg/Kg | ☼ | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| Ethylbenzene | ND | | 0.0053 | 0.00071 | mg/Kg | ☼ | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| Toluene | 0.0031 | J | 0.0053 | 0.00073 | mg/Kg | ☼ | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| m-Xylene & p-Xylene | 0.0015 | J | 0.0026 | 0.0011 | mg/Kg | ☼ | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| o-Xylene | ND | | 0.0026 | 0.00064 | mg/Kg | ☼ | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| Xylenes, Total | 0.0015 | J | 0.0053 | 0.00064 | mg/Kg | ☼ | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 143 | X | 58 - 140 | | | | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| Toluene-d8 (Surr) | 116 | | 80 - 126 | | | | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| 4-Bromofluorobenzene (Surr) | 130 | X | 76 - 127 | | | | 04/11/17 10:45 | 04/17/17 19:58 | 1 |
| Dibromofluoromethane (Surr) | 127 | X | 75 - 121 | | | | 04/11/17 10:45 | 04/17/17 19:58 | 1 |

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0019 | J | 0.0052 | 0.00049 | mg/Kg | ☼ | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| Ethylbenzene | ND | | 0.0052 | 0.00069 | mg/Kg | ☼ | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| Toluene | 0.0020 | J | 0.0052 | 0.00072 | mg/Kg | ☼ | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| m-Xylene & p-Xylene | ND | | 0.0026 | 0.0011 | mg/Kg | ☼ | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| o-Xylene | ND | | 0.0026 | 0.00063 | mg/Kg | ☼ | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| Xylenes, Total | ND | | 0.0052 | 0.00063 | mg/Kg | ☼ | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 129 | | 58 - 140 | | | | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| Toluene-d8 (Surr) | 104 | | 80 - 126 | | | | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| 4-Bromofluorobenzene (Surr) | 107 | | 76 - 127 | | | | 04/11/17 12:00 | 04/17/17 20:19 | 1 |
| Dibromofluoromethane (Surr) | 114 | | 75 - 121 | | | | 04/11/17 12:00 | 04/17/17 20:19 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0026 | J | 0.0049 | 0.00046 | mg/Kg | ☼ | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| Ethylbenzene | ND | | 0.0049 | 0.00065 | mg/Kg | ☼ | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| Toluene | 0.0033 | J | 0.0049 | 0.00067 | mg/Kg | ☼ | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| m-Xylene & p-Xylene | 0.0013 | J | 0.0024 | 0.0010 | mg/Kg | ☼ | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| o-Xylene | ND | | 0.0024 | 0.00059 | mg/Kg | ☼ | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| Xylenes, Total | 0.0013 | J | 0.0049 | 0.00059 | mg/Kg | ☼ | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 132 | | 58 - 140 | | | | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| Toluene-d8 (Surr) | 101 | | 80 - 126 | | | | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| 4-Bromofluorobenzene (Surr) | 102 | | 76 - 127 | | | | 04/11/17 12:08 | 04/17/17 20:40 | 1 |
| Dibromofluoromethane (Surr) | 116 | | 75 - 121 | | | | 04/11/17 12:08 | 04/17/17 20:40 | 1 |

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0026 | J | 0.0053 | 0.00050 | mg/Kg | ☼ | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| Ethylbenzene | ND | | 0.0053 | 0.00071 | mg/Kg | ☼ | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| Toluene | 0.0030 | J | 0.0053 | 0.00073 | mg/Kg | ☼ | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| m-Xylene & p-Xylene | ND | | 0.0027 | 0.0011 | mg/Kg | ☼ | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| o-Xylene | ND | | 0.0027 | 0.00065 | mg/Kg | ☼ | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| Xylenes, Total | ND | | 0.0053 | 0.00065 | mg/Kg | ☼ | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 154 | X | 58 - 140 | | | | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| Toluene-d8 (Surr) | 116 | | 80 - 126 | | | | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| 4-Bromofluorobenzene (Surr) | 121 | | 76 - 127 | | | | 04/11/17 11:30 | 04/17/17 21:01 | 1 |
| Dibromofluoromethane (Surr) | 133 | X | 75 - 121 | | | | 04/11/17 11:30 | 04/17/17 21:01 | 1 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0016 | J | 0.0051 | 0.00048 | mg/Kg | ☼ | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| Ethylbenzene | ND | | 0.0051 | 0.00068 | mg/Kg | ☼ | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| Toluene | 0.0019 | J | 0.0051 | 0.00070 | mg/Kg | ☼ | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| m-Xylene & p-Xylene | ND | | 0.0025 | 0.0011 | mg/Kg | ☼ | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| o-Xylene | ND | | 0.0025 | 0.00062 | mg/Kg | ☼ | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| Xylenes, Total | ND | | 0.0051 | 0.00062 | mg/Kg | ☼ | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 128 | | 58 - 140 | | | | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| Toluene-d8 (Surr) | 97 | | 80 - 126 | | | | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| 4-Bromofluorobenzene (Surr) | 99 | | 76 - 127 | | | | 04/11/17 11:10 | 04/17/17 21:22 | 1 |
| Dibromofluoromethane (Surr) | 112 | | 75 - 121 | | | | 04/11/17 11:10 | 04/17/17 21:22 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0023 | J | 0.0063 | 0.00059 | mg/Kg | ☼ | 04/11/17 12:15 | 04/17/17 21:43 | 1 |
| Ethylbenzene | ND | | 0.0063 | 0.00084 | mg/Kg | ☼ | 04/11/17 12:15 | 04/17/17 21:43 | 1 |
| Toluene | 0.0027 | J | 0.0063 | 0.00087 | mg/Kg | ☼ | 04/11/17 12:15 | 04/17/17 21:43 | 1 |
| m-Xylene & p-Xylene | ND | | 0.0031 | 0.0013 | mg/Kg | ☼ | 04/11/17 12:15 | 04/17/17 21:43 | 1 |
| o-Xylene | ND | | 0.0031 | 0.00077 | mg/Kg | ☼ | 04/11/17 12:15 | 04/17/17 21:43 | 1 |
| Xylenes, Total | ND | | 0.0063 | 0.00077 | mg/Kg | ☼ | 04/11/17 12:15 | 04/17/17 21:43 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 133 | | 58 - 140 | 04/11/17 12:15 | 04/17/17 21:43 | 1 |
| Toluene-d8 (Surr) | 101 | | 80 - 126 | 04/11/17 12:15 | 04/17/17 21:43 | 1 |
| 4-Bromofluorobenzene (Surr) | 107 | | 76 - 127 | 04/11/17 12:15 | 04/17/17 21:43 | 1 |
| Dibromofluoromethane (Surr) | 117 | | 75 - 121 | 04/11/17 12:15 | 04/17/17 21:43 | 1 |

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0019 | J | 0.0048 | 0.00045 | mg/Kg | ☼ | 04/11/17 12:50 | 04/17/17 22:04 | 1 |
| Ethylbenzene | ND | | 0.0048 | 0.00064 | mg/Kg | ☼ | 04/11/17 12:50 | 04/17/17 22:04 | 1 |
| Toluene | 0.0026 | J | 0.0048 | 0.00066 | mg/Kg | ☼ | 04/11/17 12:50 | 04/17/17 22:04 | 1 |
| m-Xylene & p-Xylene | 0.0011 | J | 0.0024 | 0.00099 | mg/Kg | ☼ | 04/11/17 12:50 | 04/17/17 22:04 | 1 |
| o-Xylene | ND | | 0.0024 | 0.00058 | mg/Kg | ☼ | 04/11/17 12:50 | 04/17/17 22:04 | 1 |
| Xylenes, Total | 0.0011 | J | 0.0048 | 0.00058 | mg/Kg | ☼ | 04/11/17 12:50 | 04/17/17 22:04 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 136 | | 58 - 140 | 04/11/17 12:50 | 04/17/17 22:04 | 1 |
| Toluene-d8 (Surr) | 105 | | 80 - 126 | 04/11/17 12:50 | 04/17/17 22:04 | 1 |
| 4-Bromofluorobenzene (Surr) | 112 | | 76 - 127 | 04/11/17 12:50 | 04/17/17 22:04 | 1 |
| Dibromofluoromethane (Surr) | 117 | | 75 - 121 | 04/11/17 12:50 | 04/17/17 22:04 | 1 |

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|---------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0030 | J | 0.0053 | 0.00050 | mg/Kg | ☼ | 04/11/17 12:40 | 04/17/17 22:24 | 1 |
| Ethylbenzene | 0.00074 | J | 0.0053 | 0.00072 | mg/Kg | ☼ | 04/11/17 12:40 | 04/17/17 22:24 | 1 |
| Toluene | 0.0044 | J | 0.0053 | 0.00074 | mg/Kg | ☼ | 04/11/17 12:40 | 04/17/17 22:24 | 1 |
| m-Xylene & p-Xylene | 0.0021 | J | 0.0027 | 0.0011 | mg/Kg | ☼ | 04/11/17 12:40 | 04/17/17 22:24 | 1 |
| o-Xylene | 0.00086 | J | 0.0027 | 0.00065 | mg/Kg | ☼ | 04/11/17 12:40 | 04/17/17 22:24 | 1 |
| Xylenes, Total | 0.0030 | J | 0.0053 | 0.00065 | mg/Kg | ☼ | 04/11/17 12:40 | 04/17/17 22:24 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 133 | | 58 - 140 | 04/11/17 12:40 | 04/17/17 22:24 | 1 |
| Toluene-d8 (Surr) | 101 | | 80 - 126 | 04/11/17 12:40 | 04/17/17 22:24 | 1 |
| 4-Bromofluorobenzene (Surr) | 106 | | 76 - 127 | 04/11/17 12:40 | 04/17/17 22:24 | 1 |
| Dibromofluoromethane (Surr) | 119 | | 75 - 121 | 04/11/17 12:40 | 04/17/17 22:24 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0027 | J | 0.0053 | 0.00050 | mg/Kg | ☼ | 04/11/17 12:30 | 04/17/17 18:13 | 1 |
| Ethylbenzene | ND | | 0.0053 | 0.00071 | mg/Kg | ☼ | 04/11/17 12:30 | 04/17/17 18:13 | 1 |
| Toluene | 0.0032 | J | 0.0053 | 0.00073 | mg/Kg | ☼ | 04/11/17 12:30 | 04/17/17 18:13 | 1 |
| m-Xylene & p-Xylene | 0.0013 | J | 0.0027 | 0.0011 | mg/Kg | ☼ | 04/11/17 12:30 | 04/17/17 18:13 | 1 |
| o-Xylene | ND | | 0.0027 | 0.00065 | mg/Kg | ☼ | 04/11/17 12:30 | 04/17/17 18:13 | 1 |
| Xylenes, Total | 0.0013 | J | 0.0053 | 0.00065 | mg/Kg | ☼ | 04/11/17 12:30 | 04/17/17 18:13 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 132 | | 58 - 140 | 04/11/17 12:30 | 04/17/17 18:13 | 1 |
| Toluene-d8 (Surr) | 104 | | 80 - 126 | 04/11/17 12:30 | 04/17/17 18:13 | 1 |
| 4-Bromofluorobenzene (Surr) | 104 | | 76 - 127 | 04/11/17 12:30 | 04/17/17 18:13 | 1 |
| Dibromofluoromethane (Surr) | 116 | | 75 - 121 | 04/11/17 12:30 | 04/17/17 18:13 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Benzene | 0.0019 | J | 0.0052 | 0.00048 | mg/Kg | ☼ | 04/11/17 10:50 | 04/17/17 18:34 | 1 |
| Ethylbenzene | ND | | 0.0052 | 0.00069 | mg/Kg | ☼ | 04/11/17 10:50 | 04/17/17 18:34 | 1 |
| Toluene | 0.0027 | J | 0.0052 | 0.00071 | mg/Kg | ☼ | 04/11/17 10:50 | 04/17/17 18:34 | 1 |
| m-Xylene & p-Xylene | 0.0011 | J | 0.0026 | 0.0011 | mg/Kg | ☼ | 04/11/17 10:50 | 04/17/17 18:34 | 1 |
| o-Xylene | ND | | 0.0026 | 0.00063 | mg/Kg | ☼ | 04/11/17 10:50 | 04/17/17 18:34 | 1 |
| Xylenes, Total | 0.0011 | J | 0.0052 | 0.00063 | mg/Kg | ☼ | 04/11/17 10:50 | 04/17/17 18:34 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 136 | | 58 - 140 | 04/11/17 10:50 | 04/17/17 18:34 | 1 |
| Toluene-d8 (Surr) | 105 | | 80 - 126 | 04/11/17 10:50 | 04/17/17 18:34 | 1 |
| 4-Bromofluorobenzene (Surr) | 121 | | 76 - 127 | 04/11/17 10:50 | 04/17/17 18:34 | 1 |
| Dibromofluoromethane (Surr) | 118 | | 75 - 121 | 04/11/17 10:50 | 04/17/17 18:34 | 1 |

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | 0.0013 | J | 0.0063 | 0.00020 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Anthracene | 0.0015 | J | 0.0063 | 0.00091 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Benzo[a]anthracene | 0.0011 | J | 0.0063 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Benzo[a]pyrene | ND | | 0.0063 | 0.00094 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Benzo[b]fluoranthene | 0.0018 | J | 0.0063 | 0.0015 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0063 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Chrysene | 0.0027 | J | 0.0063 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.0063 | 0.0016 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Fluoranthene | 0.0052 | J | 0.0063 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Fluorene | 0.0013 | J | 0.0063 | 0.00060 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.0063 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Naphthalene | 0.0024 | J | 0.0063 | 0.00041 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Pyrene | 0.0038 | J | 0.0063 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 15:45 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl | 74 | | 39 - 120 | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Nitrobenzene-d5 | 74 | | 42 - 120 | 04/18/17 09:47 | 04/24/17 15:45 | 1 |
| Terphenyl-d14 | 72 | | 35 - 124 | 04/18/17 09:47 | 04/24/17 15:45 | 1 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|------|--------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.11 | 0.0036 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Anthracene | ND | | 0.11 | 0.016 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Benzo[a]anthracene | ND | | 0.11 | 0.020 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Benzo[a]pyrene | ND | | 0.11 | 0.017 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Benzo[b]fluoranthene | ND | | 0.11 | 0.027 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Benzo[k]fluoranthene | ND | | 0.11 | 0.022 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Chrysene | ND | | 0.11 | 0.022 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Dibenz(a,h)anthracene | ND | | 0.11 | 0.029 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Fluoranthene | ND | | 0.11 | 0.022 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Fluorene | ND | | 0.11 | 0.011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.11 | 0.025 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Naphthalene | ND | | 0.11 | 0.0073 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Pyrene | ND | | 0.11 | 0.025 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:04 | 20 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl | 79 | D | 39 - 120 | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Nitrobenzene-d5 | 102 | D | 42 - 120 | 04/18/17 09:47 | 04/24/17 17:04 | 20 |
| Terphenyl-d14 | 87 | D | 35 - 124 | 04/18/17 09:47 | 04/24/17 17:04 | 20 |

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.0058 | 0.00019 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Anthracene | ND | | 0.0058 | 0.00084 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Benzo[a]anthracene | ND | | 0.0058 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Benzo[a]pyrene | ND | | 0.0058 | 0.00087 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Benzo[b]fluoranthene | 0.0039 | J | 0.0058 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0058 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Chrysene | ND | | 0.0058 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.0058 | 0.0015 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Fluoranthene | 0.0014 | J | 0.0058 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Fluorene | ND | | 0.0058 | 0.00055 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Indeno[1,2,3-cd]pyrene | 0.0017 | J | 0.0058 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Naphthalene | 0.0020 | J | 0.0058 | 0.00038 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Pyrene | 0.0014 | J | 0.0058 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:31 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl | 79 | | 39 - 120 | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Nitrobenzene-d5 | 87 | | 42 - 120 | 04/18/17 09:47 | 04/24/17 17:31 | 1 |
| Terphenyl-d14 | 78 | | 35 - 124 | 04/18/17 09:47 | 04/24/17 17:31 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|---------------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.0052 | 0.00017 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Anthracene | 0.0023 | J | 0.0052 | 0.00075 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Benzo[a]anthracene | ND | | 0.0052 | 0.00094 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Benzo[a]pyrene | ND | | 0.0052 | 0.00077 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Benzo[b]fluoranthene | 0.0025 | J | 0.0052 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0052 | 0.0010 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Chrysene | 0.0037 | J | 0.0052 | 0.0010 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.0052 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Fluoranthene | 0.0022 | J | 0.0052 | 0.0010 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Fluorene | ND | | 0.0052 | 0.00049 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.0052 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Naphthalene | ND | | 0.0052 | 0.00034 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Pyrene | 0.0017 | J | 0.0052 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl | 75 | | 39 - 120 | | | | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Nitrobenzene-d5 | 76 | | 42 - 120 | | | | 04/18/17 09:47 | 04/24/17 17:57 | 1 |
| Terphenyl-d14 | 76 | | 35 - 124 | | | | 04/18/17 09:47 | 04/24/17 17:57 | 1 |

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|---------------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | 0.0012 | J | 0.0063 | 0.00020 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Anthracene | 0.0028 | J | 0.0063 | 0.00090 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Benzo[a]anthracene | 0.016 | | 0.0063 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Benzo[a]pyrene | 0.028 | | 0.0063 | 0.00093 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Benzo[b]fluoranthene | 0.031 | | 0.0063 | 0.0015 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Benzo[k]fluoranthene | 0.0090 | | 0.0063 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Chrysene | 0.035 | | 0.0063 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Dibenz(a,h)anthracene | 0.0043 | J | 0.0063 | 0.0016 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Fluoranthene | 0.043 | | 0.0063 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Fluorene | 0.0011 | J | 0.0063 | 0.00059 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Indeno[1,2,3-cd]pyrene | 0.018 | | 0.0063 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Naphthalene | 0.0028 | J | 0.0063 | 0.00041 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Pyrene | 0.037 | | 0.0063 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl | 80 | | 39 - 120 | | | | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Nitrobenzene-d5 | 92 | | 42 - 120 | | | | 04/18/17 09:47 | 04/24/17 18:24 | 1 |
| Terphenyl-d14 | 80 | | 35 - 124 | | | | 04/18/17 09:47 | 04/24/17 18:24 | 1 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.0061 | 0.00020 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Anthracene | ND | | 0.0061 | 0.00088 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Benzo[a]anthracene | ND | | 0.0061 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Benzo[a]pyrene | ND | | 0.0061 | 0.00091 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: RC-BA-06

Date Collected: 04/11/17 11:10

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6

Matrix: Solid

Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Benzo[b]fluoranthene | 0.0025 | J | 0.0061 | 0.0015 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0061 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Chrysene | 0.0026 | J | 0.0061 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.0061 | 0.0016 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Fluoranthene | 0.0016 | J | 0.0061 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Fluorene | ND | | 0.0061 | 0.00058 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.0061 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Naphthalene | 0.0013 | J | 0.0061 | 0.00040 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Pyrene | 0.0018 | J | 0.0061 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl | 81 | | 39 - 120 | | | | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Nitrobenzene-d5 | 89 | | 42 - 120 | | | | 04/18/17 09:47 | 04/24/17 18:50 | 1 |
| Terphenyl-d14 | 81 | | 35 - 124 | | | | 04/18/17 09:47 | 04/24/17 18:50 | 1 |

Client Sample ID: RC-BA-07

Date Collected: 04/11/17 12:15

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7

Matrix: Solid

Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.0067 | 0.00022 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Anthracene | ND | | 0.0067 | 0.00097 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Benzo[a]anthracene | ND | | 0.0067 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Benzo[a]pyrene | ND | | 0.0067 | 0.0010 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Benzo[b]fluoranthene | 0.0036 | J | 0.0067 | 0.0016 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0067 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Chrysene | ND | | 0.0067 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.0067 | 0.0018 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Fluoranthene | 0.0020 | J | 0.0067 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Fluorene | ND | | 0.0067 | 0.00063 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.0067 | 0.0015 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Naphthalene | 0.0034 | J | 0.0067 | 0.00044 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Pyrene | 0.0025 | J | 0.0067 | 0.0015 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl | 84 | | 39 - 120 | | | | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Nitrobenzene-d5 | 132 | X | 42 - 120 | | | | 04/18/17 09:47 | 04/24/17 19:17 | 1 |
| Terphenyl-d14 | 82 | | 35 - 124 | | | | 04/18/17 09:47 | 04/24/17 19:17 | 1 |

Client Sample ID: RC-BA-08

Date Collected: 04/11/17 12:50

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8

Matrix: Solid

Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.0056 | 0.00018 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Anthracene | ND | | 0.0056 | 0.00081 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Benzo[a]anthracene | ND | | 0.0056 | 0.0010 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Benzo[a]pyrene | ND | | 0.0056 | 0.00084 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Benzo[b]fluoranthene | 0.0027 | J | 0.0056 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0056 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Chrysene | 0.010 | | 0.0056 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Dibenz(a,h)anthracene | 0.0034 | J | 0.0056 | 0.0015 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Fluoranthene | 0.0020 | J | 0.0056 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Fluorene | ND | | 0.0056 | 0.00053 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Indeno[1,2,3-cd]pyrene | 0.0017 | J | 0.0056 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Naphthalene | 0.0014 | J | 0.0056 | 0.00037 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Pyrene | 0.0031 | J | 0.0056 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl | 78 | | 39 - 120 | | | | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Nitrobenzene-d5 | 89 | | 42 - 120 | | | | 04/18/17 09:47 | 04/24/17 19:43 | 1 |
| Terphenyl-d14 | 80 | | 35 - 124 | | | | 04/18/17 09:47 | 04/24/17 19:43 | 1 |

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.0058 | 0.00019 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Anthracene | ND | | 0.0058 | 0.00084 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Benzo[a]anthracene | ND | | 0.0058 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Benzo[a]pyrene | ND | | 0.0058 | 0.00086 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Benzo[b]fluoranthene | 0.0032 | J | 0.0058 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0058 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Chrysene | 0.0057 | J | 0.0058 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.0058 | 0.0015 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Fluoranthene | 0.0023 | J | 0.0058 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Fluorene | 0.00073 | J | 0.0058 | 0.00055 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Indeno[1,2,3-cd]pyrene | 0.0021 | J | 0.0058 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Naphthalene | 0.0036 | J | 0.0058 | 0.00038 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Pyrene | 0.0024 | J | 0.0058 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl | 83 | | 39 - 120 | | | | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Nitrobenzene-d5 | 93 | | 42 - 120 | | | | 04/18/17 09:47 | 04/24/17 20:09 | 1 |
| Terphenyl-d14 | 83 | | 35 - 124 | | | | 04/18/17 09:47 | 04/24/17 20:09 | 1 |

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|--------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.0054 | 0.00017 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Anthracene | ND | | 0.0054 | 0.00077 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Benzo[a]anthracene | ND | | 0.0054 | 0.00096 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Benzo[a]pyrene | ND | | 0.0054 | 0.00079 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Benzo[b]fluoranthene | 0.0028 | J | 0.0054 | 0.0013 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0054 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Chrysene | 0.0060 | | 0.0054 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.0054 | 0.0014 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Fluoranthene | 0.0025 | J | 0.0054 | 0.0011 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Fluorene | ND | | 0.0054 | 0.00050 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.0054 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Naphthalene | 0.0016 | J | 0.0054 | 0.00035 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|-----------|-----------|----------|--------|-------|---|----------------|----------------|---------|
| Pyrene | 0.0028 | J | 0.0054 | 0.0012 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl | 72 | | 39 - 120 | | | | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Nitrobenzene-d5 | 84 | | 42 - 120 | | | | 04/18/17 09:47 | 04/24/17 20:35 | 1 |
| Terphenyl-d14 | 71 | | 35 - 124 | | | | 04/18/17 09:47 | 04/24/17 20:35 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|--------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.11 | 0.0035 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Anthracene | ND | | 0.11 | 0.016 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Benzo[a]anthracene | ND | | 0.11 | 0.020 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Benzo[a]pyrene | ND | | 0.11 | 0.016 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Benzo[b]fluoranthene | ND | | 0.11 | 0.026 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Benzo[k]fluoranthene | ND | | 0.11 | 0.022 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Chrysene | ND | | 0.11 | 0.022 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Dibenz(a,h)anthracene | ND | | 0.11 | 0.028 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Fluoranthene | ND | | 0.11 | 0.022 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Fluorene | ND | | 0.11 | 0.010 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.11 | 0.024 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Naphthalene | ND | | 0.11 | 0.0071 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Pyrene | ND | | 0.11 | 0.024 | mg/Kg | ☼ | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl | 74 | D | 39 - 120 | | | | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Nitrobenzene-d5 | 104 | D | 42 - 120 | | | | 04/18/17 09:47 | 04/24/17 21:02 | 20 |
| Terphenyl-d14 | 90 | D | 35 - 124 | | | | 04/18/17 09:47 | 04/24/17 21:02 | 20 |

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.3 | 0.37 | mg/Kg | ☼ | 04/11/17 10:00 | 04/18/17 23:34 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 82 | | 77 - 123 | | | | 04/11/17 10:00 | 04/18/17 23:34 | 1 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.3 | 0.34 | mg/Kg | ☼ | 04/11/17 10:45 | 04/18/17 22:45 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 91 | | 77 - 123 | | | | 04/11/17 10:45 | 04/18/17 22:45 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.2 | 0.32 | mg/Kg | ☼ | 04/11/17 12:00 | 04/19/17 00:48 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 85 | | 77 - 123 | | | | 04/11/17 12:00 | 04/19/17 00:48 | 1 |

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.2 | 0.33 | mg/Kg | ☼ | 04/11/17 12:08 | 04/19/17 01:13 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 90 | | 77 - 123 | | | | 04/11/17 12:08 | 04/19/17 01:13 | 1 |

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.3 | 0.36 | mg/Kg | ☼ | 04/11/17 11:30 | 04/19/17 01:38 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 74 | X | 77 - 123 | | | | 04/11/17 11:30 | 04/19/17 01:38 | 1 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | 0.74 | J | 1.4 | 0.39 | mg/Kg | ☼ | 04/11/17 11:10 | 04/19/17 02:02 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 82 | | 77 - 123 | | | | 04/11/17 11:10 | 04/19/17 02:02 | 1 |

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.4 | 0.38 | mg/Kg | ☼ | 04/11/17 12:15 | 04/19/17 02:27 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 68 | X | 77 - 123 | | | | 04/11/17 12:15 | 04/19/17 02:27 | 1 |

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.1 | 0.31 | mg/Kg | ☼ | 04/11/17 12:50 | 04/19/17 02:51 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 94 | | 77 - 123 | | | | 04/11/17 12:50 | 04/19/17 02:51 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | 6.1 | | 1.5 | 0.41 | mg/Kg | ☼ | 04/11/17 12:40 | 04/19/17 03:16 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 87 | | 77 - 123 | | | | 04/11/17 12:40 | 04/19/17 03:16 | 1 |

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | 0.62 | J | 1.6 | 0.43 | mg/Kg | ☼ | 04/11/17 12:30 | 04/19/17 03:41 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 98 | | 77 - 123 | | | | 04/11/17 12:30 | 04/19/17 03:41 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.2 | 0.32 | mg/Kg | ☼ | 04/11/17 10:50 | 04/19/17 04:05 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene | 78 | | 77 - 123 | | | | 04/11/17 10:50 | 04/19/17 04:05 | 1 |

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 2.9 | J | 5.0 | 0.85 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 05:51 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 90 | | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 05:51 | 1 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 440 | | 4.4 | 0.74 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 07:53 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 107 | | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 07:53 | 1 |

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 46 | | 4.7 | 0.79 | mg/Kg | ☼ | 04/19/17 09:05 | 04/24/17 23:04 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 115 | | 49 - 115 | | | | 04/19/17 09:05 | 04/24/17 23:04 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 4.8 | | 4.0 | 0.68 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 08:18 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 92 | | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 08:18 | 1 |

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 39 | | 4.6 | 0.78 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 08:42 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 93 | | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 08:42 | 1 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 15 | | 4.8 | 0.81 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 09:06 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 79 | | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 09:06 | 1 |

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 34 | | 5.3 | 0.90 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 09:31 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 38 | X | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 09:31 | 1 |

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 77 | | 4.3 | 0.74 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 09:55 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 98 | | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 09:55 | 1 |

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 12 | | 4.6 | 0.79 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 10:19 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 68 | | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 10:19 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 38 | | 4.5 | 0.77 | mg/Kg | ☼ | 04/19/17 09:05 | 04/24/17 23:29 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 105 | | 49 - 115 | | | | 04/19/17 09:05 | 04/24/17 23:29 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | 580 | | 4.3 | 0.73 | mg/Kg | ☼ | 04/13/17 08:29 | 04/22/17 10:44 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-Terphenyl (Surr) | 133 | X | 49 - 115 | | | | 04/13/17 08:29 | 04/22/17 10:44 | 1 |

Method: 20B - Sodium Adsorption Ratio - Soluble

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 2900 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 01:58 | 10 |
| Ca | 1200 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 01:58 | 10 |
| Mg | 330 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 01:58 | 10 |
| Sodium Adsorption Ratio | 19 | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 01:58 | 10 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 52 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:07 | 10 |
| Ca | 120 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:07 | 10 |
| Mg | 22 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:07 | 10 |
| Sodium Adsorption Ratio | ND | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:07 | 10 |

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 13 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:10 | 10 |
| Ca | 65 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:10 | 10 |
| Mg | 10 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:10 | 10 |
| Sodium Adsorption Ratio | ND | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:10 | 10 |

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 670 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:12 | 10 |
| Ca | 67 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:12 | 10 |
| Mg | 11 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:12 | 10 |
| Sodium Adsorption Ratio | 20 | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:12 | 10 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 20B - Sodium Adsorption Ratio - Soluble

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 38 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:15 | 10 |
| Ca | 100 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:15 | 10 |
| Mg | 15 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:15 | 10 |
| Sodium Adsorption Ratio | ND | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:15 | 10 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 53 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:18 | 10 |
| Ca | 130 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:18 | 10 |
| Mg | 25 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:18 | 10 |
| Sodium Adsorption Ratio | ND | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:18 | 10 |

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 19 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:21 | 10 |
| Ca | 87 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:21 | 10 |
| Mg | 15 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:21 | 10 |
| Sodium Adsorption Ratio | ND | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:21 | 10 |

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 640 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:35 | 10 |
| Ca | 77 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:35 | 10 |
| Mg | 45 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:35 | 10 |
| Sodium Adsorption Ratio | 14 | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:35 | 10 |

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 470 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:38 | 10 |
| Ca | 30 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:38 | 10 |
| Mg | 20 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:38 | 10 |
| Sodium Adsorption Ratio | 16 | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:38 | 10 |

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 2700 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:41 | 10 |
| Ca | 500 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:41 | 10 |
| Mg | 350 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:41 | 10 |
| Sodium Adsorption Ratio | 22 | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:41 | 10 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 20B - Sodium Adsorption Ratio - Soluble

Client Sample ID: RC-BA-DUP01

Date Collected: 04/11/17 10:50

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11

Matrix: Solid

Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-----|-----|---------|---|----------------|----------------|---------|
| Na | 62 | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:44 | 10 |
| Ca | 200 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:44 | 10 |
| Mg | 36 | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 02:44 | 10 |
| Sodium Adsorption Ratio | ND | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 02:44 | 10 |

Method: 6010C - Metals (ICP)

Client Sample ID: RC-BA-01

Date Collected: 04/11/17 10:00

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1

Matrix: Solid

Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 440 | F1 | 1.3 | 0.13 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Cadmium | 0.35 | J | 0.63 | 0.052 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Chromium | 16 | | 1.9 | 0.073 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Lead | 18 | | 1.1 | 0.39 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Boron | 15 | | 13 | 1.2 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Selenium | ND | | 1.9 | 1.1 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Silver | ND | | 1.3 | 0.20 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Calcium | 22000 | B | 63 | 18 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Copper | 16 | B | 2.5 | 0.27 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 18:34 | 1 |
| Magnesium | 12000 | B | 25 | 4.7 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Nickel | 17 | | 5.0 | 0.17 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Sodium | 2000 | | 630 | 74 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |
| Zinc | 76 | | 3.8 | 0.50 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:23 | 1 |

Client Sample ID: RC-BA-02

Date Collected: 04/11/17 10:45

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2

Matrix: Solid

Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 220 | | 1.0 | 0.10 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Cadmium | 0.37 | J | 0.50 | 0.041 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Chromium | 14 | | 1.5 | 0.058 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Lead | 15 | | 0.90 | 0.31 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Boron | 12 | | 10 | 0.98 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Selenium | 0.97 | J | 1.5 | 0.86 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Silver | ND | | 1.0 | 0.16 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Calcium | 25000 | B | 50 | 14 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Copper | 14 | B | 2.0 | 0.22 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 18:47 | 1 |
| Magnesium | 10000 | B | 20 | 3.7 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Nickel | 16 | | 4.0 | 0.13 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Sodium | 360 | J | 500 | 59 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |
| Zinc | 130 | | 3.0 | 0.40 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:35 | 1 |

Client Sample ID: RC-BA-03

Date Collected: 04/11/17 12:00

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3

Matrix: Solid

Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 220 | | 1.1 | 0.12 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Cadmium | 0.47 | J | 0.56 | 0.046 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Chromium | 18 | | 1.7 | 0.065 | mg/Kg | ✱ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|-----|------|-------|---|----------------|----------------|---------|
| Lead | 18 | | 1.0 | 0.35 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Boron | 14 | | 11 | 1.1 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Selenium | 1.3 | J | 1.7 | 0.96 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Silver | ND | | 1.1 | 0.18 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Calcium | 23000 | B | 56 | 16 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Copper | 18 | B | 2.2 | 0.24 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 18:49 | 1 |
| Magnesium | 12000 | B | 22 | 4.1 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Nickel | 20 | | 4.5 | 0.15 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Sodium | 240 | J | 560 | 66 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |
| Zinc | 90 | | 3.4 | 0.44 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:38 | 1 |

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 220 | | 0.90 | 0.093 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Cadmium | 0.43 | J | 0.45 | 0.037 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Chromium | 14 | | 1.3 | 0.052 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Lead | 16 | | 0.81 | 0.28 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Boron | 14 | | 9.0 | 0.88 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Selenium | ND | | 1.3 | 0.77 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Silver | ND | | 0.90 | 0.14 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Calcium | 24000 | B | 45 | 13 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Copper | 15 | B | 1.8 | 0.19 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 18:52 | 1 |
| Magnesium | 12000 | B | 18 | 3.3 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Nickel | 16 | | 3.6 | 0.12 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Sodium | 870 | | 450 | 53 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |
| Zinc | 75 | | 2.7 | 0.36 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:41 | 1 |

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 200 | | 0.84 | 0.088 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Cadmium | 0.40 | J | 0.42 | 0.035 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Chromium | 16 | | 1.3 | 0.049 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Lead | 16 | | 0.76 | 0.26 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Boron | 14 | | 8.4 | 0.83 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Selenium | 0.79 | J | 1.3 | 0.72 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Silver | ND | | 0.84 | 0.13 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Calcium | 22000 | B | 42 | 12 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Copper | 20 | B | 1.7 | 0.18 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 19:04 | 1 |
| Magnesium | 11000 | B | 17 | 3.1 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Nickel | 18 | | 3.4 | 0.11 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Sodium | 330 | J | 420 | 50 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |
| Zinc | 100 | | 2.5 | 0.34 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:53 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 6010C - Metals (ICP)

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 140 | | 1.2 | 0.13 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Cadmium | 0.35 | J | 0.62 | 0.051 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Chromium | 17 | | 1.9 | 0.072 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Lead | 16 | | 1.1 | 0.38 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Boron | 13 | | 12 | 1.2 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Selenium | ND | | 1.9 | 1.1 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Silver | ND | | 1.2 | 0.20 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Calcium | 22000 | B | 62 | 17 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Copper | 16 | B | 2.5 | 0.27 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 19:07 | 1 |
| Magnesium | 11000 | B | 25 | 4.6 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Nickel | 17 | | 4.9 | 0.16 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Sodium | 240 | J | 620 | 73 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |
| Zinc | 75 | | 3.7 | 0.49 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:56 | 1 |

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 210 | | 1.3 | 0.14 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Cadmium | 0.41 | J | 0.67 | 0.055 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Chromium | 23 | | 2.0 | 0.077 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Lead | 19 | | 1.2 | 0.41 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Boron | 19 | | 13 | 1.3 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Selenium | ND | | 2.0 | 1.1 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Silver | ND | | 1.3 | 0.21 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Calcium | 23000 | B | 67 | 19 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Copper | 18 | B | 2.7 | 0.29 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 19:10 | 1 |
| Magnesium | 12000 | B | 27 | 4.9 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Nickel | 21 | | 5.3 | 0.18 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Sodium | 280 | J | 670 | 78 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |
| Zinc | 94 | | 4.0 | 0.53 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 06:58 | 1 |

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 190 | | 0.88 | 0.091 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Cadmium | 0.29 | J | 0.44 | 0.036 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Chromium | 12 | | 1.3 | 0.051 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Lead | 14 | | 0.79 | 0.27 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Boron | 11 | | 8.8 | 0.86 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Selenium | 0.97 | J | 1.3 | 0.75 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Silver | ND | | 0.88 | 0.14 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Calcium | 23000 | B | 44 | 12 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Copper | 14 | B | 1.8 | 0.19 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 19:12 | 1 |
| Magnesium | 11000 | B | 18 | 3.2 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Nickel | 16 | | 3.5 | 0.12 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Sodium | 800 | | 440 | 52 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |
| Zinc | 72 | | 2.6 | 0.35 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:01 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 6010C - Metals (ICP)

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 130 | | 0.99 | 0.10 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Cadmium | 0.29 | J | 0.49 | 0.041 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Chromium | 13 | | 1.5 | 0.057 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Lead | 15 | | 0.89 | 0.31 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Boron | 12 | | 9.9 | 0.97 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Selenium | ND | | 1.5 | 0.85 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Silver | ND | | 0.99 | 0.16 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Calcium | 23000 | B | 49 | 14 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Copper | 14 | B | 2.0 | 0.21 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 19:15 | 1 |
| Magnesium | 14000 | B | 20 | 3.7 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Nickel | 15 | | 4.0 | 0.13 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Sodium | 790 | | 490 | 58 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |
| Zinc | 71 | | 3.0 | 0.39 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:04 | 1 |

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 130 | | 1.1 | 0.12 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Cadmium | 0.30 | J | 0.56 | 0.046 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Chromium | 13 | | 1.7 | 0.065 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Lead | 15 | | 1.0 | 0.35 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Boron | 12 | | 11 | 1.1 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Selenium | ND | | 1.7 | 0.96 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Silver | ND | | 1.1 | 0.18 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Calcium | 25000 | B | 56 | 16 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Copper | 14 | B | 2.2 | 0.24 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 19:17 | 1 |
| Magnesium | 14000 | B | 22 | 4.1 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Nickel | 15 | | 4.5 | 0.15 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Sodium | 1900 | | 560 | 66 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |
| Zinc | 71 | | 3.4 | 0.45 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:06 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Barium | 200 | | 1.1 | 0.11 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Cadmium | 0.36 | J | 0.55 | 0.045 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Chromium | 13 | | 1.6 | 0.063 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Lead | 15 | | 0.98 | 0.34 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Boron | 10 | J | 11 | 1.1 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Selenium | ND | | 1.6 | 0.94 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Silver | ND | | 1.1 | 0.18 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Calcium | 25000 | B | 55 | 15 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Copper | 14 | B | 2.2 | 0.24 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 19:20 | 1 |
| Magnesium | 11000 | B | 22 | 4.0 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Nickel | 16 | | 4.4 | 0.14 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Sodium | 350 | J | 550 | 65 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |
| Zinc | 110 | | 3.3 | 0.44 | mg/Kg | ☼ | 04/13/17 14:35 | 04/16/17 07:09 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 6.9 | | 0.68 | 0.057 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 15:43 | 1 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 9.2 | | 0.58 | 0.049 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:02 | 1 |

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 7.6 | | 0.67 | 0.056 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:05 | 1 |

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 8.0 | | 0.50 | 0.042 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:20 | 1 |

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 6.8 | | 0.52 | 0.044 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:24 | 1 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 7.1 | | 0.69 | 0.058 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:28 | 1 |

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 6.0 | | 0.73 | 0.062 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:32 | 1 |

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 7.2 | | 0.60 | 0.051 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:36 | 1 |

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 6.8 | | 0.60 | 0.051 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:39 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 6.7 | | 0.59 | 0.050 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:43 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | 9.1 | | 0.51 | 0.043 | mg/Kg | ☼ | 04/13/17 14:35 | 04/14/17 16:47 | 1 |

Method: 7471A - Mercury (CVAA)

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.024 | | 0.023 | 0.0074 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:22 | 1 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.023 | | 0.021 | 0.0069 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:28 | 1 |

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.034 | | 0.022 | 0.0072 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:35 | 1 |

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.019 | | 0.019 | 0.0062 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:38 | 1 |

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.090 | | 0.023 | 0.0076 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:40 | 1 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.022 | J | 0.024 | 0.0077 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:42 | 1 |

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.065 | | 0.026 | 0.0084 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:45 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.024 | | 0.020 | 0.0066 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:47 | 1 |

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.020 | J | 0.023 | 0.0076 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:49 | 1 |

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.020 | J | 0.023 | 0.0075 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:52 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | 0.024 | | 0.020 | 0.0064 | mg/Kg | ☼ | 04/19/17 12:39 | 04/19/17 21:54 | 1 |

General Chemistry

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 6.1 | 2.4 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 16 | | 6.3 | 2.5 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 21.1 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 78.9 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 5.6 | 2.2 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 14 | | 5.6 | 2.2 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 10.6 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 89.4 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 57 | 23 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 10 |
| Chromium, trivalent | 18 | | 5.9 | 2.3 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 14.8 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 85.2 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

General Chemistry

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 5.1 | 2.1 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 14 | | 5.2 | 2.1 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 4.5 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 95.5 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 6.2 | 2.5 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 16 | | 6.3 | 2.5 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 20.6 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 79.4 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 6.1 | 2.4 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 17 | | 6.2 | 2.5 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 18.9 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 81.1 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 6.7 | 2.7 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 23 | | 6.8 | 2.7 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 26.7 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 73.3 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 5.7 | 2.3 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 12 | | 5.7 | 2.3 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 12.1 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 87.9 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 5.9 | 2.4 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 13 | | 6.0 | 2.4 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 17.2 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 82.8 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

General Chemistry

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 5.5 | 2.2 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 13 | | 5.7 | 2.3 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 12.0 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 88.0 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|--------|-----------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 5.5 | 2.2 | mg/Kg | ☼ | 04/22/17 11:27 | 04/23/17 15:30 | 1 |
| Chromium, trivalent | 13 | | 5.6 | 2.2 | mg/Kg | ☼ | | 04/23/17 15:30 | 1 |
| Percent Moisture | 10.4 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |
| Percent Solids | 89.6 | | 0.1 | 0.1 | % | | | 04/14/17 09:43 | 1 |

General Chemistry - Soluble

Client Sample ID: RC-BA-01
Date Collected: 04/11/17 10:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1
Matrix: Solid
Percent Solids: 78.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 7.8 | HF | 0.1 | 0.1 | SU | | | 04/19/17 10:22 | 1 |
| Temperature | 22.1 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 11 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-02
Date Collected: 04/11/17 10:45
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2
Matrix: Solid
Percent Solids: 89.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 7.9 | HF | 0.1 | 0.1 | SU | | | 04/19/17 10:22 | 1 |
| Temperature | 22.1 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 0.57 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-03
Date Collected: 04/11/17 12:00
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3
Matrix: Solid
Percent Solids: 85.2

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 8.3 | HF | 0.1 | 0.1 | SU | | | 04/19/17 10:22 | 1 |
| Temperature | 22.3 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 0.57 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-04
Date Collected: 04/11/17 12:08
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4
Matrix: Solid
Percent Solids: 95.5

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 8.7 | HF | 0.1 | 0.1 | SU | | | 04/19/17 10:22 | 1 |
| Temperature | 22.4 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 1.8 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

TestAmerica Denver

Client Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

General Chemistry - Soluble

Client Sample ID: RC-BA-05
Date Collected: 04/11/17 11:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5
Matrix: Solid
Percent Solids: 79.4

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 8.2 | HF | 0.1 | 0.1 | SU | — | | 04/19/17 10:22 | 1 |
| Temperature | 22.4 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 0.68 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-06
Date Collected: 04/11/17 11:10
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6
Matrix: Solid
Percent Solids: 81.1

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 8.1 | HF | 0.1 | 0.1 | SU | — | | 04/19/17 10:22 | 1 |
| Temperature | 22.4 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 0.61 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-07
Date Collected: 04/11/17 12:15
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7
Matrix: Solid
Percent Solids: 73.3

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 7.9 | HF | 0.1 | 0.1 | SU | — | | 04/19/17 10:22 | 1 |
| Temperature | 22.2 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 0.72 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-08
Date Collected: 04/11/17 12:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8
Matrix: Solid
Percent Solids: 87.9

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 8.8 | HF | 0.1 | 0.1 | SU | — | | 04/19/17 10:22 | 1 |
| Temperature | 22.3 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 1.7 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-09
Date Collected: 04/11/17 12:40
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9
Matrix: Solid
Percent Solids: 82.8

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 9.3 | HF | 0.1 | 0.1 | SU | — | | 04/19/17 10:22 | 1 |
| Temperature | 22.0 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 1.2 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-10
Date Collected: 04/11/17 12:30
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10
Matrix: Solid
Percent Solids: 88.0

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 7.9 | HF | 0.1 | 0.1 | SU | — | | 04/19/17 10:22 | 1 |
| Temperature | 22.1 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 5.2 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

Client Sample ID: RC-BA-DUP01
Date Collected: 04/11/17 10:50
Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-11
Matrix: Solid
Percent Solids: 89.6

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------|-----------|-------|-------|-----------|---|----------------|----------------|---------|
| pH adj. to 25 deg C | 8.0 | HF | 0.1 | 0.1 | SU | — | | 04/19/17 10:22 | 1 |
| Temperature | 22.4 | HF | 1.0 | 1.0 | Degrees C | | | 04/19/17 10:22 | 1 |
| Electrical Conductivity | 0.59 | | 0.010 | 0.010 | mmhos/cm | | 04/19/17 09:58 | 04/20/17 15:00 | 1 |

TestAmerica Denver

Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | | |
|--------------------|--------------------|--|-----------------|-----------------|------------------|
| | | 12DCE (58-140) | TOL (80-126) | BFB (76-127) | DBFM (75-121) |
| 280-95791-1 | RC-BA-01 | 136 | 104 | 108 | 116 |
| 280-95791-1 MS | RC-BA-01 | 128 | 100 | 100 | 110 |
| 280-95791-1 MSD | RC-BA-01 | 118 | 93 | 89 | 106 |
| 280-95791-2 | RC-BA-02 | 143 X | 116 | 130 X | 127 X |
| 280-95791-3 | RC-BA-03 | 129 | 104 | 107 | 114 |
| 280-95791-4 | RC-BA-04 | 132 | 101 | 102 | 116 |
| 280-95791-5 | RC-BA-05 | 154 X | 116 | 121 | 133 X |
| 280-95791-6 | RC-BA-06 | 128 | 97 | 99 | 112 |
| 280-95791-7 | RC-BA-07 | 133 | 101 | 107 | 117 |
| 280-95791-8 | RC-BA-08 | 136 | 105 | 112 | 117 |
| 280-95791-9 | RC-BA-09 | 133 | 101 | 106 | 119 |
| 280-95791-10 | RC-BA-10 | 132 | 104 | 104 | 116 |
| 280-95791-11 | RC-BA-DUP01 | 136 | 105 | 121 | 118 |
| LCS 280-369710/2-A | Lab Control Sample | 105 | 93 | 89 | 101 |
| MB 280-369710/1-A | Method Blank | 109 | 87 | 90 | 105 |

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|--------------------|--------------------|--|-----------------|-----------------|
| | | FBP (39-120) | NBZ (42-120) | TPH (35-124) |
| 280-95791-1 | RC-BA-01 | 74 | 74 | 72 |
| 280-95791-1 MS | RC-BA-01 | 84 | 88 | 79 |
| 280-95791-1 MSD | RC-BA-01 | 83 | 88 | 82 |
| 280-95791-2 | RC-BA-02 | 79 D | 102 D | 87 D |
| 280-95791-3 | RC-BA-03 | 79 | 87 | 78 |
| 280-95791-4 | RC-BA-04 | 75 | 76 | 76 |
| 280-95791-5 | RC-BA-05 | 80 | 92 | 80 |
| 280-95791-6 | RC-BA-06 | 81 | 89 | 81 |
| 280-95791-7 | RC-BA-07 | 84 | 132 X | 82 |
| 280-95791-8 | RC-BA-08 | 78 | 89 | 80 |
| 280-95791-9 | RC-BA-09 | 83 | 93 | 83 |
| 280-95791-10 | RC-BA-10 | 72 | 84 | 71 |
| 280-95791-11 | RC-BA-DUP01 | 74 D | 104 D | 90 D |
| LCS 280-369761/2-A | Lab Control Sample | 67 | 66 | 62 |
| MB 280-369761/1-A | Method Blank | 70 | 69 | 69 |

Surrogate Legend

FBP = 2-Fluorobiphenyl

NBZ = Nitrobenzene-d5

TPH = Terphenyl-d14

TestAmerica Denver

Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | TFT1 (77-123) |
|--------------------|--------------------|------------------|
| 280-95791-1 | RC-BA-01 | 82 |
| 280-95791-1 MS | RC-BA-01 | 80 |
| 280-95791-1 MSD | RC-BA-01 | 92 |
| 280-95791-2 | RC-BA-02 | 91 |
| 280-95791-3 | RC-BA-03 | 85 |
| 280-95791-4 | RC-BA-04 | 90 |
| 280-95791-5 | RC-BA-05 | 74 X |
| 280-95791-6 | RC-BA-06 | 82 |
| 280-95791-7 | RC-BA-07 | 68 X |
| 280-95791-8 | RC-BA-08 | 94 |
| 280-95791-9 | RC-BA-09 | 87 |
| 280-95791-10 | RC-BA-10 | 98 |
| 280-95791-11 | RC-BA-DUP01 | 78 |
| LCS 280-369828/2-A | Lab Control Sample | 90 |
| MB 280-369828/1-A | Method Blank | 86 |

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | OTPH1 (49-115) |
|--------------------|--------------------|-------------------|
| 280-95791-1 | RC-BA-01 | 90 |
| 280-95791-1 MS | RC-BA-01 | 88 |
| 280-95791-1 MSD | RC-BA-01 | 71 |
| 280-95791-2 | RC-BA-02 | 107 |
| 280-95791-3 | RC-BA-03 | 115 |
| 280-95791-4 | RC-BA-04 | 92 |
| 280-95791-5 | RC-BA-05 | 93 |
| 280-95791-6 | RC-BA-06 | 79 |
| 280-95791-7 | RC-BA-07 | 38 X |
| 280-95791-8 | RC-BA-08 | 98 |
| 280-95791-9 | RC-BA-09 | 68 |
| 280-95791-10 | RC-BA-10 | 105 |
| 280-95791-11 | RC-BA-DUP01 | 133 X |
| LCS 280-369203/2-A | Lab Control Sample | 121 X |
| LCS 280-369968/2-A | Lab Control Sample | 122 X |
| MB 280-369203/1-A | Method Blank | 113 |
| MB 280-369968/1-A | Method Blank | 117 X |

Surrogate Legend

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-369710/1-A

Matrix: Solid

Analysis Batch: 369704

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 369710

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|-----------|--------------|--------|---------|-------|---|----------------|----------------|---------|
| Benzene | ND | | 0.0050 | 0.00047 | mg/Kg | | 04/17/17 15:00 | 04/17/17 17:30 | 1 |
| Ethylbenzene | ND | | 0.0050 | 0.00067 | mg/Kg | | 04/17/17 15:00 | 04/17/17 17:30 | 1 |
| Toluene | ND | | 0.0050 | 0.00069 | mg/Kg | | 04/17/17 15:00 | 04/17/17 17:30 | 1 |
| m-Xylene & p-Xylene | ND | | 0.0025 | 0.0010 | mg/Kg | | 04/17/17 15:00 | 04/17/17 17:30 | 1 |
| o-Xylene | ND | | 0.0025 | 0.00061 | mg/Kg | | 04/17/17 15:00 | 04/17/17 17:30 | 1 |
| Xylenes, Total | ND | | 0.0050 | 0.00061 | mg/Kg | | 04/17/17 15:00 | 04/17/17 17:30 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|--------------|-----------|----------------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 136 | | 58 - 143 | 3401/01/ 15733 | 3401/01/ 1/7.3 | 1 |
| Toluene-d8 (Surr) | 8/ | | 83 - 12B | 3401/01/ 15733 | 3401/01/ 1/7.3 | 1 |
| 4-mrofluoroxene (Surr) | 63 | | / B - 12/ | 3401/01/ 15733 | 3401/01/ 1/7.3 | 1 |
| Dizrofluorof ethane (Surr) | 135 | | / 5 - 121 | 3401/01/ 15733 | 3401/01/ 1/7.3 | 1 |

Lab Sample ID: LCS 280-369710/2-A

Matrix: Solid

Analysis Batch: 369704

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 369710

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|---------------------|-------------|------------|---------------|-------|---|------|----------|
| Benzene | 0.0500 | 0.0507 | | mg/Kg | | 101 | 75 - 135 |
| Ethylbenzene | 0.0500 | 0.0456 | | mg/Kg | | 91 | 73 - 125 |
| Toluene | 0.0500 | 0.0517 | | mg/Kg | | 103 | 77 - 122 |
| m-Xylene & p-Xylene | 0.0500 | 0.0460 | | mg/Kg | | 92 | 77 - 135 |
| o-Xylene | 0.0500 | 0.0478 | | mg/Kg | | 96 | 75 - 135 |
| Xylenes, Total | 0.100 | 0.0938 | | mg/Kg | | 94 | 76 - 135 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------------------|---------------|---------------|-----------|
| 1,2-Dichloroethane-d4 (Surr) | 135 | | 58 - 143 |
| Toluene-d8 (Surr) | 6/ | | 83 - 12B |
| 4-mrofluoroxene (Surr) | 86 | | / B - 12/ |
| Dizrofluorof ethane (Surr) | 131 | | / 5 - 121 |

Lab Sample ID: 280-95791-1 MS

Matrix: Solid

Analysis Batch: 369704

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369710

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|---------------------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Benzene | 0.0025 | J F1 F2 | 0.0539 | 0.0274 | F1 | mg/Kg | ☼ | 46 | 75 - 135 |
| Ethylbenzene | ND | F1 F2 | 0.0539 | 0.0209 | F1 | mg/Kg | ☼ | 39 | 73 - 125 |
| Toluene | 0.0031 | J F1 F2 | 0.0539 | 0.0274 | F1 | mg/Kg | ☼ | 45 | 77 - 122 |
| m-Xylene & p-Xylene | ND | F1 F2 | 0.0539 | 0.0221 | F1 | mg/Kg | ☼ | 41 | 77 - 135 |
| o-Xylene | ND | F1 F2 | 0.0539 | 0.0223 | F1 | mg/Kg | ☼ | 41 | 75 - 135 |
| Xylenes, Total | ND | F1 F2 | 0.108 | 0.0444 | F1 | mg/Kg | ☼ | 41 | 76 - 135 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|------------------------------|--------------|--------------|-----------|
| 1,2-Dichloroethane-d4 (Surr) | 128 | | 58 - 143 |
| Toluene-d8 (Surr) | 133 | | 83 - 12B |
| 4-mrofluoroxene (Surr) | 133 | | / B - 12/ |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-95791-1 MS

Matrix: Solid

Analysis Batch: 369704

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369710

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|------------------------|-----------------|-----------------|-----------|
| Dizrofluoethane (Surr) | 113 | | / 5 - 121 |

Lab Sample ID: 280-95791-1 MSD

Matrix: Solid

Analysis Batch: 369704

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369710

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---------------------|------------------|---------------------|----------------|---------------|------------------|-------|---|------|-----------------|-----|--------------|
| Benzene | 0.0025 | J F1 F2 | 0.0786 | 0.0886 | F2 | mg/Kg | ☼ | 109 | 75 - 135 | 106 | 20 |
| Ethylbenzene | ND | F1 F2 | 0.0786 | 0.0686 | F2 | mg/Kg | ☼ | 87 | 73 - 125 | 107 | 20 |
| Toluene | 0.0031 | J F1 F2 | 0.0786 | 0.0878 | F2 | mg/Kg | ☼ | 108 | 77 - 122 | 105 | 20 |
| m-Xylene & p-Xylene | ND | F1 F2 | 0.0786 | 0.0710 | F2 | mg/Kg | ☼ | 90 | 77 - 135 | 105 | 20 |
| o-Xylene | ND | F1 F2 | 0.0786 | 0.0687 | F2 | mg/Kg | ☼ | 87 | 75 - 135 | 102 | 20 |
| Xylenes, Total | ND | F1 F2 | 0.157 | 0.140 | F2 | mg/Kg | ☼ | 89 | 76 - 135 | 104 | 20 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|------------------------------|------------------|------------------|-----------|
| 1,2-Dichloroethane-d4 (Surr) | 118 | | 58 - 143 |
| Toluene-d8 (Surr) | 6: | | 83 - 12B |
| 4-mrofluoroxene (Surr) | 86 | | / B - 12/ |
| Dizrofluoethane (Surr) | 13B | | / 5 - 121 |

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 280-369761/1-A

Matrix: Solid

Analysis Batch: 370634

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 369761

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------------|-----------------|--------|---------|-------|---|----------------|----------------|---------|
| Acenaphthene | ND | | 0.0050 | 0.00016 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Anthracene | ND | | 0.0050 | 0.00072 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Benzo[a]anthracene | ND | | 0.0050 | 0.00090 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Benzo[a]pyrene | ND | | 0.0050 | 0.00074 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Benzo[b]fluoranthene | ND | | 0.0050 | 0.0012 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Benzo[k]fluoranthene | ND | | 0.0050 | 0.0010 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Chrysene | ND | | 0.0050 | 0.0010 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.0050 | 0.0013 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Fluoranthene | ND | | 0.0050 | 0.0010 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Fluorene | ND | | 0.0050 | 0.00047 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.0050 | 0.0011 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Naphthalene | ND | | 0.0050 | 0.00033 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |
| Pyrene | ND | | 0.0050 | 0.0011 | mg/Kg | | 04/18/17 09:47 | 04/24/17 14:26 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------------|-----------------|-----------|----------------|----------------|---------|
| 2-9luoroziFhenpl | / 3 | | : 6 - 123 | 3401801/ 3674/ | 3402401/ 1472B | 1 |
| yitrozenXene-d5 | B6 | | 42 - 123 | 3401801/ 3674/ | 3402401/ 1472B | 1 |
| TerFhenpl-d14 | B6 | | : 5 - 124 | 3401801/ 3674/ | 3402401/ 1472B | 1 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 280-369761/2-A

Matrix: Solid

Analysis Batch: 370634

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 369761

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|------------------------|-------------|------------|---------------|-------|---|------|----------|
| Acenaphthene | 0.0300 | 0.0208 | | mg/Kg | | 69 | 35 - 120 |
| Anthracene | 0.0300 | 0.0208 | | mg/Kg | | 69 | 43 - 120 |
| Benzo[a]anthracene | 0.0300 | 0.0209 | | mg/Kg | | 70 | 36 - 120 |
| Benzo[a]pyrene | 0.0300 | 0.0176 | | mg/Kg | | 59 | 20 - 120 |
| Benzo[b]fluoranthene | 0.0300 | 0.0190 | | mg/Kg | | 63 | 37 - 120 |
| Benzo[k]fluoranthene | 0.0300 | 0.0191 | | mg/Kg | | 64 | 46 - 120 |
| Chrysene | 0.0300 | 0.0230 | | mg/Kg | | 77 | 34 - 120 |
| Dibenz(a,h)anthracene | 0.0300 | 0.0189 | | mg/Kg | | 63 | 20 - 120 |
| Fluoranthene | 0.0300 | 0.0200 | | mg/Kg | | 67 | 45 - 120 |
| Fluorene | 0.0300 | 0.0209 | | mg/Kg | | 70 | 44 - 120 |
| Indeno[1,2,3-cd]pyrene | 0.0300 | 0.0217 | | mg/Kg | | 72 | 20 - 127 |
| Naphthalene | 0.0300 | 0.0221 | | mg/Kg | | 74 | 44 - 120 |
| Pyrene | 0.0300 | 0.0206 | | mg/Kg | | 69 | 43 - 120 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------|---------------|---------------|-----------|
| 2-9luoroziFhenpl | B/ | | : 6 - 123 |
| y itrozeXene-d5 | BB | | 42 - 123 |
| TerFhenpl-d14 | B2 | | : 5 - 124 |

Lab Sample ID: 280-95791-1 MS

Matrix: Solid

Analysis Batch: 370634

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369761

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|------------------------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Acenaphthene | 0.0013 | J | 0.0379 | 0.0349 | | mg/Kg | ☼ | 89 | 35 - 120 |
| Anthracene | 0.0015 | J | 0.0379 | 0.0355 | | mg/Kg | ☼ | 90 | 43 - 120 |
| Benzo[a]anthracene | 0.0011 | J | 0.0379 | 0.0367 | | mg/Kg | ☼ | 97 | 36 - 120 |
| Benzo[a]pyrene | ND | | 0.0379 | 0.0403 | | mg/Kg | ☼ | 106 | 20 - 120 |
| Benzo[b]fluoranthene | 0.0018 | J | 0.0379 | 0.0388 | | mg/Kg | ☼ | 97 | 37 - 120 |
| Benzo[k]fluoranthene | ND | | 0.0379 | 0.0367 | | mg/Kg | ☼ | 97 | 46 - 120 |
| Chrysene | 0.0027 | J | 0.0379 | 0.0403 | | mg/Kg | ☼ | 99 | 34 - 120 |
| Dibenz(a,h)anthracene | ND | | 0.0379 | 0.0383 | | mg/Kg | ☼ | 101 | 20 - 120 |
| Fluoranthene | 0.0052 | J | 0.0379 | 0.0342 | | mg/Kg | ☼ | 77 | 45 - 120 |
| Fluorene | 0.0013 | J | 0.0379 | 0.0339 | | mg/Kg | ☼ | 86 | 44 - 120 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.0379 | 0.0437 | | mg/Kg | ☼ | 115 | 20 - 127 |
| Naphthalene | 0.0024 | J | 0.0379 | 0.0357 | | mg/Kg | ☼ | 88 | 44 - 120 |
| Pyrene | 0.0038 | J | 0.0379 | 0.0350 | | mg/Kg | ☼ | 82 | 43 - 120 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|------------------|--------------|--------------|-----------|
| 2-9luoroziFhenpl | 84 | | : 6 - 123 |
| y itrozeXene-d5 | 88 | | 42 - 123 |
| TerFhenpl-d14 | / 6 | | : 5 - 124 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 280-95791-1 MSD

Matrix: Solid

Analysis Batch: 370634

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369761

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|------------------------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|-----|-------|
| Acenaphthene | 0.0013 | J | 0.0374 | 0.0343 | | mg/Kg | ☼ | 88 | 35 - 120 | 2 | 50 |
| Anthracene | 0.0015 | J | 0.0374 | 0.0355 | | mg/Kg | ☼ | 91 | 43 - 120 | 0 | 50 |
| Benzo[a]anthracene | 0.0011 | J | 0.0374 | 0.0368 | | mg/Kg | ☼ | 98 | 36 - 120 | 0 | 40 |
| Benzo[a]pyrene | ND | | 0.0374 | 0.0372 | | mg/Kg | ☼ | 100 | 20 - 120 | 8 | 30 |
| Benzo[b]fluoranthene | 0.0018 | J | 0.0374 | 0.0392 | | mg/Kg | ☼ | 100 | 37 - 120 | 1 | 28 |
| Benzo[k]fluoranthene | ND | | 0.0374 | 0.0366 | | mg/Kg | ☼ | 98 | 46 - 120 | 0 | 28 |
| Chrysene | 0.0027 | J | 0.0374 | 0.0400 | | mg/Kg | ☼ | 100 | 34 - 120 | 1 | 41 |
| Dibenz(a,h)anthracene | ND | | 0.0374 | 0.0379 | | mg/Kg | ☼ | 101 | 20 - 120 | 1 | 25 |
| Fluoranthene | 0.0052 | J | 0.0374 | 0.0343 | | mg/Kg | ☼ | 78 | 45 - 120 | 0 | 30 |
| Fluorene | 0.0013 | J | 0.0374 | 0.0337 | | mg/Kg | ☼ | 87 | 44 - 120 | 0 | 50 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.0374 | 0.0437 | | mg/Kg | ☼ | 117 | 20 - 127 | 0 | 50 |
| Naphthalene | 0.0024 | J | 0.0374 | 0.0362 | | mg/Kg | ☼ | 90 | 44 - 120 | 1 | 50 |
| Pyrene | 0.0038 | J | 0.0374 | 0.0345 | | mg/Kg | ☼ | 82 | 43 - 120 | 1 | 30 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|------------------|---------------|---------------|-----------|
| 2-9luoroziFhenpl | 8: | | : 6 - 123 |
| y itrozeXene-d5 | 88 | | 42 - 123 |
| TerFhenpl-d14 | 82 | | : 5 - 124 |

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Gasoline Range Organics)

Lab Sample ID: MB 280-369828/1-A

Matrix: Solid

Analysis Batch: 369840

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 369828

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------|-----------|--------------|-----|------|-------|---|----------------|----------------|---------|
| GRO (C6-C10) | ND | | 1.2 | 0.33 | mg/Kg | | 04/18/17 09:34 | 04/18/17 18:11 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------|--------------|--------------|----------|----------------|----------------|---------|
| a,a,a-Tribuorotoluene | 8B | | // - 12: | 3401801/ 367.4 | 3401801/ 18711 | 1 |

Lab Sample ID: LCS 280-369828/2-A

Matrix: Solid

Analysis Batch: 369840

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 369828

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|--------------|-------------|------------|---------------|-------|---|------|----------|
| GRO (C6-C10) | 5.50 | 6.61 | | mg/Kg | | 120 | 85 - 153 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|-----------------------|---------------|---------------|----------|
| a,a,a-Tribuorotoluene | 63 | | // - 12: |

Lab Sample ID: 280-95791-1 MS

Matrix: Solid

Analysis Batch: 369840

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369828

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|--------------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| GRO (C6-C10) | ND | | 7.50 | 7.98 | | mg/Kg | ☼ | 106 | 85 - 153 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|-----------------------|-----------------|-----------------|----------|
| a,a,a-Tribuorotoluene | 83 | | // - 12: |

Lab Sample ID: 280-95791-1 MSD

Matrix: Solid

Analysis Batch: 369840

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369828

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|--------------|------------------|---------------------|----------------|---------------|------------------|-------|---|------|-----------------|-----|--------------|
| GRO (C6-C10) | ND | | 7.40 | 8.75 | | mg/Kg | ☒ | 118 | 85 - 153 | 9 | 30 |

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|-----------------------|------------------|------------------|----------|
| a,a,a-Tribuorotoluene | 62 | | // - 12: |

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Lab Sample ID: MB 280-369203/1-A

Matrix: Solid

Analysis Batch: 370413

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 369203

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------|--------------|-----------------|-----|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | ND | | 4.0 | 0.68 | mg/Kg | | 04/13/17 08:29 | 04/22/17 05:03 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------|-----------------|-----------------|----------|-----------------|---------------|---------|
| o-TerFhenpl (Surr) | 11: | | 46 - 115 | 3401: 01/ 38726 | 340201/ 3573: | 1 |

Lab Sample ID: LCS 280-369203/2-A

Matrix: Solid

Analysis Batch: 370413

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 369203

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------|----------------|---------------|------------------|-------|---|------|-----------------|
| DRO (C10-C28) | 66.7 | 62.1 | | mg/Kg | | 93 | 53 - 115 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|--------------------|------------------|------------------|----------|
| o-TerFhenpl (Surr) | 121 | N | 46 - 115 |

Lab Sample ID: 280-95791-1 MS

Matrix: Solid

Analysis Batch: 370413

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369203

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------|------------------|---------------------|----------------|--------------|-----------------|-------|---|------|-----------------|
| DRO (C10-C28) | 2.9 | J | 82.6 | 75.1 | | mg/Kg | ☒ | 87 | 56 - 115 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|--------------------|-----------------|-----------------|----------|
| o-TerFhenpl (Surr) | 88 | | 46 - 115 |

Lab Sample ID: 280-95791-1 MSD

Matrix: Solid

Analysis Batch: 370413

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369203

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---------------|------------------|---------------------|----------------|---------------|------------------|-------|---|------|-----------------|-----|--------------|
| DRO (C10-C28) | 2.9 | J | 83.7 | 70.1 | | mg/Kg | ☒ | 80 | 56 - 115 | 7 | 23 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 8015C - Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics) (Continued)

Lab Sample ID: 280-95791-1 MSD

Matrix: Solid

Analysis Batch: 370413

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369203

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|--------------------|------------------|------------------|----------|
| o-TerFhenpl (Surr) | 71 | | 46 - 115 |

Lab Sample ID: MB 280-369968/1-A

Matrix: Solid

Analysis Batch: 370641

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 369968

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|--------------|--------------|----------|------|-------|---|----------------|----------------|---------|
| DRO (C10-C28) | ND | | 4.0 | 0.68 | mg/Kg | - | 04/19/17 09:05 | 04/24/17 21:51 | 1 |
| Surrogate | MB %Recovery | MB Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-TerFhenpl (Surr) | 11/ | N | 46 - 115 | | | | 3401601/ 36735 | 3402401/ 21751 | 1 |

Lab Sample ID: LCS 280-369968/2-A

Matrix: Solid

Analysis Batch: 370641

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 369968

| | | | Spike | LCS | LCS | | | | %Rec. | | |
|--------------------|-----------|-----------|----------|--------|-----------|-------|---|------|----------|--|--|
| Analyte | | | Added | Result | Qualifier | Unit | D | %Rec | Limits | | |
| DRO (C10-C28) | | | 66.7 | 69.5 | | mg/Kg | - | 104 | 53 - 115 | | |
| Surrogate | LCS | LCS | | | | | | | | | |
| | %Recovery | Qualifier | Limits | | | | | | | | |
| o-TerFhenpl (Surr) | 122 | N | 46 - 115 | | | | | | | | |

Method: 20B - Sodium Adsorption Ratio

Lab Sample ID: MB 280-369086/1-A

Matrix: Solid

Analysis Batch: 370249

Client Sample ID: Method Blank

Prep Type: Soluble

Prep Batch: 369086

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|--------------|-----------------|-----|-----|---------|---|----------------|----------------|---------|
| Na | ND | | 10 | 10 | mg/Kg | | 04/12/17 12:15 | 04/20/17 01:55 | 10 |
| Ca | ND | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 01:55 | 10 |
| Mg | ND | | 2.0 | 2.0 | mg/Kg | | 04/12/17 12:15 | 04/20/17 01:55 | 10 |
| Sodium Adsorption Ratio | ND | | 1.2 | 1.2 | No Unit | | 04/12/17 12:15 | 04/20/17 01:55 | 10 |

Lab Sample ID: 280-95791-1 DU

Matrix: Solid

Analysis Batch: 370249

Client Sample ID: RC-BA-01

Prep Type: Soluble

Prep Batch: 369086

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|-------------------------|------------------|---------------------|--------------|-----------------|---------|---|-----|--------------|
| Na | 2900 | | 2740 | | mg/Kg | | 5 | 20 |
| Ca | 1200 | | 960 | | mg/Kg | | 20 | 20 |
| Mg | 330 | | 323 | | mg/Kg | | 1 | 20 |
| Sodium Adsorption Ratio | 19 | | 19.5 | | No Unit | | 2 | 20 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-369080/1-A

Matrix: Solid

Analysis Batch: 369552

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|-----------|--------------|------|-------|-------|---|----------------|----------------|---------|
| Barium | ND | | 1.0 | 0.10 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Cadmium | ND | | 0.50 | 0.041 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Chromium | ND | | 1.5 | 0.058 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Lead | ND | | 0.90 | 0.31 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Boron | ND | | 10 | 0.98 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Selenium | ND | | 1.5 | 0.86 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Silver | ND | | 1.0 | 0.16 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Calcium | 23.4 | J | 50 | 14 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Magnesium | 6.98 | J | 20 | 3.7 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Nickel | ND | | 4.0 | 0.13 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Sodium | ND | | 500 | 59 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |
| Zinc | ND | | 3.0 | 0.40 | mg/Kg | | 04/13/17 14:35 | 04/16/17 06:18 | 1 |

Lab Sample ID: MB 280-369080/1-A

Matrix: Solid

Analysis Batch: 369613

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|-----|------|-------|---|----------------|----------------|---------|
| Copper | 0.371 | J | 2.0 | 0.22 | mg/Kg | | 04/13/17 14:35 | 04/16/17 18:29 | 1 |

Lab Sample ID: LCS 280-369080/2-A

Matrix: Solid

Analysis Batch: 369552

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|----------|-------------|------------|---------------|-------|---|------|----------|
| Barium | 200 | 200 | | mg/Kg | | 100 | 87 - 112 |
| Cadmium | 10.0 | 10.6 | | mg/Kg | | 106 | 87 - 110 |
| Chromium | 20.0 | 19.9 | | mg/Kg | | 100 | 84 - 114 |
| Lead | 50.0 | 50.0 | | mg/Kg | | 100 | 86 - 110 |
| Boron | 100 | 99.8 | | mg/Kg | | 100 | 80 - 120 |
| Selenium | 200 | 210 | | mg/Kg | | 105 | 83 - 110 |
| Silver | 5.00 | 5.38 | | mg/Kg | | 108 | 87 - 114 |
| Nickel | 50.0 | 49.8 | | mg/Kg | | 100 | 87 - 110 |
| Zinc | 50.0 | 52.4 | | mg/Kg | | 105 | 76 - 114 |

Lab Sample ID: LCS 280-369080/2-A

Matrix: Solid

Analysis Batch: 369613

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|---------|-------------|------------|---------------|-------|---|------|----------|
| Copper | 25.0 | 26.1 | | mg/Kg | | 104 | 88 - 110 |

Lab Sample ID: 280-95791-1 MS

Matrix: Solid

Analysis Batch: 369552

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|---------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Barium | 440 | F1 | 182 | 462 | F1 | mg/Kg | ☼ | 11 | 52 - 159 |
| Cadmium | 0.35 | J | 9.10 | 8.57 | | mg/Kg | ☼ | 90 | 40 - 130 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-95791-1 MS

Matrix: Solid

Analysis Batch: 369552

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|----------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Chromium | 16 | | 18.2 | 42.5 | | mg/Kg | ☼ | 145 | 70 - 200 |
| Lead | 18 | | 45.5 | 52.4 | | mg/Kg | ☼ | 75 | 70 - 200 |
| Boron | 15 | | 91.0 | 100 | | mg/Kg | ☼ | 94 | 80 - 120 |
| Selenium | ND | | 182 | 161 | | mg/Kg | ☼ | 88 | 76 - 104 |
| Silver | ND | | 4.55 | 4.53 | | mg/Kg | ☼ | 100 | 75 - 141 |
| Nickel | 17 | | 45.5 | 53.2 | | mg/Kg | ☼ | 79 | 61 - 126 |
| Zinc | 76 | | 45.5 | 118 | | mg/Kg | ☼ | 93 | 70 - 200 |

Lab Sample ID: 280-95791-1 MS

Matrix: Solid

Analysis Batch: 369613

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|---------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Copper | 16 | B | 22.7 | 36.1 | | mg/Kg | ☼ | 89 | 37 - 187 |

Lab Sample ID: 280-95791-1 MSD

Matrix: Solid

Analysis Batch: 369552

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|----------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|-----|-------|
| Barium | 440 | F1 | 197 | 488 | F1 | mg/Kg | ☼ | 23 | 52 - 159 | 6 | 20 |
| Cadmium | 0.35 | J | 9.85 | 9.61 | | mg/Kg | ☼ | 94 | 40 - 130 | 11 | 20 |
| Chromium | 16 | | 19.7 | 45.2 | | mg/Kg | ☼ | 148 | 70 - 200 | 6 | 20 |
| Lead | 18 | | 49.3 | 57.6 | | mg/Kg | ☼ | 80 | 70 - 200 | 9 | 20 |
| Boron | 15 | | 98.5 | 109 | | mg/Kg | ☼ | 96 | 80 - 120 | 9 | 20 |
| Selenium | ND | | 197 | 181 | | mg/Kg | ☼ | 92 | 76 - 104 | 12 | 20 |
| Silver | ND | | 4.93 | 5.02 | | mg/Kg | ☼ | 102 | 75 - 141 | 10 | 20 |
| Nickel | 17 | | 49.3 | 58.7 | | mg/Kg | ☼ | 84 | 61 - 126 | 10 | 20 |
| Zinc | 76 | | 49.3 | 126 | | mg/Kg | ☼ | 101 | 70 - 200 | 6 | 20 |

Lab Sample ID: 280-95791-1 MSD

Matrix: Solid

Analysis Batch: 369613

Client Sample ID: RC-BA-01

Prep Type: Total/NA

Prep Batch: 369080

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|---------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|-----|-------|
| Copper | 16 | B | 24.6 | 39.1 | | mg/Kg | ☼ | 94 | 37 - 187 | 8 | 20 |

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-369081/1-A

Matrix: Solid

Analysis Batch: 369598

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 369081

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|------|-------|-------|---|----------------|----------------|---------|
| Arsenic | ND | | 0.60 | 0.051 | mg/Kg | | 04/13/17 14:35 | 04/14/17 15:35 | 1 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-369081/2-A
Matrix: Solid
Analysis Batch: 369598

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 369081

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|---------|-------------|------------|---------------|-------|---|------|----------|
| Arsenic | 20.0 | 17.5 | | mg/Kg | | 87 | 83 - 111 |

Lab Sample ID: 280-95791-1 MS
Matrix: Solid
Analysis Batch: 369598

Client Sample ID: RC-BA-01
Prep Type: Total/NA
Prep Batch: 369081

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|---------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Arsenic | 6.9 | | 17.6 | 22.2 | | mg/Kg | ✱ | 87 | 83 - 111 |

Lab Sample ID: 280-95791-1 MSD
Matrix: Solid
Analysis Batch: 369598

Client Sample ID: RC-BA-01
Prep Type: Total/NA
Prep Batch: 369081

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|---------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|-----|-------|
| Arsenic | 6.9 | | 19.3 | 23.4 | | mg/Kg | ✱ | 86 | 83 - 111 | 5 | 20 |

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 280-369993/1-A
Matrix: Solid
Analysis Batch: 370169

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 369993

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|-------|--------|-------|---|----------------|----------------|---------|
| Mercury | ND | | 0.017 | 0.0055 | mg/Kg | | 04/19/17 12:39 | 04/19/17 21:17 | 1 |

Lab Sample ID: LCS 280-369993/2-A
Matrix: Solid
Analysis Batch: 370169

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 369993

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|---------|-------------|------------|---------------|-------|---|------|----------|
| Mercury | 0.417 | 0.428 | | mg/Kg | | 103 | 87 - 111 |

Lab Sample ID: 280-95791-1 MS
Matrix: Solid
Analysis Batch: 370169

Client Sample ID: RC-BA-01
Prep Type: Total/NA
Prep Batch: 369993

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|---------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|
| Mercury | 0.024 | | 0.587 | 0.621 | | mg/Kg | ✱ | 102 | 87 - 111 |

Lab Sample ID: 280-95791-1 MSD
Matrix: Solid
Analysis Batch: 370169

Client Sample ID: RC-BA-01
Prep Type: Total/NA
Prep Batch: 369993

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|---------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|-----|-------|
| Mercury | 0.024 | | 0.622 | 0.650 | | mg/Kg | ✱ | 101 | 87 - 111 | 5 | 20 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 490-424248/1-A
Matrix: Solid
Analysis Batch: 424500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424248

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------|-----------|--------------|-----|-----|-------|---|----------------|----------------|---------|
| Chromium, hex | ND | | 4.9 | 1.9 | mg/Kg | | 04/22/17 11:27 | 04/23/17 15:30 | 1 |

Lab Sample ID: LCS 490-424248/3-A
Matrix: Solid
Analysis Batch: 424500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424248

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------|-------------|------------|---------------|-------|---|------|--------------|
| Chromium, hex | 63.6 | 73.1 | | mg/Kg | | 115 | 80 - 120 |

Lab Sample ID: LCSS 490-424248/2-A
Matrix: Solid
Analysis Batch: 424500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424248

| Analyte | Spike Added | LCSS Result | LCSS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------|-------------|-------------|----------------|-------|---|------|--------------|
| Chromium, hex | 39.0 | 44.0 | | mg/Kg | | 113 | 80 - 120 |

Lab Sample ID: 280-95791-1 MSI
Matrix: Solid
Analysis Batch: 424500

Client Sample ID: RC-BA-01
Prep Type: Total/NA
Prep Batch: 424248

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSI Result | MSI Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------|---------------|------------------|-------------|------------|---------------|-------|---|------|--------------|
| Chromium, hex | ND | | 82.1 | 85.3 | | mg/Kg | ✖ | 104 | 75 - 125 |

Lab Sample ID: 280-95791-1 MSS
Matrix: Solid
Analysis Batch: 424500

Client Sample ID: RC-BA-01
Prep Type: Total/NA
Prep Batch: 424248

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSS Result | MSS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------|---------------|------------------|-------------|------------|---------------|-------|---|------|--------------|
| Chromium, hex | ND | | 49.5 | 48.5 | | mg/Kg | ✖ | 98 | 75 - 125 |

Lab Sample ID: 280-95791-1 DU
Matrix: Solid
Analysis Batch: 424500

Client Sample ID: RC-BA-01
Prep Type: Total/NA
Prep Batch: 424248

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | Limit |
|---------------|---------------|------------------|-----------|--------------|-------|---|-----|-------|
| Chromium, hex | ND | | ND | | mg/Kg | ✖ | NC | 20 |

Method: 9045D - pH

Lab Sample ID: LCS 280-369457/22-A
Matrix: Solid
Analysis Batch: 370033

Client Sample ID: Lab Control Sample
Prep Type: Soluble

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------|-------------|------------|---------------|------|---|------|--------------|
| pH adj. to 25 deg C | 7.00 | 7.0 | | SU | | 100 | 97 - 103 |

TestAmerica Denver

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Method: 9050A - Specific Conductance

Lab Sample ID: 280-95791-1 DU

Matrix: Solid

Analysis Batch: 423759

Client Sample ID: RC-BA-01

Prep Type: Soluble

Prep Batch: 422713

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|-------------------------|------------------|---------------------|--------------|-----------------|----------|---|-----|--------------|
| Electrical Conductivity | 11 | | 10.9 | | mmhos/cm | — | 0.2 | 10 |

Method: Moisture - Percent Moisture

Lab Sample ID: 280-95791-9 DU

Matrix: Solid

Analysis Batch: 369406

Client Sample ID: RC-BA-09

Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|------------------|------------------|---------------------|--------------|-----------------|------|---|-----|--------------|
| Percent Moisture | 17.2 | | 17.6 | | % | — | 2 | 20 |
| Percent Solids | 82.8 | | 82.4 | | % | | 0.5 | 20 |

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

GC/MS VOA

Analysis Batch: 369704

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 8260B | 369710 |
| MB 280-369710/1-A | Method Blank | Total/NA | Solid | 8260B | 369710 |
| LCS 280-369710/2-A | Lab Control Sample | Total/NA | Solid | 8260B | 369710 |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 8260B | 369710 |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 8260B | 369710 |

Prep Batch: 369710

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 5035 | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 5035 | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 5035 | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 5035 | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 5035 | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 5035 | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 5035 | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 5035 | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 5035 | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 5035 | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 5035 | |
| MB 280-369710/1-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 280-369710/2-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 5035 | |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 5035 | |

GC/MS Semi VOA

Prep Batch: 369761

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 3546 | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 3546 | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 3546 | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 3546 | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 3546 | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 3546 | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 3546 | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 3546 | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 3546 | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 3546 | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 3546 | |
| MB 280-369761/1-A | Method Blank | Total/NA | Solid | 3546 | |

TestAmerica Denver

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

GC/MS Semi VOA (Continued)

Prep Batch: 369761 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| LCS 280-369761/2-A | Lab Control Sample | Total/NA | Solid | 3546 | |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 3546 | |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 3546 | |

Analysis Batch: 370634

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|-----------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 8270D SIM | 369761 |
| MB 280-369761/1-A | Method Blank | Total/NA | Solid | 8270D SIM | 369761 |
| LCS 280-369761/2-A | Lab Control Sample | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 8270D SIM | 369761 |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 8270D SIM | 369761 |

GC VOA

Prep Batch: 369828

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 5035 | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 5035 | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 5035 | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 5035 | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 5035 | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 5035 | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 5035 | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 5035 | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 5035 | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 5035 | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 5035 | |
| MB 280-369828/1-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 280-369828/2-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 5035 | |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 5035 | |

Analysis Batch: 369840

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 8015C | 369828 |

TestAmerica Denver

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

GC VOA (Continued)

Analysis Batch: 369840 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 8015C | 369828 |
| MB 280-369828/1-A | Method Blank | Total/NA | Solid | 8015C | 369828 |
| LCS 280-369828/2-A | Lab Control Sample | Total/NA | Solid | 8015C | 369828 |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 8015C | 369828 |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 8015C | 369828 |

GC Semi VOA

Prep Batch: 369203

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 3546 | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 3546 | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 3546 | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 3546 | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 3546 | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 3546 | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 3546 | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 3546 | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 3546 | |
| MB 280-369203/1-A | Method Blank | Total/NA | Solid | 3546 | |
| LCS 280-369203/2-A | Lab Control Sample | Total/NA | Solid | 3546 | |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 3546 | |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 3546 | |

Prep Batch: 369968

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 3546 | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 3546 | |
| MB 280-369968/1-A | Method Blank | Total/NA | Solid | 3546 | |
| LCS 280-369968/2-A | Lab Control Sample | Total/NA | Solid | 3546 | |

Analysis Batch: 370413

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 8015C | 369203 |
| MB 280-369203/1-A | Method Blank | Total/NA | Solid | 8015C | 369203 |
| LCS 280-369203/2-A | Lab Control Sample | Total/NA | Solid | 8015C | 369203 |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 8015C | 369203 |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 8015C | 369203 |

TestAmerica Denver

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

GC Semi VOA (Continued)

Analysis Batch: 370641

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 8015C | 369968 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 8015C | 369968 |
| MB 280-369968/1-A | Method Blank | Total/NA | Solid | 8015C | 369968 |
| LCS 280-369968/2-A | Lab Control Sample | Total/NA | Solid | 8015C | 369968 |

Metals

Prep Batch: 369080

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 3050B | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 3050B | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 3050B | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 3050B | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 3050B | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 3050B | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 3050B | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 3050B | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 3050B | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 3050B | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 3050B | |
| MB 280-369080/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 280-369080/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 3050B | |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 3050B | |

Prep Batch: 369081

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 3050B | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 3050B | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 3050B | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 3050B | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 3050B | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 3050B | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 3050B | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 3050B | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 3050B | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 3050B | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 3050B | |
| MB 280-369081/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 280-369081/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 3050B | |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 3050B | |

Prep Batch: 369086

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Soluble | Solid | 20B | |
| 280-95791-2 | RC-BA-02 | Soluble | Solid | 20B | |
| 280-95791-3 | RC-BA-03 | Soluble | Solid | 20B | |
| 280-95791-4 | RC-BA-04 | Soluble | Solid | 20B | |
| 280-95791-5 | RC-BA-05 | Soluble | Solid | 20B | |

TestAmerica Denver

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Metals (Continued)

Prep Batch: 369086 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------|-----------|--------|--------|------------|
| 280-95791-6 | RC-BA-06 | Soluble | Solid | 20B | |
| 280-95791-7 | RC-BA-07 | Soluble | Solid | 20B | |
| 280-95791-8 | RC-BA-08 | Soluble | Solid | 20B | |
| 280-95791-9 | RC-BA-09 | Soluble | Solid | 20B | |
| 280-95791-10 | RC-BA-10 | Soluble | Solid | 20B | |
| 280-95791-11 | RC-BA-DUP01 | Soluble | Solid | 20B | |
| MB 280-369086/1-A | Method Blank | Soluble | Solid | 20B | |
| 280-95791-1 DU | RC-BA-01 | Soluble | Solid | 20B | |

Analysis Batch: 369552

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 6010C | 369080 |
| MB 280-369080/1-A | Method Blank | Total/NA | Solid | 6010C | 369080 |
| LCS 280-369080/2-A | Lab Control Sample | Total/NA | Solid | 6010C | 369080 |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 6010C | 369080 |

Analysis Batch: 369598

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 6020A | 369081 |
| MB 280-369081/1-A | Method Blank | Total/NA | Solid | 6020A | 369081 |
| LCS 280-369081/2-A | Lab Control Sample | Total/NA | Solid | 6020A | 369081 |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 6020A | 369081 |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 6020A | 369081 |

Analysis Batch: 369613

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 6010C | 369080 |

TestAmerica Denver

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Metals (Continued)

Analysis Batch: 369613 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 6010C | 369080 |
| MB 280-369080/1-A | Method Blank | Total/NA | Solid | 6010C | 369080 |
| LCS 280-369080/2-A | Lab Control Sample | Total/NA | Solid | 6010C | 369080 |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 6010C | 369080 |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 6010C | 369080 |

Prep Batch: 369993

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 7471A | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 7471A | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 7471A | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 7471A | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 7471A | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 7471A | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 7471A | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 7471A | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 7471A | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 7471A | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 7471A | |
| MB 280-369993/1-A | Method Blank | Total/NA | Solid | 7471A | |
| LCS 280-369993/2-A | Lab Control Sample | Total/NA | Solid | 7471A | |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 7471A | |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 7471A | |

Analysis Batch: 370169

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 7471A | 369993 |
| MB 280-369993/1-A | Method Blank | Total/NA | Solid | 7471A | 369993 |
| LCS 280-369993/2-A | Lab Control Sample | Total/NA | Solid | 7471A | 369993 |
| 280-95791-1 MS | RC-BA-01 | Total/NA | Solid | 7471A | 369993 |
| 280-95791-1 MSD | RC-BA-01 | Total/NA | Solid | 7471A | 369993 |

Analysis Batch: 370249

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Soluble | Solid | 20B | 369086 |

TestAmerica Denver

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Metals (Continued)

Analysis Batch: 370249 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------|-----------|--------|--------|------------|
| 280-95791-2 | RC-BA-02 | Soluble | Solid | 20B | 369086 |
| 280-95791-3 | RC-BA-03 | Soluble | Solid | 20B | 369086 |
| 280-95791-4 | RC-BA-04 | Soluble | Solid | 20B | 369086 |
| 280-95791-5 | RC-BA-05 | Soluble | Solid | 20B | 369086 |
| 280-95791-6 | RC-BA-06 | Soluble | Solid | 20B | 369086 |
| 280-95791-7 | RC-BA-07 | Soluble | Solid | 20B | 369086 |
| 280-95791-8 | RC-BA-08 | Soluble | Solid | 20B | 369086 |
| 280-95791-9 | RC-BA-09 | Soluble | Solid | 20B | 369086 |
| 280-95791-10 | RC-BA-10 | Soluble | Solid | 20B | 369086 |
| 280-95791-11 | RC-BA-DUP01 | Soluble | Solid | 20B | 369086 |
| MB 280-369086/1-A | Method Blank | Soluble | Solid | 20B | 369086 |
| 280-95791-1 DU | RC-BA-01 | Soluble | Solid | 20B | 369086 |

General Chemistry

Analysis Batch: 369406

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------|------------------|-----------|--------|----------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | Moisture | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | Moisture | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | Moisture | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | Moisture | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | Moisture | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | Moisture | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | Moisture | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | Moisture | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | Moisture | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | Moisture | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | Moisture | |
| 280-95791-9 DU | RC-BA-09 | Total/NA | Solid | Moisture | |

Leach Batch: 369457

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------|-----------|--------|----------|------------|
| 280-95791-1 | RC-BA-01 | Soluble | Solid | DI Leach | |
| 280-95791-2 | RC-BA-02 | Soluble | Solid | DI Leach | |
| 280-95791-3 | RC-BA-03 | Soluble | Solid | DI Leach | |
| 280-95791-4 | RC-BA-04 | Soluble | Solid | DI Leach | |
| 280-95791-5 | RC-BA-05 | Soluble | Solid | DI Leach | |
| 280-95791-6 | RC-BA-06 | Soluble | Solid | DI Leach | |
| 280-95791-7 | RC-BA-07 | Soluble | Solid | DI Leach | |
| 280-95791-8 | RC-BA-08 | Soluble | Solid | DI Leach | |
| 280-95791-9 | RC-BA-09 | Soluble | Solid | DI Leach | |
| 280-95791-10 | RC-BA-10 | Soluble | Solid | DI Leach | |
| 280-95791-11 | RC-BA-DUP01 | Soluble | Solid | DI Leach | |
| LCS 280-369457/22-A | Lab Control Sample | Soluble | Solid | DI Leach | |

Analysis Batch: 370033

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Soluble | Solid | 9045D | 369457 |
| 280-95791-2 | RC-BA-02 | Soluble | Solid | 9045D | 369457 |
| 280-95791-3 | RC-BA-03 | Soluble | Solid | 9045D | 369457 |

TestAmerica Denver

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

General Chemistry (Continued)

Analysis Batch: 370033 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-4 | RC-BA-04 | Soluble | Solid | 9045D | 369457 |
| 280-95791-5 | RC-BA-05 | Soluble | Solid | 9045D | 369457 |
| 280-95791-6 | RC-BA-06 | Soluble | Solid | 9045D | 369457 |
| 280-95791-7 | RC-BA-07 | Soluble | Solid | 9045D | 369457 |
| 280-95791-8 | RC-BA-08 | Soluble | Solid | 9045D | 369457 |
| 280-95791-9 | RC-BA-09 | Soluble | Solid | 9045D | 369457 |
| 280-95791-10 | RC-BA-10 | Soluble | Solid | 9045D | 369457 |
| 280-95791-11 | RC-BA-DUP01 | Soluble | Solid | 9045D | 369457 |
| LCS 280-369457/22-A | Lab Control Sample | Soluble | Solid | 9045D | 369457 |

Prep Batch: 422713

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------|------------------|-----------|--------|---------------|------------|
| 280-95791-1 | RC-BA-01 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-2 | RC-BA-02 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-3 | RC-BA-03 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-4 | RC-BA-04 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-5 | RC-BA-05 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-6 | RC-BA-06 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-7 | RC-BA-07 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-8 | RC-BA-08 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-9 | RC-BA-09 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-10 | RC-BA-10 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-11 | RC-BA-DUP01 | Soluble | Solid | Sat Paste Ext | |
| 280-95791-1 DU | RC-BA-01 | Soluble | Solid | Sat Paste Ext | |

Analysis Batch: 423759

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Soluble | Solid | 9050A | 422713 |
| 280-95791-2 | RC-BA-02 | Soluble | Solid | 9050A | 422713 |
| 280-95791-3 | RC-BA-03 | Soluble | Solid | 9050A | 422713 |
| 280-95791-4 | RC-BA-04 | Soluble | Solid | 9050A | 422713 |
| 280-95791-5 | RC-BA-05 | Soluble | Solid | 9050A | 422713 |
| 280-95791-6 | RC-BA-06 | Soluble | Solid | 9050A | 422713 |
| 280-95791-7 | RC-BA-07 | Soluble | Solid | 9050A | 422713 |
| 280-95791-8 | RC-BA-08 | Soluble | Solid | 9050A | 422713 |
| 280-95791-9 | RC-BA-09 | Soluble | Solid | 9050A | 422713 |
| 280-95791-10 | RC-BA-10 | Soluble | Solid | 9050A | 422713 |
| 280-95791-11 | RC-BA-DUP01 | Soluble | Solid | 9050A | 422713 |
| LCS 490-423759/3 | Lab Control Sample | Total/NA | Solid | 9050A | |
| LCSD 490-423759/4 | Lab Control Sample Dup | Total/NA | Solid | 9050A | |
| 280-95791-1 DU | RC-BA-01 | Soluble | Solid | 9050A | 422713 |

Prep Batch: 424248

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 3060A | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 3060A | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 3060A | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 3060A | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 3060A | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 3060A | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 3060A | |

TestAmerica Denver

QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

General Chemistry (Continued)

Prep Batch: 424248 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 3060A | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 3060A | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 3060A | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 3060A | |
| MB 490-424248/1-A | Method Blank | Total/NA | Solid | 3060A | |
| LCSI 490-424248/3-A | Lab Control Sample | Total/NA | Solid | 3060A | |
| LCSS 490-424248/2-A | Lab Control Sample | Total/NA | Solid | 3060A | |
| 280-95791-1 MSI | RC-BA-01 | Total/NA | Solid | 3060A | |
| 280-95791-1 MSS | RC-BA-01 | Total/NA | Solid | 3060A | |
| 280-95791-1 DU | RC-BA-01 | Total/NA | Solid | 3060A | |

Analysis Batch: 424500

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 7196A | 424248 |
| MB 490-424248/1-A | Method Blank | Total/NA | Solid | 7196A | 424248 |
| LCSI 490-424248/3-A | Lab Control Sample | Total/NA | Solid | 7196A | 424248 |
| LCSS 490-424248/2-A | Lab Control Sample | Total/NA | Solid | 7196A | 424248 |
| 280-95791-1 MSI | RC-BA-01 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-1 MSS | RC-BA-01 | Total/NA | Solid | 7196A | 424248 |
| 280-95791-1 DU | RC-BA-01 | Total/NA | Solid | 7196A | 424248 |

Analysis Batch: 424595

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 280-95791-1 | RC-BA-01 | Total/NA | Solid | 7196A | |
| 280-95791-2 | RC-BA-02 | Total/NA | Solid | 7196A | |
| 280-95791-3 | RC-BA-03 | Total/NA | Solid | 7196A | |
| 280-95791-4 | RC-BA-04 | Total/NA | Solid | 7196A | |
| 280-95791-5 | RC-BA-05 | Total/NA | Solid | 7196A | |
| 280-95791-6 | RC-BA-06 | Total/NA | Solid | 7196A | |
| 280-95791-7 | RC-BA-07 | Total/NA | Solid | 7196A | |
| 280-95791-8 | RC-BA-08 | Total/NA | Solid | 7196A | |
| 280-95791-9 | RC-BA-09 | Total/NA | Solid | 7196A | |
| 280-95791-10 | RC-BA-10 | Total/NA | Solid | 7196A | |
| 280-95791-11 | RC-BA-DUP01 | Total/NA | Solid | 7196A | |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-01

Date Collected: 04/11/17 10:00

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 96.517 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 01:58 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.14 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-01

Date Collected: 04/11/17 10:00

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-1

Matrix: Solid

Percent Solids: 78.9

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.531 g | 5 mL | 369710 | 04/11/17 10:00 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 18:55 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.0 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 15:45 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.645 g | 5 mL | 369828 | 04/11/17 10:00 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/18/17 23:34 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.2 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 05:51 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.005 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 06:23 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.005 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 18:34 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.116 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 15:43 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.57 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:22 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5934 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-02

Date Collected: 04/11/17 10:45

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 91.329 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:07 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.23 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-02

Date Collected: 04/11/17 10:45

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-02

Date Collected: 04/11/17 10:45

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-2

Matrix: Solid

Percent Solids: 89.4

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.305 g | 5 mL | 369710 | 04/11/17 10:45 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 19:58 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.0 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 20 | | | 370634 | 04/24/17 17:04 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.323 g | 5 mL | 369828 | 04/11/17 10:45 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/18/17 22:45 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.6 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 07:53 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.119 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 06:35 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.119 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 18:47 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.161 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:02 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.54 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:28 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5029 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-03

Date Collected: 04/11/17 12:00

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 90.243 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:10 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.38 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-03

Date Collected: 04/11/17 12:00

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-3

Matrix: Solid

Percent Solids: 85.2

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.662 g | 5 mL | 369710 | 04/11/17 12:00 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 20:19 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.1 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 17:31 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.891 g | 5 mL | 369828 | 04/11/17 12:00 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 00:48 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.1 g | 1 mL | 369968 | 04/19/17 09:05 | JRA | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370641 | 04/24/17 23:04 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.050 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 06:38 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.050 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 18:49 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.055 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:05 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.54 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:35 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5535 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 10 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-04

Date Collected: 04/11/17 12:08

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 97.813 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:12 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.44 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-04

Date Collected: 04/11/17 12:08

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4

Matrix: Solid

Percent Solids: 95.5

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.37 g | 5 mL | 369710 | 04/11/17 12:08 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 20:40 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.2 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 17:57 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.161 g | 5 mL | 369828 | 04/11/17 12:08 | TEM | TAL DEN |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-04

Date Collected: 04/11/17 12:08

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-4

Matrix: Solid

Percent Solids: 95.5

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 01:13 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 31.5 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 08:18 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.165 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 06:41 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.165 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 18:52 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.255 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:20 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.56 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:38 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5428 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-05

Date Collected: 04/11/17 11:30

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 97.114 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:15 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.43 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-05

Date Collected: 04/11/17 11:30

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5

Matrix: Solid

Percent Solids: 79.4

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.93 g | 5 mL | 369710 | 04/11/17 11:30 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 21:01 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.1 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 18:24 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.727 g | 5 mL | 369828 | 04/11/17 11:30 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 01:38 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 32.9 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 08:42 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.494 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 06:53 | CRR | TAL DEN |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-05

Date Collected: 04/11/17 11:30

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-5

Matrix: Solid

Percent Solids: 79.4

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 3050B | | | 1.494 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 19:04 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.453 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:24 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.55 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:40 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5357 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-06

Date Collected: 04/11/17 11:10

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 95.278 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:18 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.16 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-06

Date Collected: 04/11/17 11:10

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6

Matrix: Solid

Percent Solids: 81.1

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 6.072 g | 5 mL | 369710 | 04/11/17 11:10 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 21:22 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.2 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 18:50 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.176 g | 5 mL | 369828 | 04/11/17 11:10 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 02:02 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.9 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 09:06 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.000 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 06:56 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.000 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 19:07 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.068 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:28 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.53 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-06

Date Collected: 04/11/17 11:10

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-6

Matrix: Solid

Percent Solids: 81.1

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:42 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5225 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-07

Date Collected: 04/11/17 12:15

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 97.485 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:21 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.23 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-07

Date Collected: 04/11/17 12:15

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-7

Matrix: Solid

Percent Solids: 73.3

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.421 g | 5 mL | 369710 | 04/11/17 12:15 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 21:43 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.4 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 19:17 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.828 g | 5 mL | 369828 | 04/11/17 12:15 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 02:27 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.8 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 09:31 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.026 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 06:58 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.026 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 19:10 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.119 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:32 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.54 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:45 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5312 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-08

Date Collected: 04/11/17 12:50

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 96.623 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:35 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.25 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-08

Date Collected: 04/11/17 12:50

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-8

Matrix: Solid

Percent Solids: 87.9

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.979 g | 5 mL | 369710 | 04/11/17 12:50 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 22:04 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.2 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 19:43 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.938 g | 5 mL | 369828 | 04/11/17 12:50 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 02:51 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 31.4 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 09:55 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.298 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 07:01 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.298 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 19:12 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.137 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:36 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.57 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:47 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5032 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-09

Date Collected: 04/11/17 12:40

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 99.671 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:38 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.32 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-09

Date Collected: 04/11/17 12:40

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-09

Date Collected: 04/11/17 12:40

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-9

Matrix: Solid

Percent Solids: 82.8

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.646 g | 5 mL | 369710 | 04/11/17 12:40 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 22:24 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 31.0 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 20:09 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 4.83 g | 5 mL | 369828 | 04/11/17 12:40 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 03:16 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 31.2 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 10:19 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.221 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 07:04 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.221 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 19:15 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.200 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:39 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.53 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:49 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5459 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-10

Date Collected: 04/11/17 12:30

Date Received: 04/12/17 08:45

Lab Sample ID: 280-95791-10

Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 95.376 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:41 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.34 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-10

Lab Sample ID: 280-95791-10

Date Collected: 04/11/17 12:30

Matrix: Solid

Date Received: 04/12/17 08:45

Percent Solids: 88.0

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.351 g | 5 mL | 369710 | 04/11/17 12:30 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 18:13 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 31.8 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 1 | | | 370634 | 04/24/17 20:35 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 4.323 g | 5 mL | 369828 | 04/11/17 12:30 | TEM | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 03:41 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.2 g | 1 mL | 369968 | 04/19/17 09:05 | JRA | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370641 | 04/24/17 23:29 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.015 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 07:06 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.015 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 19:17 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.148 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:43 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.50 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:52 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5939 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Client Sample ID: RC-BA-DUP01

Lab Sample ID: 280-95791-11

Date Collected: 04/11/17 10:50

Matrix: Solid

Date Received: 04/12/17 08:45

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Soluble | Prep | 20B | | | 97.781 g | 50 mL | 369086 | 04/12/17 12:15 | SUR | TAL DEN |
| Soluble | Analysis | 20B | | 10 | | | 370249 | 04/20/17 02:44 | CML | TAL DEN |
| Soluble | Leach | DI Leach | | | 40.17 g | 40 mL | 369457 | 04/14/17 13:02 | IEU | TAL DEN |
| Soluble | Analysis | 9045D | | 1 | 1 mL | 1 mL | 370033 | 04/19/17 10:22 | IEU | TAL DEN |
| Soluble | Prep | Sat Paste Ext | | | 1 g | 1 mL | 422713 | 04/19/17 09:58 | BAA | TAL NSH |
| Soluble | Analysis | 9050A | | 1 | | | 423759 | 04/20/17 15:00 | JAB | TAL NSH |
| Total/NA | Analysis | Moisture | | 1 | | | 369406 | 04/14/17 09:43 | PAH | TAL DEN |

Client Sample ID: RC-BA-DUP01

Lab Sample ID: 280-95791-11

Date Collected: 04/11/17 10:50

Matrix: Solid

Date Received: 04/12/17 08:45

Percent Solids: 89.6

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5035 | | | 5.406 g | 5 mL | 369710 | 04/11/17 10:50 | ADD | TAL DEN |
| Total/NA | Analysis | 8260B | | 1 | 5 g | 5 mL | 369704 | 04/17/17 18:34 | ADD | TAL DEN |
| Total/NA | Prep | 3546 | | | 30.6 g | 1 mL | 369761 | 04/18/17 09:47 | JRA | TAL DEN |
| Total/NA | Analysis | 8270D SIM | | 20 | | | 370634 | 04/24/17 21:02 | KGV | TAL DEN |
| Total/NA | Prep | 5035 | | | 5.714 g | 5 mL | 369828 | 04/11/17 10:50 | TEM | TAL DEN |

TestAmerica Denver

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Client Sample ID: RC-BA-DUP01

Lab Sample ID: 280-95791-11

Date Collected: 04/11/17 10:50

Matrix: Solid

Date Received: 04/12/17 08:45

Percent Solids: 89.6

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8015C | | 1 | 0.1 mL | 5 mL | 369840 | 04/19/17 04:05 | KDK | TAL DEN |
| Total/NA | Prep | 3546 | | | 31.1 g | 1 mL | 369203 | 04/13/17 08:29 | DFB1 | TAL DEN |
| Total/NA | Analysis | 8015C | | 1 | | | 370413 | 04/22/17 10:44 | TEM | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.020 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369552 | 04/16/17 07:09 | CRR | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.020 g | 100 mL | 369080 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6010C | | 1 | | | 369613 | 04/16/17 19:20 | SJS | TAL DEN |
| Total/NA | Prep | 3050B | | | 1.316 g | 100 mL | 369081 | 04/13/17 14:35 | SEJ | TAL DEN |
| Total/NA | Analysis | 6020A | | 1 | | | 369598 | 04/14/17 16:47 | LMT | TAL DEN |
| Total/NA | Prep | 7471A | | | 0.58 g | 50 mL | 369993 | 04/19/17 12:39 | CDH | TAL DEN |
| Total/NA | Analysis | 7471A | | 1 | | | 370169 | 04/19/17 21:54 | CDH | TAL DEN |
| Total/NA | Prep | 3060A | | | 2.5575 g | 500 mL | 424248 | 04/22/17 11:27 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424500 | 04/23/17 15:30 | BLM | TAL NSH |
| Total/NA | Analysis | 7196A | | 1 | 50 mL | 50 mL | 424595 | 04/23/17 15:30 | BMC | TAL NSH |

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Laboratory: TestAmerica Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|------------------------|---------------|------------|-----------------------|-----------------|
| A2LA | DoD ELAP | | 2907.01 | 10-31-17 |
| A2LA | ISO/IEC 17025 | | 2907.01 | 10-31-17 |
| Alabama | State Program | 4 | 40730 | 09-30-12 * |
| Alaska (UST) | State Program | 10 | UST-30 | 04-05-18 |
| Arizona | State Program | 9 | AZ0713 | 12-20-17 |
| Arkansas DEQ | State Program | 6 | 88-0687 | 06-01-17 |
| California | State Program | 9 | 2513 | 01-08-18 * |
| Connecticut | State Program | 1 | PH-0686 | 09-30-18 |
| Florida | NELAP | 4 | E87667 | 06-30-17 |
| Georgia | State Program | 4 | N/A | 01-08-18 |
| Illinois | NELAP | 5 | 200017 | 04-30-18 |
| Iowa | State Program | 7 | 370 | 12-01-18 * |
| Kansas | NELAP | 7 | E-10166 | 04-30-17 * |
| Louisiana | NELAP | 6 | 02096 | 06-30-17 |
| Maine | State Program | 1 | CO0002 | 03-03-19 |
| Minnesota | NELAP | 5 | 8-999-405 | 12-31-17 * |
| Nevada | State Program | 9 | CO0026 | 07-31-17 |
| New Hampshire | NELAP | 1 | 205310 | 04-28-17 |
| New Jersey | NELAP | 2 | CO004 | 06-30-17 |
| New York | NELAP | 2 | 11964 | 04-01-18 |
| North Carolina (WW/SW) | State Program | 4 | 358 | 12-31-17 |
| North Dakota | State Program | 8 | R-034 | 01-09-18 |
| Oklahoma | State Program | 6 | 8614 | 08-31-17 |
| Oregon | NELAP | 10 | 4025 | 01-08-18 |
| Pennsylvania | NELAP | 3 | 68-00664 | 07-31-17 |
| South Carolina | State Program | 4 | 72002001 | 01-09-17 * |
| Texas | NELAP | 6 | T104704183-16-12 | 09-30-17 |
| USDA | Federal | | P330-16-00397 | 12-15-19 |
| Utah | NELAP | 8 | CO00026 | 07-31-17 |
| Virginia | NELAP | 3 | 460232 | 06-14-17 |
| Washington | State Program | 10 | C583 | 08-02-17 |
| West Virginia DEP | State Program | 3 | 354 | 11-30-17 |
| Wisconsin | State Program | 5 | 999615430 | 08-31-17 |
| Wyoming (UST) | A2LA | 8 | 2907.01 | 10-31-17 |

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|--------------|---------------|------------|-----------------------|-----------------|
| A2LA | A2LA | | NA: NELAP & A2LA | 12-31-17 |
| A2LA | ISO/IEC 17025 | | 0453.07 | 12-31-17 |
| Alaska (UST) | State Program | 10 | UST-087 | 09-01-17 |
| Arizona | State Program | 9 | AZ0473 | 05-05-17 |
| Arkansas DEQ | State Program | 6 | 88-0737 | 04-25-18 |
| California | State Program | 9 | 2938 | 10-31-18 |
| Connecticut | State Program | 1 | PH-0220 | 12-31-17 |
| Florida | NELAP | 4 | E87358 | 06-30-17 |
| Georgia | State Program | 4 | N/A | 12-31-17 |
| Illinois | NELAP | 5 | 200010 | 12-09-17 |
| Iowa | State Program | 7 | 131 | 04-01-18 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Denver

Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Project/Site: Chevron Rangely, CO C-4

TestAmerica Job ID: 280-95791-1

Laboratory: TestAmerica Nashville (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|----------------------------------|---------------|------------|-----------------------|-----------------|
| Kansas | NELAP | 7 | E-10229 | 10-31-17 |
| Kentucky (UST) | State Program | 4 | 19 | 06-30-17 |
| Kentucky (WW) | State Program | 4 | 90038 | 12-31-17 |
| Louisiana | NELAP | 6 | 30613 | 06-30-17 |
| Maine | State Program | 1 | TN00032 | 11-03-17 |
| Maryland | State Program | 3 | 316 | 03-31-18 |
| Massachusetts | State Program | 1 | M-TN032 | 06-30-17 |
| Minnesota | NELAP | 5 | 047-999-345 | 12-31-17 |
| Mississippi | State Program | 4 | N/A | 06-30-17 |
| Montana (UST) | State Program | 8 | NA | 02-24-20 |
| Nevada | State Program | 9 | TN00032 | 07-31-17 |
| New Hampshire | NELAP | 1 | 2963 | 10-09-17 |
| New Jersey | NELAP | 2 | TN965 | 06-30-17 |
| New York | NELAP | 2 | 11342 | 03-31-18 |
| North Carolina (WW/SW) | State Program | 4 | 387 | 12-31-17 |
| North Dakota | State Program | 8 | R-146 | 06-30-17 |
| Ohio VAP | State Program | 5 | CL0033 | 07-10-17 |
| Oklahoma | State Program | 6 | 9412 | 08-31-17 |
| Oregon | NELAP | 10 | TN200001 | 04-27-17 * |
| Pennsylvania | NELAP | 3 | 68-00585 | 06-30-17 |
| Rhode Island | State Program | 1 | LAO00268 | 12-30-17 |
| South Carolina | State Program | 4 | 84009 (001) | 02-18-17 * |
| South Carolina (Do Not Use - DW) | State Program | 4 | 84009 (002) | 12-16-17 |
| Tennessee | State Program | 4 | 2008 | 02-23-20 |
| Texas | NELAP | 6 | T104704077 | 08-31-17 |
| USDA | Federal | | P330-13-00306 | 12-01-19 |
| Utah | NELAP | 8 | TN00032 | 07-31-17 |
| Virginia | NELAP | 3 | 460152 | 06-14-17 |
| Washington | State Program | 10 | C789 | 07-19-17 |
| West Virginia DEP | State Program | 3 | 219 | 02-28-18 |
| Wisconsin | State Program | 5 | 998020430 | 08-31-17 |
| Wyoming (UST) | A2LA | 8 | 453.07 | 12-31-17 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Denver

Arvada, CO 80002-4517
phone 303.736.0100 fax 303.431.7171

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | | Project Manager: Bethany Lucente | | Site Contact: Bethany Lucente | | Date: 4/11/17 | | | | | | | | | | | |
|---|-------------|---|------------------------------|-------------------------------|------------|------------------------|------------------------|----------------|----------------|----------------|----------------|--------|--------------|----------|----------|----------|-----------------|
| Tel/Fax: (303) 250-4718 | | Lab Contact: Jamie Ide | | Carrier: Courier | | COC No: / of 1 Pages | | | | | | | | | | | |
| 2000 South Colorado Blvd., Suite 2-300 | | Analysis Turnaround Time | | Sampler: Stauthamer/Jones | | For Lab Use Only: | | | | | | | | | | | |
| Denver, CO 80222 | | <input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS | | Walk-in Client: | | Lab Sampling: | | | | | | | | | | | |
| (303) 758-4058 Phone | | TAT if different from Below | | Job / SDG No.: | | Sample Specific Notes: | | | | | | | | | | | |
| (303) 758-4828 FAX | | ASAP. | | | | | | | | | | | | | | | |
| Project Name: CPL-Rangely C-4 | | 2 weeks | | | | | | | | | | | | | | | |
| Site: CPL Rangely | | 1 week | | | | | | | | | | | | | | | |
| P O # 203720102 | | 2 days | | | | | | | | | | | | | | | |
| | | 1 day | | | | | | | | | | | | | | | |
| Sample Identification | Sample Date | Sample Time | Sample Type (C-Comp, G-Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | GRO-TEPH 8015B | DRO-TEPH 8015B | ORO-TEPH 8015B | PAHs 8270D SIM | EC/SAR | Metals 6010C | Hg 7171A | pH 9045D | Moisture | Chill/CVI 7196A |
| RC-BA-01 | 4/11/2017 | 1000 | G | Soil | 27 | N | Y | X | X | X | X | X | X | X | X | X | X |
| RC-BA-02 | 4/11/2017 | 1045 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-03 | 4/11/2017 | 1200 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-04 | 4/11/2017 | 1208 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-05 | 4/11/2017 | 1130 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-06 | 4/11/2017 | 1110 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-07 | 4/11/2017 | 1215 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-08 | 4/11/2017 | 1250 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-09 | 4/11/2017 | 1240 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-10 | 4/11/2017 | 1230 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| RC-BA-DUP01 | 4/11/2017 | 1050 | G | Soil | 9 | N | N | X | X | X | X | X | X | X | X | X | X |
| <p>Preservation Used: <input checked="" type="checkbox"/> Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> HCl <input type="checkbox"/> H2SO4 <input type="checkbox"/> HNO3 <input type="checkbox"/> NaOH <input type="checkbox"/> Other</p> <p>Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Are any samples from a listed EPA Hazardous Waste? Section if the lab is to dispose of the sample.</p> <p>Comments Section if the lab is to dispose of the sample.</p> <p><input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown</p> <p>Special Instructions/QC Requirements & Comments:</p> <p>Metals include Ba, B, Cd, Cr, Cu, Pb, Ni, Se, Ag, Zn</p> <p>Custody Seal No.: 3.1, 4.1, 2.0, 1.7 to 0.0 transferred by DS 4/12/17</p> <p>Cooler Temp. (°C): Obs'd: Cor'd:</p> <p>Therm ID No.:</p> <p>Relinquished by: Mike Stauthamer Date/Time: 4/11/17 1620</p> <p>Relinquished by: Date/Time: 4/12/17 0845</p> <p>Relinquished by: Date/Time:</p> | | | | | | | | | | | | | | | | | |

COOLER RECEIPT FORM



Cooler Received/Opened On 04-13-2017 @ 09:45

Time Samples Removed From Cooler 17:14 Time Samples Placed In Storage 18:56 (2 Hour Window)

1. Tracking # 2540 (last 4 digits, FedEx) Courier: FedEx
IR Gun ID 160656843 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 4.1 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? 1 (front) YES...NO...NA
If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) KD

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) JD

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) KD

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) KD

I certify that I attached a label with the unique LIMS number to each container (initial) KD

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# _____

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- 12
- 13
- 14
- 15

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | | | | | | | |
|--|---------|-------|----------|-------|---|--|--|-----------------------|--------------------------|
| Client Information (Sub Contract Lab) | | | | | | Sampler: | | COC No: | 280-394006-1 |
| Client Contact: Shipping/Receiving Company: TestAmerica Laboratories, Inc. | | | | | | Phone: | Jamie N | Page: | 280-95791-1 |
| | | | | | | E-Mail: | jamie.n@testamerica.com | Page 1 of 2 | |
| Address: 2960 Foster Creighton Drive, City: Nashville State, Zip: TN, 37204 Phone: 615-726-0177(Tel) 615-726-3404(Fax) Email: | | | | | | Due Date Requested: 4/24/2017 TAT Requested (days): PO #: W/O #: Project Name: Chevron Rangely, CO SSOW#: | Lab Pmt: Ide, Jamie N Accreditations Required (See note): Colorado | Job #: 280-95791-1 | |
| | | | | | | Field Filtered Sample (Yes or No) | Analysis Requested | | |
| | | | | | | Perform MS/MSD (Yes or No) | Preservation Codes: | | |
| | | | | | | 7196A_CR3 Trivalent Chromium (CrIII) | A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Ammonia H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: | | |
| | | | | | | 7196A/3060A Hexavalent Chromium (CrVI) | M - Hexane N - None O - AsnSO2 P - Na2CO3 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) | | |
| | | | | | | 9050A/SatPaste_Prep Electrical Conductivity | | | |
| | | | | | | Total Number of containers | | | |
| Sample Identification - Client ID (Lab ID) | | | | | | Special Instructions/Note: | | | |
| RC-BA-01 (280-95791-1) | 4/11/17 | 10:00 | Mountain | Solid | X | X | X | 2 | |
| RC-BA-01 (280-95791-IMS) | 4/11/17 | 10:00 | Mountain | MS | X | X | X | 2 | |
| RC-BA-01 (280-95791-IMSD) | 4/11/17 | 10:00 | Mountain | MSD | X | X | X | 2 | |
| RC-BA-02 (280-95791-2) | 4/11/17 | 10:45 | Mountain | Solid | X | X | X | 2 | |
| RC-BA-03 (280-95791-3) | 4/11/17 | 12:00 | Mountain | Solid | X | X | X | 2 | |
| RC-BA-04 (280-95791-4) | 4/11/17 | 12:08 | Mountain | Solid | X | X | X | 2 | |
| RC-BA-05 (280-95791-5) | 4/11/17 | 11:30 | Mountain | Solid | X | X | X | 2 | |
| RC-BA-06 (280-95791-6) | 4/11/17 | 11:10 | Mountain | Solid | X | X | X | 2 | |
| RC-BA-07 (280-95791-7) | 4/11/17 | 12:15 | Mountain | Solid | X | X | X | 2 | |
| Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/method being analyzed, the samples must be shipped back to the TestAmerica Laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc. | | | | | | | | | |
| Possible Hazard Identification | | | | | | Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) | | | |
| Unconfirmed | | | | | | <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months | | | |
| Deliverable Requested: I, II, III, IV, Other (specify) | | | | | | Special Instructions/QC Requirements: | | | |
| Primary Deliverable Rank: 2 | | | | | | | | | |
| Empty Kit Relinquished by: | | | | | | Date: | Time: | Method of Shipment: | |
| Relinquished by: [Signature] | | | | | | Date Time: 4/12/17 | 1615 | Company TAB | Received by: [Signature] |
| Relinquished by: | | | | | | Date Time: | | Company | Received by: |
| Relinquished by: | | | | | | Date Time: | | Company | Received by: |
| Custody Seals Intact: Δ Yes Δ No | | | | | | Cooler Temperature(s) °C and Other Remarks: 4.1 | | | |

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| 15 |

4955 Yarrow Street
Avrard, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica

THE UNIVERSITY OF CHICAGO PRESS

[illegible]

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 280-95791-1

Login Number: 95791

List Number: 1

Creator: True, Joshua A

List Source: TestAmerica Denver

| Question | Answer | Comment |
|--|--------|---------|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | N/A | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 280-95791-1

Login Number: 95791

List Number: 2

Creator: Dawson, Keith M

List Source: TestAmerica Nashville

List Creation: 04/13/17 06:54 PM

| Question | Answer | Comment |
|--|--------|---------|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

Stantec Analytical Validation Report/Checklist**Report No. 042817-EC-01**

| | | | |
|---|---|----------|---------|
| Project Name: Chevron – Rangeley, CO | Project Number: 203720102 | | |
| Stantec Validator: Elizabeth Crowley | Laboratory: Test America – Denver, CO | | |
| Date Validated: 04/27/17 | Laboratory Project Number: 280-95791-1 | | |
| Sample Start-End Date: 04/11/17 | Laboratory Report Date: 04/26/17 | | |
| Parameters Validated: Volatile Organic Compounds (VOC) by EPA SW 846 8260B, Poly Aromatic Hydrocarbons by 8270 SIM, Gasoline Range Organic Compounds (GRO) and Diesel Range Organic Compounds (DRO) by 8015C, Total Metals by 6010C, 6020A and 7471A, Sodium Adsorption Ratio and Soluble Metals by 20B, Hexavalent and Trivalent Chromium by 7196A, pH by 9045D, Electrical Conductivity by 9050A and Percent Moisture | | | |
| Associated Chain(s) of Custody – 280-394006.1 and 280-394006.2/11 solid field samples | | | |
| VALIDATION CRITERIA CHECK | | | |
| Validation Flags Applicable to this Review: | | | |
| U | The analyte was analyzed for, but not detected above the reported sample quantitation limit. | | |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | | |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | | |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration. | | |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. | | |
| B | The analyte was detected in the method, field and/or trip blank. | | |
| 1. | Were all the analyses requested for the samples submitted with each COC completed by the lab? | Yes X | No |
| Comments: TEPH ORO analysis not conducted per client request 4/12/17. | | | |
| 2. | Did the laboratory identify any non-conformances related to the analytical result? | Yes | No X |
| Comments: | | | |
| 3. | Were sample Chain-of-Custody forms complete? | Yes X | No |
| Comments: | | | |
| 4. | Were samples received in good condition and at the appropriate temperature? | Yes X | No |
| Comments: | | | |
| 5. | Were sample holding times met? | Yes | No X |
| Comments: 9045D – the 15 minute method holding time was exceeded for all samples. Associated sample results flagged “J”. Reason Code – HT | | | |
| 6. | Were correct concentration units reported? | Yes X | No |
| Comments: | | | |

| | | |
|--|-----------|---------|
| 7. Were detections found in laboratory blank samples? | Yes X | No |
| Comments: 6010C batch 369552 – Calcium = 23.4 mg/kg, Magnesium = 6.98 mg/kg and Copper = 0.371 mg/kg. Associated sample results greater than 10 times the blank concentration. No qualifying action required. | | |
| 8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples? | Yes NA | No |
| Comments: No blank sample submitted. | | |
| 9. Were instrument calibrations within method criteria? | Yes NA | No |
| Comments: Level II data package – no data provided. | | |
| 10. Were surrogate recoveries within laboratory control limits? | Yes | No X |
| Comments: 8260C – 3 of 4 surrogate %Rs are above limits for RC-BA-02 and 2 of 4 surrogates are above limits for RC-BA-05. All associated sample results flagged “J”. 8015C GRO – surrogate %R below limits for RC-BA-05(74%) and RC-BA-07(68%). Associated result flagged “UJ”. 8015C DRO – Surrogate %R below limits for RC-BA-07(38%). Associated result flagged “J”. Surrogate %R above limits for C-BA-DUP01(133%). Associated result flagged “J”. Reason Code - SUR | | |
| 11. Were laboratory control sample recoveries within laboratory control limits? | Yes X | No |
| Comments: | | |
| 12. Were matrix spike recoveries within laboratory control limits? | Yes | No X |
| Comments: 8260C batch 369704 - %Rs below limits for Benzene(46%), Ethylbenzene(39%), Toluene(45%) and Xylene(41%). Associated RC-BA-01 results flagged “J-“ if positive or “UJ-“ if non-detect and are biased low. 6010C batch 369552 - %R below limits for Barium(11%). Associated RC-BA-01 results flagged “J- “ and is biased low. The %R is above limits for Chromium(148%). Associated RC-BA-01 result flagged “J+” and is biased high. Reason Code – MS | | |
| 13. Were RPDs within control limits? | Yes | No X |
| Comments: 8260C batch 369704 – matrix RPDs above ±20% limit for Benzene(106%), Ethylbenzene(107%), Toluene(105%) and Xylene(104%). All associated results flagged “J” if positive. Reason Code – MD | | |
| 14. Were dilutions required on any samples? | Yes | No |

| | | | |
|---|--------------------------------|--------------|-----------------------|
| X | | | |
| Comments: No qualifying action required. | | | |
| 15. Were Tentatively Identified Compounds (TIC) present? | | Yes X | No |
| Comments: Sample results below the reporting limit do not possess the degree of qualitative or quantitative confidence required. The value may be a false positive and is an estimated value and is flagged "NJ". Reason Code – SQL | | | |
| 16. Were organic system performance criteria met? | | Yes | No |
| NA | | | |
| Comments: Level II data package – no data provided. | | | |
| 17. Were GC/MS internal standards within method criteria? | | Yes | No X |
| Comments: The "Case Narrative" reports internal standard 1,4-DCB-d4 recovery below 50% for RC-BA-02, RC-BA-07 and RC-BA-08. Associated Benzene and Toluene results flagged "J" if positive or "UJ" if non-detect. Sample RC-BA-05 reported 3 internal standard %Rs below 50%. All associated sample results flagged "J" if positive or "UJ" if non-detect. Reason Code - IS | | | |
| 18. Were inorganic system performance criteria met? | | Yes | No |
| NA | | | |
| Comments: No inorganic samples submitted. | | | |
| 19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. | | Yes X | No |
| Duplicate Sample No. RC-BA-DUP01 | Primary Sample No. RC-BA-02 | | |
| Comments: All RPDS within limits. | | | |
| 20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results? | | Yes X | No Initials EAC |
| Comments: | | | |
| 21. Other: Validation Limit | | Yes X | No |
| Comments: All sample results validated at Level II. | | | |
| PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT | | | |
| Precision: | Acceptable X | Unacceptable | Initials EAC |
| Comments: Data usable. | | | |
| Accuracy: | Acceptable X | Unacceptable | Initials EAC |

| | | | |
|--|-----------------|--------------|--------------|
| Comments: Data usable. | | | |
| Method Compliance: | Acceptable X | Unacceptable | Initials EAC |
| Comments: | | | |
| Completeness: | Acceptable X | Unacceptable | Initials EAC |
| Comments: The completeness goal of 90% was achieved. | | | |

Appendix C

Crude Oil Sample Laboratory Analytical Report

April 26, 2017



Bethany Lucente
Stantec
2000 S Colorado Blvd
Suite 2-300
Denver, CO 80222

RE: RC4
Project Number: 203720102

Pace Analytical received 1 sample on March 27, 2017 for analysis labeled RC4-5038-FNG. Per client request, the following analyses were performed:

1. PAHs & Extended Alkylated Isomers
2. C3-C36-Whole Oil Molecular Characterization Gas Chromatography "Fingerprint" by GC/FID
3. C8-C40 Qualitative Molecular Characterization by GC/MS – full scan mode
4. Simulated Distillation
5. Oxygenated Gasoline Blending Agents by GC/MS – SIM Mode
6. Organic Lead Speciation by GC/ECD
7. C3-C12 Quantitative Molecular Characterization by GC/MS – full scan mode

The sample was performed in house under laboratory number **22131**.

Please call the lab at 412-826-5245, or you may email any questions or concerns to ruth.welsh@pacelabs.com regarding any analytical data reports.

Respectfully submitted,

Ruth Welsh

Ruth Welsh
Project Manager



**(C3-C36) Whole-Oil Molecular Characterization
Gas Chromatography "Fingerprint"
by GC/FID**

*Includes Semi-quantitative screening of over 90
gasoline range PIANO compounds*



**(C3-C12) Quantitative Molecular Characterization
by GC/MS - full scan mode**

***PIANO, Oxygenated Blending Agents, Lead Scavengers,
MMT & Thiophenes***



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO

Project: RC4
Project #: 203720102
Collected by: Robert Gomez

Lab ID: 22131-1
Collected: 3/24/2017
Received:
Matrix: Product

Client ID: RC4-5038-FNG
Analyzed: 4/20/2017
Q Method: 041817.M

| CONSTITUENTS | CLASS | ABBR. | ssRL mg/kg | RESULT mg/kg | QUALIFIER |
|--------------------------------|-------|-------|---------------|-----------------|-----------|
| Isopentane (2-Methylbutane) | I | IP | 26.1 | 447.9 | |
| 1-Pentene | O | 1P | 26.1 | 26.1 | U |
| 2-Methyl-1-butene | O | 2M1B | 26.1 | 35.6 | J |
| Pentane (nC5) | P | C5 | 26.1 | 1336.5 | |
| trans-2-pentene | O | T2P | 26.1 | 26.1 | U |
| cis-2-pentene | O | C2P | 26.1 | 26.1 | U |
| 2-Methyl-2-butene (t) | O | 2M2B | 26.1 | 26.1 | U |
| 2,2-Dimethylbutane (t) | I | 22DMB | 26.1 | 40.9 | |
| Cyclopentane | N | CYP | 26.1 | 231.7 | |
| 2,3-Dimethylbutane | I | 23DMB | 26.1 | 258.7 | |
| 2-Methylpentane | I | 2MP | 26.1 | 1201.7 | |
| Methyl-tert-butyl ether (MTBE) | ADD | MTBE | 26.1 | 26.1 | U |
| 3-Methylpentane | P | 3MP | 26.1 | 1019.4 | |
| 1-Hexene | O | 1HX | 26.1 | 26.1 | U |
| Hexane (nC6) | P | C6 | 26.1 | 2597.8 | |
| Di-isopropyl ether (DIPE) | ADD | DIPE | 26.1 | 26.1 | U |
| trans-2-hexene (t) | O | T2HE | 26.1 | 26.1 | U |
| 2-Methyl-2-pentene (t) | O | 2M2P | 26.1 | 26.1 | U |
| cis-2-hexene (t) | O | C2HE | 26.1 | 26.1 | U |
| cis-3-Methyl-2-pentene (t) | O | C3M2P | 26.1 | 26.1 | U |
| Ethyl-tert-butyl ether (ETBE) | ADD | ETBE | 26.1 | 26.1 | U |
| 2,2-Dimethylpentane (t) | I | 22DMP | 26.1 | 31.9 | J |
| Methylcyclopentane | N | MCYP | 26.1 | 1336.6 | |
| 2,4-Dimethylpentane | I | 24DMP | 26.1 | 163.8 | |
| 1,2-Dichloroethane (EDC) | ADD | EDC | 26.1 | 26.1 | U |
| Benzene | A | B | 26.1 | 1181.7 | |
| 3,3-Dimethylpentane (t) | I | 33DMP | 26.1 | 94.5 | |
| Thiophene | S | THIO | 26.1 | 26.1 | U |
| Cyclohexane | N | CYH | 26.1 | 2340.5 | |
| 2-Methylhexane | I | 2MH | 26.1 | 2508.4 | |
| 2,3-Dimethylpentane | I | 23DMP | 26.1 | 1014.2 | |
| Tert-amyl methyl ether (TAME) | ADD | TAME | 26.1 | 26.1 | U |



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO

Project: RC4
Project #: 203720102
Collected by: Robert Gomez

Lab ID: 22131-1
Collected: 3/24/2017
Received:
Matrix: Product

Client ID: RC4-5038-FNG
Analyzed: 4/20/2017
Q Method: 041817.M

| CONSTITUENTS | CLASS | ABBR. | ssRL mg/kg | RESULT mg/kg | QUALIFIER |
|------------------------------------|-------|----------|---------------|-----------------|-----------|
| 3-Methylhexane | I | 3MH | 26.1 | 2728.3 | |
| trans-1,3-Dimethylcyclopentane (t) | N | T13DMCYP | 26.1 | 591.6 | |
| cis-1,3-Dimethylcyclopentane (t) | N | C13DMCYP | 26.1 | 177.2 | |
| trans-1,2-Dimethylcyclopentane (t) | N | T12DMCYP | 26.1 | 932.7 | |
| 2,2,4-Trimethylpentane (isooctane) | I | 224TMP | 26.1 | 180.4 | |
| 1-Heptene | O | 1HP | 26.1 | 26.1 | U |
| Heptane (nC7) | P | C7 | 26.1 | 6889.6 | |
| trans-2-heptene (t) | O | T2HP | 26.1 | 26.1 | U |
| Methylcyclohexane | N | MCYH | 26.1 | 8383.1 | |
| 2,5-Dimethylhexane | I | 25DMH | 26.1 | 636.8 | |
| 2,2,3-Trimethylpentane | I | 233TMP | 26.1 | 147.5 | |
| 2,4-Dimethylhexane | I | 24DMH | 26.1 | 522.5 | |
| 2,3,4-Trimethylpentane | I | 234TMP | 26.1 | 55.2 | |
| 2,3,3-Trimethylpentane | I | 233TMP | 26.1 | 35.3 | J |
| Toluene | A | T | 26.1 | 4042.0 | |
| 2-Methylthiophene | S | 2MTHIO | 26.1 | 26.1 | U |
| 2,3-Dimethylhexane | I | 23DMH | 26.1 | 597.9 | |
| 3-Methylthiophene | S | 3MTHIO | 26.1 | 26.1 | U |
| 2-Methylheptane | I | 2MHP | 26.1 | 4629.4 | |
| 4-Methylheptane (t) | I | 4MHP | 26.1 | 924.0 | |
| 3-Methylheptane | I | 3MHP | 26.1 | 2219.5 | |
| 3-Ethylhexane | I | 3EHX | 26.1 | 890.9 | |
| 1,2-Dibromoethane (EDB) | ADD | EDB | 26.1 | 26.1 | U |
| 1-Octene | O | 1O | 26.1 | 1055.3 | |
| Octane (nC8) | P | C8 | 26.1 | 8088.7 | |
| 2,4-Dimethylheptane (t) | I | 24DMHP | 26.1 | 2698.5 | |
| 2,5-Dimethylheptane (t) | I | 25DMHP | 26.1 | 3344.8 | |
| Ethylbenzene | A | EB | 26.1 | 1490.3 | |
| 2-Ethylthiophene | S | 2ETHIO | 26.1 | 26.1 | U |
| 2,3-Dimethylheptane (t) | I | 23DMHP | 26.1 | 6532.4 | |
| m-Xylene | A | MX | 26.1 | 4607.3 | |
| p-Xylene | A | PX | 26.1 | 1219.6 | |



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO

Project: RC4
Project #: 203720102
Collected by: Robert Gomez

Lab ID: 22131-1
Collected: 3/24/2017
Received:
Matrix: Product

Client ID: RC4-5038-FNG
Analyzed: 4/20/2017
Q Method: 041817.M

| CONSTITUENTS | CLASS | ABBR. | ssRL mg/kg | RESULT mg/kg | QUALIFIER |
|--|-------|-----------|---------------|-----------------|-----------|
| 4-Methyloctane (t) | I | 4MO | 26.1 | 1008.1 | |
| 2-Methyloctane (t) | I | 2MO | 26.1 | 1095.9 | |
| 3-Methyloctane (t) | I | 3MO | 26.1 | 2807.6 | |
| Styrene | A | STRE | 26.1 | 26.1 | U |
| o-Xylene | A | OX | 26.1 | 2169.1 | |
| 1-Nonene | O | 1N | 26.1 | 131.5 | |
| Nonane (nC9) | P | C9 | 26.1 | 4563.6 | |
| Isopropylbenzene (cumene) | A | IPROPB | 26.1 | 452.3 | |
| n-Propylbenzene | A | NPRPPB | 26.1 | 747.9 | |
| 1-Methyl-3-ethylbenzene | A | 1M3EB | 26.1 | 1787.7 | |
| 1-Methyl-4-ethylbenzene | A | 1M4EB | 26.1 | 958.5 | |
| 1,3,5-Trimethylbenzene (mesitylene) | A | 135TMB | 26.1 | 1251.9 | |
| 1-Methyl-2-ethylbenzene | A | 1M2EB | 26.1 | 713.6 | |
| 1,2,4-Trimethylbenzene | A | 124TMB | 26.1 | 2826.7 | |
| 1-Decene | O | 1D | 26.1 | 244.5 | |
| Decane (nC10) | P | C10 | 26.1 | 6496.0 | |
| sec-Butylbenzene | A | SBUB | 26.1 | 310.2 | |
| 1-Methyl-3-isopropylbenzene (m-cymene) | A | 1M3IPROPE | 26.1 | 422.5 | |
| 1-Methyl-4-isopropylbenzene (p-cymene) | A | 1M4IPROPE | 26.1 | 259.6 | |
| Indane | A | IA | 26.1 | 36.1 | J |
| Indene | A | IE | 26.1 | 26.1 | U |
| 1-Methyl-2-isopropylbenzene (o-cymene) | A | 1M2IPROPE | 26.1 | 70.3 | |
| 1-Methyl-3-propylbenzene | A | 1M3PROPB | 26.1 | 729.6 | |
| 1-Methyl-4-propylbenzene | A | 1M4PROPB | 26.1 | 340.3 | |
| n-Butylbenzene | A | NBB | 26.1 | 273.0 | |
| 1,3-Dimethyl-5-ethylbenzene | A | 13DM5EB | 26.1 | 572.0 | |
| 1,2-diethylbenzene | A | 12DEB | 26.1 | 87.1 | |
| 1-Methyl-2-propylbenzene | A | 1M2PROPB | 26.1 | 407.9 | |
| 1,4-Dimethyl-2-ethylbenzene | A | 14DM2EB | 26.1 | 358.4 | |
| 1,3-Dimethyl-4-ethylbenzene | A | 13DM4EB | 26.1 | 438.7 | |
| 1,2-Dimethyl-4-ethylbenzene | A | 12DM4EB | 26.1 | 551.8 | |
| 1,3-Dimethyl-2-ethylbenzene | A | 13DM2EB | 26.1 | 86.8 | |



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO

Project: RC4
Project #: 203720102
Collected by: Robert Gomez

Lab ID: 22131-1
Collected: 3/24/2017
Received:
Matrix: Product
Client ID: RC4-5038-FNG
Analyzed: 4/20/2017
Q Method: 041817.M

| CONSTITUENTS | CLASS | ABBR. | ssRL mg/kg | RESULT mg/kg | QUALIFIER |
|--------------------------------|-------|----------|---------------|-----------------|-----------|
| 1,2-Dimethyl-3-ethylbenzene | A | 12DM3EB | 26.1 | 454.8 | |
| Undecane (nC11) | P | C11 | 26.1 | 2856.0 | |
| 1,2,4,5-Tetramethylbenzene | A | 1245TMB | 26.1 | 260.3 | |
| 1,2,3,5-Tetramethylbenzene (t) | A | 1235TMB | 26.1 | 531.0 | |
| n-Pentylbenzene | A | NPYB | 26.1 | 71.4 | |
| Naphthalene | A | N | 26.1 | 447.3 | |
| Benzothiophene | S | BTHIO | 26.1 | 26.1 | U |
| Dodecane (nC12) | P | C12 | 26.1 | 1765.0 | |
| 1,2,3,4-Tetramethylbenzene (t) | A | 1234TMB | 26.1 | 577.6 | |
| MMT | ADD | MMT | 26.1 | 26.1 | U |
| 2-Methylnaphthalene | A | 2MN | 26.1 | 641.2 | |
| 1-Methylnaphthalene | A | 1MN | 26.1 | 626.6 | |
| 1,2-Dichloroethane-d4 (RS) | | 84.02 % | | | |
| Toluene-d8 (RS) | | 125.86 % | | | |
| p-Bromofluorobenzene (RS) | | 116.82 % | | | |

ssRL - Sample Specific Reporting Limit

Results listed as U would have been reported if present at or above the listed ssRL

J - Values greater than the ssRL but less than the PQL (3 x ssRL).

D - Secondary dilution performed

Q - Surrogate recovery limit exceedance

I - Matrix Interference

NC - Not calibrated

Note: Extracted by EPA 5030 (Purge and Trap).

Submitted by,
Pace Energy Services

US631

041817-4PROD.D & dilution 041817-4PROD.D



Supporting Quality Control Results



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032517-BLK.D
Collected:
Received:
Matrix: Water
QC type: Method Blank
Analyzed: 3/25/2017
Q Method: 032317.M

| CONSTITUENTS | ssRL | RESULT | |
|--------------------------------|------|--------|------|
| | ug/L | ug/L | QUAL |
| Isopentane (2-Methylbutane) | 0.8 | 0.8 | U |
| 1-Pentene | 0.8 | 0.8 | U |
| 2-Methyl-1-butene | 0.8 | 0.8 | U |
| Pentane (nC5) | 0.8 | 0.8 | U |
| trans-2-pentene | 0.8 | 0.8 | U |
| cis-2-pentene | 0.8 | 0.8 | U |
| 2-Methyl-2-butene (t) | 0.8 | 0.8 | U |
| 2,2-Dimethylbutane (t) | 0.8 | 0.8 | U |
| Cyclopentane | 0.8 | 0.8 | U |
| 2,3-Dimethylbutane | 0.8 | 0.8 | U |
| 2-Methylpentane | 0.8 | 0.8 | U |
| Methyl-tert-butyl ether (MTBE) | 0.8 | 0.8 | U |
| 3-Methylpentane | 0.8 | 0.8 | U |
| 1-Hexene | 0.8 | 0.8 | U |
| Hexane (nC6) | 0.8 | 0.8 | U |
| Di-isopropyl ether (DIPE) | 0.8 | 0.8 | U |
| trans-2-hexene (t) | 0.8 | 0.8 | U |
| 2-Methyl-2-pentene (t) | 0.8 | 0.8 | U |
| cis-2-hexene (t) | 0.8 | 0.8 | U |
| cis-3-Methyl-2-pentene (t) | 0.8 | 0.8 | U |
| Ethyl-tert-butyl ether (ETBE) | 0.8 | 0.8 | U |
| 2,2-Dimethylpentane (t) | 0.8 | 0.8 | U |
| Methylcyclopentane | 0.8 | 0.8 | U |
| 2,4-Dimethylpentane | 0.8 | 0.8 | U |
| 1,2-Dichloroethane (EDC) | 0.8 | 0.8 | U |
| Benzene | 0.8 | 0.8 | U |
| 3,3-Dimethylpentane (t) | 0.8 | 0.8 | U |
| Thiophene | 0.8 | 0.8 | U |
| Cyclohexane | 0.8 | 0.8 | U |
| 2-Methylhexane | 0.8 | 0.8 | U |
| 2,3-Dimethylpentane | 0.8 | 0.8 | U |
| Tert-amyl methyl ether (TAME) | 0.8 | 0.8 | U |



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032517-BLK.D
Collected:
Received:
Matrix: Water
QC type: Method Blank
Analyzed: 3/25/2017
Q Method: 032317.M

| CONSTITUENTS | ssRL | RESULT | |
|------------------------------------|------|--------|------|
| | ug/L | ug/L | QUAL |
| 3-Methylhexane | 0.8 | 0.8 | U |
| trans-1,3-Dimethylcyclopentane (t) | 0.8 | 0.8 | U |
| cis-1,3-Dimethylcyclopentane (t) | 0.8 | 0.8 | U |
| trans-1,2-Dimethylcyclopentane (t) | 0.8 | 0.8 | U |
| 2,2,4-Trimethylpentane (isooctane) | 0.8 | 0.8 | U |
| 1-Heptene | 0.8 | 0.8 | U |
| Heptane (nC7) | 0.8 | 0.8 | U |
| trans-2-heptene (t) | 0.8 | 0.8 | U |
| Methylcyclohexane | 0.8 | 0.8 | U |
| 2,5-Dimethylhexane | 0.8 | 0.8 | U |
| 2,2,3-Trimethylpentane | 0.8 | 0.8 | U |
| 2,4-Dimethylhexane | 0.8 | 0.8 | U |
| 2,3,4-Trimethylpentane | 0.8 | 0.8 | U |
| 2,3,3-Trimethylpentane | 0.8 | 0.8 | U |
| Toluene | 0.8 | 0.8 | U |
| 2-Methylthiophene | 0.8 | 0.8 | U |
| 2,3-Dimethylhexane | 0.8 | 0.8 | U |
| 3-Methylthiophene | 0.8 | 0.8 | U |
| 2-Methylheptane | 0.8 | 0.8 | U |
| 4-Methylheptane (t) | 0.8 | 0.8 | U |
| 3-Methylheptane | 0.8 | 0.8 | U |
| 3-Ethylhexane | 0.8 | 0.8 | U |
| 1,2-Dibromoethane (EDB) | 0.8 | 0.8 | U |
| 1-Octene | 0.8 | 0.8 | U |
| Octane (nC8) | 0.8 | 0.8 | U |
| 2,4-Dimethylheptane (t) | 0.8 | 0.8 | U |
| 2,5-Dimethylheptane (t) | 0.8 | 0.8 | U |
| Ethylbenzene | 0.8 | 0.8 | U |
| 2-Ethylthiophene | 0.8 | 0.8 | U |
| 2,3-Dimethylheptane (t) | 0.8 | 0.8 | U |
| m-Xylene | 0.8 | 0.8 | U |
| p-Xylene | 0.8 | 0.8 | U |



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032517-BLK.D
Collected:
Received:
Matrix: Water
QC type: Method Blank
Analyzed: 3/25/2017
Q Method: 032317.M

| CONSTITUENTS | ssRL | RESULT | |
|--|------|--------|------|
| | ug/L | ug/L | QUAL |
| 4-Methyloctane (t) | 0.8 | 0.8 | U |
| 2-Methyloctane (t) | 0.8 | 0.8 | U |
| 3-Methyloctane (t) | 0.8 | 0.8 | U |
| Styrene | 0.8 | 0.8 | U |
| o-Xylene | 0.8 | 0.8 | U |
| 1-Nonene | 0.8 | 0.8 | U |
| Nonane (nC9) | 0.8 | 0.8 | U |
| Isopropylbenzene (cumene) | 0.8 | 0.8 | U |
| n-Propylbenzene | 0.8 | 0.8 | U |
| 1-Methyl-3-ethylbenzene | 0.8 | 0.8 | U |
| 1-Methyl-4-ethylbenzene | 0.8 | 0.8 | U |
| 1,3,5-Trimethylbenzene (mesitylene) | 0.8 | 0.8 | U |
| 1-Methyl-2-ethylbenzene | 0.8 | 0.8 | U |
| 1,2,4-Trimethylbenzene | 0.8 | 0.8 | U |
| 1-Decene | 0.8 | 0.8 | U |
| Decane (nC10) | 0.8 | 0.8 | U |
| sec-Butylbenzene | 0.8 | 0.8 | U |
| 1-Methyl-3-isopropylbenzene (m-cymene) | 0.8 | 0.8 | U |
| 1-Methyl-4-isopropylbenzene (p-cymene) | 0.8 | 0.8 | U |
| Indane | 0.8 | 0.8 | U |
| Indene | 0.8 | 0.8 | U |
| 1-Methyl-2-isopropylbenzene (o-cymene) | 0.8 | 0.8 | U |
| 1-Methyl-3-propylbenzene | 0.8 | 0.8 | U |
| 1-Methyl-4-propylbenzene | 0.8 | 0.8 | U |
| n-Butylbenzene | 0.8 | 0.8 | U |
| 1,3-Dimethyl-5-ethylbenzene | 0.8 | 0.8 | U |
| 1,2-diethylbenzene | 0.8 | 0.8 | U |
| 1-Methyl-2-propylbenzene | 0.8 | 0.8 | U |
| 1,4-Dimethyl-2-ethylbenzene | 0.8 | 0.8 | U |
| 1,3-Dimethyl-4-ethylbenzene | 0.8 | 0.8 | U |
| 1,2-Dimethyl-4-ethylbenzene | 0.8 | 0.8 | U |
| 1,3-Dimethyl-2-ethylbenzene | 0.8 | 0.8 | U |



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032517-BLK.D
Collected:
Received:
Matrix: Water
QC type: Method Blank
Analyzed: 3/25/2017
Q Method: 032317.M

| CONSTITUENTS | ssRL | RESULT | |
|--------------------------------|------|--------|------|
| | ug/L | ug/L | QUAL |
| 1,2-Dimethyl-3-ethylbenzene | 0.8 | 0.8 | U |
| Undecane (nC11) | 0.8 | 0.8 | U |
| 1,2,4,5-Tetramethylbenzene | 0.8 | 0.8 | U |
| 1,2,3,5-Tetramethylbenzene (t) | 0.8 | 0.8 | U |
| n-Pentylbenzene | 0.8 | 0.8 | U |
| Naphthalene | 0.8 | 0.8 | U |
| Benzo thiophene | 0.8 | 0.8 | U |
| Dodecane (nC12) | 0.8 | 0.8 | U |
| 1,2,3,4-Tetramethylbenzene (t) | 0.8 | 0.8 | U |
| MMT | 0.8 | 0.8 | U |
| 2-Methylnaphthalene | 0.8 | 0.8 | U |
| 1-Methylnaphthalene | 0.8 | 0.8 | U |
| 1,2-Dichloroethane-d4 (RS) % | | 106 | |
| Toluene-d8 (RS) % | | 116 | |
| p-Bromofluorobenzene (RS) % | | 95 | |

ssRL - Sample Specific Reporting Limit

Results listed as U would have been reported if present at or above the listed ssRL

B - Exceeds PQL - 3 x ssRL

Q - Surrogate recovery limit exceedance

NC - Not calibrated

J - Values greater than the ssRL but less than the PQL.

Note: Extracted by EPA 5030 (Purge and Trap).

US631
032517-BLK.D

Submitted by,
Pace Energy Services



Client: Bethany Lucente
 Stantec
 2000 S. Colorado Blvd. Ste 2-300
 Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032617-2 WATER.D & 032617-3 WATER.D
Collected:
Received:
Matrix: Product
QC type: DUP
Analyzed:
Q Method: 032317.M

| CONSTITUENTS | 21880-5 50X 20ppb IS/SS | 21880-5 DUP 50X 20ppb IS/SS | Passing Diff. | Actual Diff. | QUAL |
|------------------------------------|----------------------------|-----------------------------------|---------------|--------------|------|
| | RESULT mg/kg | RESULT mg/kg | % | % | |
| Isopentane (2-Methylbutane) | 301.1 | 346.0 | 30 | 13.0 | |
| 1-Pentene | U | U | 30 | | |
| 2-Methyl-1-butene | 64.0 | 70.8 | 30 | 9.5 | |
| Pentane (nC5) | 215.3 | 235.0 | 30 | 8.4 | |
| trans-2-pentene | U | U | 30 | | |
| cis-2-pentene | U | U | 30 | | |
| 2-Methyl-2-butene (t) | 306.1 | 377.9 | 30 | 19.0 | |
| 2,2-Dimethylbutane (t) | U | U | 30 | | |
| Cyclopentane | 207.7 | 268.7 | 30 | 22.7 | |
| 2,3-Dimethylbutane | 39.6 | 45.2 | 30 | 12.4 | |
| 2-Methylpentane | 62.7 | 74.6 | 30 | 16.0 | |
| Methyl-tert-butyl ether (MTBE) | 133.4 | 160.2 | 30 | 16.7 | |
| 3-Methylpentane | 33.5 | 36.5 | 30 | 8.3 | |
| 1-Hexene | U | U | 30 | | |
| Hexane (nC6) | U | 25.4 | 30 | | |
| Di-isopropyl ether (DIPE) | U | U | 30 | | |
| trans-2-hexene (t) | U | U | 30 | | |
| 2-Methyl-2-pentene (t) | 33.6 | 46.8 | 30 | 28.2 | |
| cis-2-hexene (t) | U | U | 30 | | |
| cis-3-Methyl-2-pentene (t) | U | 27.2 | 30 | | |
| Ethyl-tert-butyl ether (ETBE) | U | U | 30 | | |
| 2,2-Dimethylpentane (t) | U | U | 30 | | |
| Methylcyclopentane | 201.2 | 213.9 | 30 | 5.9 | |
| 2,4-Dimethylpentane | U | U | 30 | | |
| 1,2-Dichloroethane (EDC) | U | U | 30 | | |
| Benzene | 2582.5 | 2941.9 | 30 | 12.2 | |
| 3,3-Dimethylpentane (t) | U | U | 30 | | |
| Thiophene | 29.2 | 40.8 | 30 | 28.6 | |
| Cyclohexane | 68.8 | 85.6 | 30 | 19.6 | |
| 2-Methylhexane | U | U | 30 | | |
| 2,3-Dimethylpentane | U | U | 30 | | |
| Tert-amyl methyl ether (TAME) | U | U | 30 | | |
| 3-Methylhexane | U | U | 30 | | |
| trans-1,3-Dimethylcyclopentane (t) | U | U | 30 | | |
| cis-1,3-Dimethylcyclopentane (t) | U | U | 30 | | |



Client: Bethany Lucente
 Stantec
 2000 S. Colorado Blvd. Ste 2-300
 Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032617-2 WATER.D & 032617-3 WATER.D
Collected:
Received:
Matrix: Product
QC type: DUP
Analyzed:
Q Method: 032317.M

| CONSTITUENTS | 21880-5 50X 20ppb IS/SS | 21880-5 DUP 50X 20ppb IS/SS | Passing Diff. | Actual Diff. | QUAL |
|------------------------------------|----------------------------|-----------------------------------|---------------|--------------|------|
| | RESULT mg/kg | RESULT mg/kg | % | % | |
| trans-1,2-Dimethylcyclopentane (t) | U | U | 30 | | |
| 2,2,4-Trimethylpentane (isooctane) | U | U | 30 | | |
| 1-Heptene | U | U | 30 | | |
| Heptane (nC7) | U | U | 30 | | |
| trans-2-heptene (t) | U | U | 30 | | |
| Methylcyclohexane | 63.4 | 66.0 | 30 | 3.9 | |
| 2,5-Dimethylhexane | U | U | 30 | | |
| 2,2,3-Trimethylpentane | U | U | 30 | | |
| 2,4-Dimethylhexane | U | U | 30 | | |
| 2,3,4-Trimethylpentane | U | U | 30 | | |
| 2,3,3-Trimethylpentane | U | U | 30 | | |
| Toluene | 814.8 | 926.4 | 30 | 12.0 | |
| 2-Methylthiophene | U | U | 30 | | |
| 2,3-Dimethylhexane | U | U | 30 | | |
| 3-Methylthiophene | U | U | 30 | | |
| 2-Methylheptane | U | U | 30 | | |
| 4-Methylheptane (t) | U | U | 30 | | |
| 3-Methylheptane | U | U | 30 | | |
| 3-Ethylhexane | U | U | 30 | | |
| 1,2-Dibromoethane (EDB) | U | U | 30 | | |
| 1-Octene | U | U | 30 | | |
| Octane (nC8) | U | U | 30 | | |
| 2,4-Dimethylheptane (t) | U | U | 30 | | |
| 2,5-Dimethylheptane (t) | U | U | 30 | | |
| Ethylbenzene | 918.8 | 1044.0 | 30 | 12.0 | |
| 2-Ethylthiophene | U | U | 30 | | |
| 2,3-Dimethylheptane (t) | U | U | 30 | | |
| m-Xylene | 2650.6 | 2708.6 | 30 | 2.1 | |
| p-Xylene | 1446.0 | 1515.5 | 30 | 4.6 | |
| 4-Methyloctane (t) | U | U | 30 | | |
| 2-Methyloctane (t) | U | U | 30 | | |
| 3-Methyloctane (t) | U | U | 30 | | |
| Styrene | U | U | 30 | | |
| o-Xylene | 1022.5 | 1178.8 | 30 | 13.3 | |
| 1-Nonene | U | U | 30 | | |



Client: Bethany Lucente
 Stantec
 2000 S. Colorado Blvd. Ste 2-300
 Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032617-2 WATER.D & 032617-3 WATER.D
Collected:
Received:
Matrix: Product
QC type: DUP
Analyzed:
Q Method: 032317.M

| CONSTITUENTS | 21880-5 50X 20ppb IS/SS | 21880-5 DUP 50X 20ppb IS/SS | Passing Diff. % | Actual Diff. % | QUAL |
|--|----------------------------|-----------------------------------|--------------------|-------------------|------|
| | RESULT mg/kg | RESULT mg/kg | | | |
| Nonane (nC9) | 96.0 | 80.3 | 30 | 19.5 | |
| Isopropylbenzene (cumene) | 54.0 | 59.2 | 30 | 8.8 | |
| n-Propylbenzene | 132.6 | 147.4 | 30 | 10.1 | |
| 1-Methyl-3-ethylbenzene | 391.1 | 441.8 | 30 | 11.5 | |
| 1-Methyl-4-ethylbenzene | 309.6 | 329.7 | 30 | 6.1 | |
| 1,3,5-Trimethylbenzene (mesitylene) | 325.9 | 365.9 | 30 | 10.9 | |
| 1-Methyl-2-ethylbenzene | 184.5 | 213.2 | 30 | 13.5 | |
| 1,2,4-Trimethylbenzene | 1109.8 | 1271.8 | 30 | 12.7 | |
| 1-Decene | U | U | 30 | | |
| Decane (nC10) | U | U | 30 | | |
| sec-Butylbenzene | U | U | 30 | | |
| 1-Methyl-3-isopropylbenzene (m-cymene) | U | U | 30 | | |
| 1-Methyl-4-isopropylbenzene (p-cymene) | U | U | 30 | | |
| Indane | 410.8 | 448.0 | 30 | 8.3 | |
| Indene | U | U | 30 | | |
| 1-Methyl-2-isopropylbenzene (o-cymene) | U | U | 30 | | |
| 1-Methyl-3-propylbenzene | 35.7 | 37.8 | 30 | 5.4 | |
| 1-Methyl-4-propylbenzene | U | 27.1 | 30 | | |
| n-Butylbenzene | U | U | 30 | | |
| 1,3-Dimethyl-5-ethylbenzene | 67.0 | 66.8 | 30 | 0.2 | |
| 1,2-diethylbenzene | U | U | 30 | | |
| 1-Methyl-2-propylbenzene | 34.7 | 35.7 | 30 | 2.7 | |
| 1,4-Dimethyl-2-ethylbenzene | 50.5 | 56.1 | 30 | 9.9 | |
| 1,3-Dimethyl-4-ethylbenzene | 43.3 | 42.6 | 30 | 1.8 | |
| 1,2-Dimethyl-4-ethylbenzene | 119.2 | 128.5 | 30 | 7.2 | |
| 1,3-Dimethyl-2-ethylbenzene | U | U | 30 | | |
| 1,2-Dimethyl-3-ethylbenzene | U | 25.5 | 30 | | |
| Undecane (nC11) | U | U | 30 | | |
| 1,2,4,5-Tetramethylbenzene | 77.6 | 80.9 | 30 | 4.2 | |
| 1,2,3,5-Tetramethylbenzene (t) | 77.5 | 79.3 | 30 | 2.2 | |
| n-Pentylbenzene | U | U | 30 | | |
| Naphthalene | 442.5 | 470.7 | 30 | 6.0 | |
| Benzothiophene | U | U | 30 | | |
| Dodecane (nC12) | 64.2 | 52.2 | 30 | 23.0 | |
| 1,2,3,4-Tetramethylbenzene (t) | 47.5 | 50.7 | 30 | 6.2 | |



Client: Bethany Lucente
 Stantec
 2000 S. Colorado Blvd. Ste 2-300
 Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032617-2 WATER.D & 032617-3 WATER.D
Collected:
Received:
Matrix: Product
QC type: DUP
Analyzed:
Q Method: 032317.M

| CONSTITUENTS | 21880-5 50X 20ppb IS/SS | 21880-5 DUP 50X 20ppb IS/SS | Passing Diff. Actual Diff. | | QUAL |
|--------------------------------|----------------------------|-----------------------------------|----------------------------|------|------|
| | RESULT mg/kg | RESULT mg/kg | % | % | |
| MMT | U | U | 30 | | |
| 2-Methylnaphthalene | 30.6 | 33.5 | 30 | 8.5 | |
| 1-Methylnaphthalene | 25.5 | U | 30 | | |
| 1,2-Dichloroethane-d4 (RS) (%) | 99 | 117 | 30 | 15.5 | |
| Toluene-d8 (RS) (%) | 116 | 117 | 30 | 0.7 | |
| p-Bromofluorobenzene (RS) (%) | 99 | 101 | 30 | 2.3 | |

ssRL - Sample Specific Reporting Limit

Results listed as U would have been reported if present at or above the listed ssRL

QD - Exceeds RSD limit

Q - Surrogate recovery limit exceedance

NC - Not calibrated

Note: Extracted by EPA 5030 (Purge and Trap).

Submitted by,
 Pace Energy Services

US631
 032517-BLK.D



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032617-LCS25.D

Collected:

Received:

Matrix: Water

QC type: LCS

Analyzed: 3/25/2017

Q Method: 032317.M

| CONSTITUENTS | RESULT ug/L | Recovery % | Spike Conc. ug/L | QUAL |
|-------------------------------------|----------------|---------------|---------------------|------|
| 1-Pentene | 26.7 | 106.8 | 25.0 | |
| Pentane (nC5) | 30.5 | 122.0 | 25.0 | |
| Cyclopentane | 25.9 | 103.8 | 25.0 | |
| 1-Hexene | 28.3 | 113.1 | 25.0 | |
| Hexane (nC6) | 29.7 | 118.7 | 25.0 | |
| Di-isopropyl ether (DIPE) | 28.9 | 115.5 | 25.0 | |
| Ethyl-tert-butyl ether (ETBE) | 24.7 | 98.8 | 25.0 | |
| 2,4-Dimethylpentane | 33.1 | 132.4 | 25.0 | |
| Benzene | 23.7 | 95.0 | 25.0 | |
| Cyclohexane | 30.1 | 120.3 | 25.0 | |
| Tert-amyl methyl ether (TAME) | 26.7 | 106.6 | 25.0 | |
| 2,2,4-Trimethylpentane (isooctane) | 28.1 | 112.5 | 25.0 | |
| Heptane (nC7) | 32.7 | 130.6 | 25.0 | |
| Toluene | 27.2 | 108.6 | 25.0 | |
| Octane (nC8) | 27.7 | 110.6 | 25.0 | |
| Ethylbenzene | 27.3 | 109.2 | 25.0 | |
| m-Xylene | 23.0 | 92.1 | 25.0 | |
| p-Xylene | 17.6 | 70.4 | 25.0 | |
| o-Xylene | 25.7 | 102.8 | 25.0 | |
| Nonane (nC9) | 23.7 | 94.6 | 25.0 | |
| n-Propylbenzene | 25.9 | 103.4 | 25.0 | |
| 1,3,5-Trimethylbenzene (mesitylene) | 24.8 | 99.4 | 25.0 | |
| 1-Decene | 19.7 | 78.7 | 25.0 | |
| Decane (nC10) | 25.3 | 101.2 | 25.0 | |
| n-Butylbenzene | 26.6 | 106.4 | 25.0 | |
| n-Pentylbenzene | 34.5 | 138.1 | 25.0 | |
| Dodecane (nC12) | 80.6 | 128.9 | 62.5 | |
| 1,2-Dichloroethane-d4 (RS) | | 109 | | |
| Toluene-d8 (RS) | | 118 | | |
| p-Bromofluorobenzene (RS) | | 102 | | |

ssRL - Sample Specific Reporting Limit

NC - Not calibrated

Q - Surrogate recovery limit exceedance

LQ - Percent difference exceedance (50 - 140)

I - Matrix Interference

Note: Extracted by EPA 5030 (Purge and Trap).

US631

**Submitted by,
Pace Energy Services**

032617-LCS25.D



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 032617-LCSD25.D
Collected:
Received:
Matrix: Water
QC type: LCSD
Analyzed: 3/25/2017
Q Method: 032317.M

| CONSTITUENTS | RESULT ug/L | Recovery % | Spike Conc. ug/L | RPD % | QUAL |
|-------------------------------------|----------------|---------------|---------------------|----------|------|
| 1-Pentene | 30.9 | 123.8 | 25.0 | 14.7 | |
| Pentane (nC5) | 32.6 | 130.5 | 25.0 | 6.7 | |
| Cyclopentane | 26.0 | 103.9 | 25.0 | 0.1 | |
| 1-Hexene | 27.6 | 110.6 | 25.0 | 2.3 | |
| Hexane (nC6) | 29.1 | 116.2 | 25.0 | 2.1 | |
| Di-isopropyl ether (DIPE) | 30.5 | 121.8 | 25.0 | 5.3 | |
| Ethyl-tert-butyl ether (ETBE) | 25.7 | 102.6 | 25.0 | 3.8 | |
| 2,4-Dimethylpentane | 32.1 | 128.3 | 25.0 | 3.1 | |
| Benzene | 24.6 | 98.6 | 25.0 | 3.7 | |
| Cyclohexane | 30.3 | 121.2 | 25.0 | 0.8 | |
| Tert-amyl methyl ether (TAME) | 26.1 | 104.4 | 25.0 | 2.1 | |
| 2,2,4-Trimethylpentane (isooctane) | 25.0 | 100.0 | 25.0 | 11.7 | |
| Heptane (nC7) | 30.2 | 120.6 | 25.0 | 7.9 | |
| Toluene | 26.9 | 107.5 | 25.0 | 1.1 | |
| Octane (nC8) | 28.3 | 113.0 | 25.0 | 2.1 | |
| Ethylbenzene | 26.8 | 107.4 | 25.0 | 1.7 | |
| m-Xylene | 23.4 | 93.4 | 25.0 | 1.4 | |
| p-Xylene | 17.9 | 71.4 | 25.0 | 1.4 | |
| o-Xylene | 25.3 | 101.0 | 25.0 | 1.7 | |
| Nonane (nC9) | 20.7 | 82.8 | 25.0 | 13.3 | |
| n-Propylbenzene | 25.4 | 101.4 | 25.0 | 2.0 | |
| 1,3,5-Trimethylbenzene (mesitylene) | 24.5 | 97.8 | 25.0 | 1.5 | |
| 1-Decene | 18.3 | 73.2 | 25.0 | 7.2 | |
| Decane (nC10) | 22.8 | 91.2 | 25.0 | 10.4 | |
| n-Butylbenzene | 25.7 | 103.0 | 25.0 | 3.3 | |
| n-Pentylbenzene | 32.9 | 131.5 | 25.0 | 4.9 | |
| Dodecane (nC12) | 80.5 | 128.7 | 62.5 | 0.2 | |
| 1,2-Dichloroethane-d4 (RS) | | 115 | | | |
| Toluene-d8 (RS) | | 119 | | | |
| p-Bromofluorobenzene (RS) | | 103 | | | |

ssRL - Sample Specific Reporting Limit

Q - Surrogate recovery limit exceedance

I - Matrix Interference

NC - Not calibrated

RQ - Percent difference exceeded (15)

LQ - Percent difference exceedance (50 - 140)

Note: Extracted by EPA 5030 (Purge and Trap).

US631

032617-LCSD25.D

Submitted by,
Pace Energy Services



Client: Bethany Lucente
Stantec
2000 S. Colorado Blvd. Ste 2-300
Denver, CO 80222

Project: RC4
Project #: 203720102
Collected by:

Lab ID: 030617-QC.D & 030617-QC1.D

Collected:

Received:

Matrix: Product/Soil

QC type: NIST SRM 2295

Analyzed:

Q Method: 032317.M

| CONSTITUENTS | RESULT mg/kg | ssRL mg/kg | D Flag | NIST Result mg/kg | Passing Diff. % | Actual Diff. % | QUAL |
|-------------------------------------|-----------------|---------------|--------|----------------------|--------------------|-------------------|------|
| 1-Pentene | 7980.1 | 53.2 | | 7400.0 | 40 | 7.5 | |
| Pentane (nC5) | 40002.4 | 252.5 | D | 35700.0 | 40 | 11.4 | |
| Methyl-tert-butyl ether (MTBE) | 120082.8 | 252.5 | D | 145400.0 | 40 | 19.1 | |
| Hexane (nC6) | 30693.5 | 252.5 | D | 37000.0 | 40 | 18.6 | |
| 2,4-Dimethylpentane | 69060.1 | 252.5 | D | 79000.0 | 40 | 13.4 | |
| Benzene | 10886.3 | 53.2 | | 9900.0 | 40 | 9.5 | |
| Thiophene | 273.4 | 53.2 | | 260.0 | 40 | 5.0 | |
| Cyclohexane | 72607.1 | 252.5 | D | 88400.0 | 40 | 19.6 | |
| 2,2,4-Trimethylpentane (isooctane) | 127998.0 | 252.5 | D | 118000.0 | 40 | 8.1 | |
| 1-Heptene | 18227.3 | 252.5 | D | 15000.0 | 40 | 19.4 | |
| Heptane (nC7) | 90861.6 | 252.5 | D | 77700.0 | 40 | 15.6 | |
| Toluene | 85225.8 | 252.5 | D | 78900.0 | 40 | 7.7 | |
| 3-Methylthiophene | 390.8 | 53.2 | | 300.0 | 40 | 26.3 | |
| Octane (nC8) | 86675.3 | 252.5 | D | 79800.0 | 40 | 8.3 | |
| Ethylbenzene | 22493.6 | 252.5 | D | 19600.0 | 40 | 13.7 | |
| m,p-Xylenes | 64241.2 | 505.1 | D | 58700.0 | 40 | 9.0 | |
| o-Xylene | 21111.9 | 252.5 | D | 19700.0 | 40 | 6.9 | |
| 1,3,5-Trimethylbenzene (mesitylene) | 19838.3 | 252.5 | D | 19700.0 | 40 | 0.7 | |
| 1,2,4-Trimethylbenzene | 19445.4 | 252.5 | D | 20010.0 | 40 | 2.9 | |
| Decane (nC10) | 41.9 | 53.2 | | 41400.0 | 40 | 199.6 | SQ |
| 1,2,4,5-Tetramethylbenzene | 10082.8 | 53.2 | | 9600.0 | 40 | 4.9 | |
| Naphthalene | 10363.0 | 53.2 | | 11500.0 | 40 | 10.4 | |
| Benzothiophene | 352.5 | 53.2 | | 440.0 | 40 | 22.1 | |
| 1,2-Dichloroethane-d4 (RS) % | 112 | | | | | | |
| Toluene-d8 (RS) % | 114 | | | | | | |
| p-Bromofluorobenzene (RS) % | 115 | | | | | | |

ssRL - Sample Specific Reporting Limit

D - Secondary dilution performed

Q - Surrogate recovery limit exceedance

SQ - SRM percent difference exceeded

I - Matrix Interference

NC - Not calibrated

Note: Extracted by EPA 5030 (Purge and Trap).

Submitted by,

US631

Pace Energy Services

030617-QC.D & 030617-QC1.D



**Oxygenated Gasoline Blending Agents
by GC/MS - SIM mode**

MtBE, DIPE, EtBE, tAME, tBA, and ethanol

REPORT OF ANALYTICAL RESULTS

Client: Bethany Lucente
Stantec
2000 S Colorado Blvd
Denver, CO 80222

Lab Number: 22131-1
Collected: 3/24/2017
Received: 3/27/2017
Matrix: Product

Project: RC4

Project Number: 203720102
Collected by: Roberto Gomez

Sample Description: RC4-5038-FNG

Analyzed: 4/5/2017
Method: EPA 1624 GC/MS

| CONSTITUENT | PQL* mg/Kg | RESULT** mg/Kg |
|--|---------------|-------------------|
| t-Amyl Methyl Ether (TAME) | 100 | ND |
| t-Butyl Alcohol (TBA) | 10 | ND |
| Diisopropyl Ether (DIPE) | 100 | ND |
| Ethanol | 10 | ND |
| Ethyl-t-Butyl Ether (ETBE) | 50 | ND |
| Methyl-t-Butyl Ether (MTBE) | 50 | ND |
| Percent Surrogate Recovery (1,4-difluorobenzene) | | 94 |

*PQL - Practical Quantitation Limit

**Results listed as ND would have been reported if present at or above the listed PQL.

J: value below PQL

22131-1.oxy.xls
RL



**Organic Lead Speciation
by GC/ECD**

***EDB, TML, TMEL, DMDEL, MTEL, TEL
& MMT***

REPORT OF ANALYTICAL RESULTS

Client: Bethany Lucente
Stantec
2000 S Colorado Blvd
Denver, CO 80222

Lab Number: 22131
Collected: 3/24/2017
Received: 3/27/2017
Matrix: Product

Project: RC4
Project Number: 203720102
Collected by: -

Sample Description: See Below
Analyzed: 4/17/2017
Method: GC/ECD

EDB and ORGANIC LEAD SPECIATION

| LAB NUMBER | SAMPLE DESCRIPTION | EDB mg/L | TML mg/L | TMEL mg/L | DMDEL mg/L | MTEL mg/L | TEL mg/L | MMT mg/L |
|------------------|-----------------------|-------------|-------------|--------------|---------------|--------------|-------------|-------------|
| 22131-1 | RC4-5038-FNG | <0.5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Detection Limit: | | 0.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Method Blank: | | <0.5 | <5 | <5 | <5 | <5 | <5 | <5 |

EDB: Ethylene Dibromide
TML: Tetramethyl Lead
TMEL: Trimethylethyl Lead
DMDEL: Dimethyldiethyl Lead
MTEL: Methyltriethyl Lead
TEL: Tetraethyl Lead
MMT: Methylcyclopentadienyl Manganese Tricarbonyl

22131e.xls
RL

QUALITY ASSURANCE REPORT

Client: Bethany Lucente
Stantec
2000 S Colorado Blvd
Denver, CO 80222

Lab Number: 22131
Analyzed: 4/17/2017
Method: GC/ECD

QA DATA FOR EDB and TEL

| ANALYTES | RF | RF _D | %D | ACCEPTANCE |
|----------|-------|-----------------|-------|------------|
| | | | | LIMIT % |
| EDB | 0.684 | 1 | 0.50 | ±15 |
| TEL | 0.038 | 0 | 13.50 | ±15 |

EDB: Ethylene Dibromide

TEL: Tetraethyl Lead

RF = Mean response factor from 3 point calibration

RF_D = Daily calibration standard response factor

% D = % Difference

Calibration file: ORG07168.M / MMT07168.M

22131e.xls
RL



**PAHs & Extended Akylated Isomers
by GC/MS - SIM mode**

*PAHs, alkylatedPAHs, sulfurPAHs - Parent,
Individual Isomers, and Homologous Series*

REPORT OF ANALYTICAL RESULTS
PAGE1



Client: Bethany Lucente
Stantec
2000 S Colorado Blvd, Ste 2-300
Denver CO 80222

Lab Number: 22131-1
Collected: 3/24/2017
Received: 3/27/2017
Matrix: Product

Project: RC4

Sample Description: RC4-5038-FNG

Project Number: 203720102
Collected by: Roberto Gomez

Analyzed: 4/19/2017
Method: FORGSIM2016_GAIN2.M

| CONSTITUENT | ssRL mg/kg | RESULT mg/kg | QUALIFIER |
|--------------------------|---------------|-----------------|-----------|
| Decalin (cis) | 7.500 | 1707.000 | |
| Decalin (trans) | 7.500 | 91.000 | |
| C1 Decalin | 7.500 | 2562.250 | |
| C2 decalin | 7.500 | 2278.000 | |
| C3 decalin | 7.500 | 1291.500 | |
| C4 Decalin | 7.500 | 519.250 | |
| Benzothiophene | 7.500 | 7.500 | U |
| C1 Benzothiophene | 7.500 | 122.000 | |
| C2 Benzothiophene | 7.500 | 423.250 | |
| C3 Benzothiophene | 7.500 | 400.000 | |
| C4 Benzothiophene | 7.500 | 336.000 | |
| Naphthalene | 7.500 | 741.500 | |
| 2-methyl naphthalene | 7.500 | 1169.250 | |
| 1-methyl naphthalene | 7.500 | 1021.250 | |
| C2 naphthalene | 7.500 | 2598.250 | |
| C3 Naphthalene | 7.500 | 2275.000 | |
| C4 Naphthalene | 7.500 | 1617.250 | |
| Biphenyl | 7.500 | 395.250 | |
| Acenaphthylene | 7.500 | 7.500 | U |
| Acenaphthene | 7.500 | 7.500 | U |
| Dibenzofuran | 7.500 | 113.500 | |
| Fluorene | 7.500 | 64.250 | |
| C1 Fluorene | 7.500 | 249.750 | |
| C2 Fluorene | 7.500 | 504.750 | |
| C3 Fluorene | 7.500 | 591.750 | |
| Dibenzothiophene | 7.500 | 430.500 | |
| C1 Dibenzothiophene | 7.500 | 422.500 | |
| C2 Dibenzothiophene | 7.500 | 717.500 | |
| C3 Dibenzothiophene | 7.500 | 610.250 | |
| C4 Dibenzothiophene | 7.500 | 537.250 | |
| Phenanthrene | 7.500 | 259.750 | |
| Anthracene | 7.500 | 7.500 | U |
| C1 Phenanthrene | 7.500 | 679.750 | |
| C2 Phenanthrene | 7.500 | 943.500 | |
| C3 Phenanthrene | 7.500 | 740.750 | |
| C4 Phenanthrene | 7.500 | 319.750 | |
| Fluoranthene | 7.500 | 11.750 | J |
| Pyrene | 7.500 | 13.250 | J |
| C1 Fluoranthenes/Pyrenes | 7.500 | 77.000 | |
| C2 Fluoranthenes/Pyrenes | 7.500 | 129.750 | |
| C3 Fluoranthenes/Pyrenes | 7.500 | 205.500 | |
| Benz(a)anthracene | 7.500 | 7.500 | U |
| Chrysene | 7.500 | 64.000 | |
| C1 Chrysene | 7.500 | 125.750 | |

REPORT OF ANALYTICAL RESULTS
PAGE2



Client: Bethany Lucente
Stantec
2000 S Colorado Blvd, Ste 2-300
Denver CO 80222

Lab Number: 22131-1
Collected: 3/24/2017
Received: 3/27/2017
Matrix: Product

Project: RC4

Sample Description: RC4-5038-FNG

Project Number: 203720102
Collected by: Roberto Gomez

Analyzed: 4/19/2017
Method: FORGSIM2016_GAIN2.M

| CONSTITUENT | ssRL mg/kg | RESULT mg/kg | QUALIFIER |
|------------------------|---------------|-----------------|-----------|
| C2 Chrysene | 7.500 | 180.750 | |
| C3 Chrysene | 7.500 | 156.000 | |
| C4 Chrysene | 7.500 | 75.500 | |
| Benzo(b)fluoranthene | 7.500 | 7.500 | U |
| Benzo(k)fluoranthene | 7.500 | 7.500 | U |
| Benzo(e)pyrene | 7.500 | 24.000 | |
| Benzo(a)pyrene | 7.500 | 7.500 | U |
| Perylene | 7.500 | 7.500 | U |
| Indeno(1,2,3,cd)pyrene | 7.500 | 7.500 | U |
| Dibenz(a,h)anthracene | 7.500 | 7.500 | U |
| Benzo(g,h,i)perylene | 7.500 | 7.500 | U |

ssRL - Sample Specific Reporting Limit.

D - Secondary dilution performed.

B - Analyte detected in the blank at levels greater than the PQL - probable lab contamination.

J - Values greater than the ssRL of 0.03 ug/L but less than the PQL.

U - Not Detected

Note: Analyzed in the Selected Ion Monitoring (SIM) mode.

Submitted by,
Pace Energy Services

PAHFull Scan
22131-1_PAH_Report.xls
041917-10.D & 041917-10.D

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| | | | | | |
|---|--|---|--|-----------------------------------|--|
| Section A Required Client Information: | | Section B Required Project Information: | | Section C Invoice Information: | |
| Company: <u>Stantec</u> | | Report To: <u>Bethany Lucante @ Stantec.com</u> | | Attention: | |
| Address: <u>2000 S Colorado Blvd</u> | | Copy To: <u>Tom.Madsen @ Stantec.com</u> | | Company Name: | |
| Email To: <u>Suite 2-300 Denver, CO</u> | | | | Address: | |
| Phone: <u>303 758 4828</u> | | Purchase Order No.: <u>203720102</u> | | Pace Quote Reference: | |
| Fax: | | Project Name: <u>RC4</u> | | Pace Project Manager: | |
| Requested Due Date/TAT: <u>Normal</u> | | Project Number: <u>203720102</u> | | Pace Profile #: | |

Page: 1 of 1

003681

REGULATORY AGENCY

NPDES ☒ GROUND WATER ☒ DRINKING WATER

UST ☐ RCRA ☐ OTHER ☐

Site Location

STATE:

[illegible]

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

| Temp in °C | Received on ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|------------|-----------------------|-----------------------------|----------------------|
|------------|-----------------------|-----------------------------|----------------------|

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07. 15-May-2007

Cooler Receipt Form

Client Name: Stantec Project: RC4 Lab Work Order: 22131

A. Shipping/Container Information (circle appropriate response)

Courier: FedEx UPS USPS Client Other: _____ Air bill Present: Yes No

Tracking Number: J 2242469298

Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other: _____

Type of Ice: Wet Blue None Ice Intact: Yes Melted

Cooler Temperature: 2°C Radiation Screened: Yes No Chain of Custody Present: Yes No

Comments: _____

B. Laboratory Assignment/Log-in (check appropriate response)

| | YES | NO | N/A | Comment Reference non-Conformance |
|--|----------|----|----------|--------------------------------------|
| Chain of Custody properly filled out | <u>✓</u> | | | |
| Chain of Custody relinquished | <u>✓</u> | | | |
| Sampler Name & Signature on COC | <u>✓</u> | | | |
| Containers intact | <u>✓</u> | | | |
| Were samples in separate bags | <u>✓</u> | | | |
| Sample container labels match COC | <u>✓</u> | | | |
| Sample name/date and time collected | <u>✓</u> | | | |
| Sufficient volume provided | <u>✓</u> | | | |
| PAES containers used | <u>✓</u> | | | |
| Are containers properly preserved for the requested testing? (as labeled) | | | <u>✓</u> | |
| If an unknown preservation state, were containers checked? Exception: VOA's coliform | | | <u>✓</u> | If yes, see pH form. |
| Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container? | | | <u>✓</u> | |

Comments: _____

Cooler contents examined/received by: LY Date: 3.27.17

Project Manager Review: CM Date: 3/27/17