UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 5



IN THE MATTER OF:

Sangamon Street Right of Way Site Chicago, Cook County, Illinois (C54R) AMENDMENT TO ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTION

Docket No. V-W-16-C-007

Proceeding Under Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622

Respondent:

BNSF Railway Company

I. GENERAL PROVISIONS

1. On March 16, 2016, the United States Environmental Protection Agency (U.S. EPA) and BNSF Railway Company (Respondent) entered into an Administrative Order on Consent, Docket No. V-W-16-C-007 (Settlement Agreement), providing for Respondent's performance of removal actions and the payment of certain response costs the United States incurs at or in connection with the Sangamon Street Right of Way Site (Site), which consists of the BNSF right-of-way that runs east of and adjacent to the City of Chicago's Sangamon Street and sidewalk, between 16th Street to the north and 21st Street to the south, in Chicago, Cook County, Illinois. This Amendment to the Settlement Agreement expands the scope of the removal actions to the portion of the Site between 18th and 16th Streets along Sangamon Street and provides for Respondent's payment of response costs incurred by the United States for that additional portion of the Site.

2. This Amendment to the Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607, and 9622 (CERCLA). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12,580, 52 Fed. Reg. 2,923 (Jan. 29, 1987), and further delegated to Regional Administrators by EPA Delegation Nos. 14-14-A (Determinations of Imminent and Substantial Endangerment, Jan. 31, 2017), 14-14-C (Administrative Actions Through Consent Orders, Jan. 31, 2017) and 14-14-D (Cost Recovery Non-Judicial Agreements and Administrator of EPA Region 5 to the Director of the Superfund Division by Regional Redelegation Nos. 14-14-A, 14-14-C, and 14-14-D.

3. Respondent hereby consents to the issuance of this Amendment to the Settlement Agreement and agrees to abide by each and every provision in the Settlement Agreement, Docket No. V-W-16-C-007, as amended herein. Except as specified in this Amendment to the Settlement Agreement, all provisions of the Settlement Agreement are unchanged and remain in full force and effect.

II. AMENDMENT TO SETTLEMENT AGREEMENT

4. Pursuant to Section XXV of the Settlement Agreement (Modifications), the undersigned hereby unanimously agree that the Settlement Agreement is amended as follows:

a. The paragraph below is added between Paragraph 7 and Section III's definition of "CERCLA":

"Amendment to the Settlement Agreement" shall mean the Amendment to this Administrative Settlement Agreement and Order on Consent (Settlement Agreement).

b. Paragraph 8(b) is replaced with the paragraph below:

b. Several private properties are adjacent to the ROW which may overlap the Site

property. The City also owns and maintains a sidewalk and portions of the ROW. A title search and property survey will be conducted by BNSF prior to the removal action. The ROW between 18th and 16th Streets along Sangamon Street is adjacent to the National Lead Site, which was in the Illinois Environmental Protection Agency ("IEPA") voluntary remediation program.

c. Paragraphs 8(k) and 8(l) are renumbered as Paragraphs 8(l) and 8(m).

d. The paragraph below is added as new Paragraph 8(k):

k. In October 2016, EPA engaged in additional sampling activities along the Site. *See* Attachment B (Revised Final Site Assessment Report (Feb. 2017)). Of the thirteen locations sampled, five had lead concentrations above the EPA industrial RML. Of the three boring locations analyzed for TCLP for lead, two had concentrations above the TCLP threshold of 5 mg/L.

e. In Paragraph 11, the reference to "ANSI/ASQC E-4-1994, 'Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs' (American National Standard, January 5, 1995" is replaced with the following:

ASQ/ANSI E4:2014 "Quality management systems for environmental information and technology programs – Requirements with guidance for use" (American Society for Quality, February 2014)

f. In Paragraph 11, the following sentence is inserted after the first sentence.

For the portion of the Site between 18th and 16th Streets, Respondent has retained Stiles Construction to perform the Work.

g. The first sentence of Paragraph 15 is replaced with the following:

Respondent shall perform, at a minimum, the following removal activities consistent with the Work Plan attached as Attachment A and, for the portion of the Site between 18th and 16th Streets, the 2017 Work Plan attached as Attachment C.

h. Paragraph 15(e) is replaced with the paragraph below:

Transport and dispose of all characterized or identified hazardous substances, pollutants, wastes, or contaminants at a RCRA/CERCLA-approved disposal facility in accordance with U.S. EPA's Off-Site Rule (40 C.F.R. § 300.440) (note: if excavated soil and debris are non-hazardous, dispose of such materials at a Subtitle D landfill that is currently in compliance);

i. The first three sentences of Paragraph 16(a) are replaced with the following:

Respondent has submitted and U.S. EPA has approved the Work Plan (attached as Attachment A) and the 2017 Work Plan (attached as Attachment C) for performing the removal action generally described in Paragraph 15 above. The Work Plan and the 2017 Work Plan shall provide a description of, and an expeditious schedule for, the actions required by this Settlement Agreement. The Work Plan and the 2017 Work Plan shall include a Quality Assurance Project Plan ("QAPP").

j. Paragraph 16(b) is replaced with the paragraph below:

The Work Plan, the 2017 Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Settlement Agreement.

k. In Paragraph 17, the first sentence is replaced with the following sentence:

Within 10 business days after the Effective Date, and within 10 business days after electronic receipt by Respondent of a copy of the Amendment to the Settlement Agreement signed by the Director, Superfund Division, U.S. EPA Region 5, Respondent shall submit for U.S. EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-site work under this Settlement Agreement.

I. In Paragraph 17, the reference to "U.S. EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963413, June 1992)" is replaced with the following:

"OSWER Integrated Health and Safety Program Operating Practices for OSWER Field Activities," Pub. 9285.0-OIC (Nov. 2002), available on the NSCEP database at https://www.epa.gov/nscep, and "EPA's Emergency Responder Health and Safety Manual," OSWER Directive 9285.3-12 (July 2005 and updates), available at https://www.epaosc.org/_HealthSafetyManual/manual-index.htm

m. The first sentence of Paragraph 37(a) is replaced with the two sentences below:

Within 30 days after Respondent has received a copy of the Amendment to the Settlement Agreement signed by the Director, Superfund Division, U.S. EPA Region 5, Respondent shall pay to U.S. EPA \$8,056.69, plus interest of \$82.39, for a total of \$8,139.08 for Past Response Costs. Within 30 days after Respondent has received a copy of the Amendment to the Settlement Agreement signed by the Director, Superfund Division, U.S. EPA Region 5, Respondent shall pay to U.S. EPA Region 5, Respondent shall pay to U.S. EPA an additional \$56,228.10 for Past Response Costs associated with the portion of the Site between 18th and 16th Streets.

n. Notice of payment of Past Response Costs under Paragraph 37 and of Future Response Costs under Paragraph 38 shall also be sent to "Robert M. Peachey, Associate Regional Counsel, 77 West Jackson Boulevard, C-14J, Chicago, Illinois, 60604."

- o. Appendix A of this Amendment to the Settlement Agreement (Revised Final Site Assessment Report (Feb. 2017)) is attached as Attachment B to the Settlement Agreement.
- p. Appendix B of this Amendment to the Settlement Agreement (2017 Work Plan) is attached as Attachment C to the Settlement Agreement.

III. EFFECTIVE DATE

5. This Amendment to the Settlement Agreement is effective upon electronic receipt by Respondent of a copy of the Amendment to the Settlement signed by the Director, Superfund Division, U.S. EPA Region 5.

IT IS SO AGREED AND ORDERED:

11/3/2017 Dated U.S. ENVIRONMENTAL PROTECTION AGENCY:

Margaret Guerriero

Acting Director, Superfund Division Region 5 U.S. Environmental Protection Agency

In the Matter of Sangamon Street Right of Way Site Chicago, Cook County, Illinois Docket No. V-W-16-C-007

The undersigned representative of Respondent certifies that he is fully authorized to enter into the terms and conditions of this Amendment to the Settlement Agreement and to bind the party he represents to this document.

10/27/2017 Dated

RESPONDENT (BNSF Railway Company):

David L. Freeman Executive Vice President Operations BNSF Railway Company

Appendix A Revised Final Site Assessment Report (Feb. 2017)

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REVISED FINAL SITE ASSESSMENT REPORT FOR THE SANGAMON RIGHT OF WAY OU1 (16TH TO 18TH STREET) CHICAGO, COOK COUNTY, ILLINOIS 60608

U.S. Environmental Protection Agency Emergency Response Branch Region 5 77 West Jackson Boulevard Chicago, IL 60604

Submitted by

Tetra Tech, Inc. 1 South Wacker, 37th Floor Chicago, Illinois 60606

EPA Contract No. EP-S5-13-01

Technical Direction Document No. S05-0001-1610-004

Document Tracking No.: 1515

February 22, 2017

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1 LABORATORY DATA PACKAGE

1.0 INTRODUCTION

Under Superfund Technical Assessment and Response Team (START) Contract No. EP-S5-13-01, Technical Direction Document (TDD) No. S05-0001-1610-004, the U.S. Environmental Protection Agency (EPA) tasked Tetra Tech, Inc. (Tetra Tech), to perform a site assessment at the Sangamon Right of Way Operable Unit No. 1 (OU1) site (site) in Chicago, Cook County, Illinois (Appendix A, Figure 1). The site assessment was performed to evaluate the potential impacts to surface soils and shallow subsurface soils on-site through aerial deposition of fugitive air releases from surrounding historically operating industrial facilities and historic activities of the site as a railway.

2.0 SITE BACKGROUND

This section describes the site location, site background, and previous site investigation.

2.1 SITE LOCATION AND DESCRIPTION

The site consists of 1.20 acres and encompasses the inactive railway located between 16th and 18th Street, west of the intersection of South Peoria Street and north of West 18th Street, Chicago, Illinois. The site is bounded by West 16th Street to the north, the former National Lead Site to the east, West 18th Street to the south, and a parking area utilized by a trucking company to the west (Appendix A, Figure 2). The site is currently owned and operated by Burlington Northern Santa Fe Railway (BNSF).

2.2 SITE BACKGROUND

The site encompassing the railway is approximately 950 feet long and 50 to 65 feet wide at its narrowest and widest points, respectively. Adjacent to the eastern boundary of the site is the former National Lead Site. The former National Lead Site was owned by the National Lead Company and was known as the National Lead Co. Southern White Lead Works. Dutch Boy Paint was founded in 1907 by the National Lead Company and the former National Lead Site was a manufacturer of Dutch Boy White Lead.

The former National Lead Site is indicated to be National Lead Co. Southern White Lead Works on historic Sanborn fire insurance maps from 1914 and 1950 and National Lead Co. on the map from 1975. The historic Sanborn fire insurance maps from 1914, 1950, and 1975 indicate a former rail spur which originated off the railway on the south side of the site near West 18th Street and continued north along the west side of the former National Lead structure. The historic Sanborn fire insurance maps are provided in Appendix B.

Historical aerials from 1938, 1952, 1962, 1972, 1978, and 1984 indicate the site with a railway located between 16^{th} and 18^{th} Street. The historical aerials from 1938, 1952, and 1972 appear to indicate a rail spur originating off the railway on the south side of the site near West 18^{th} Street and continuing north along the west side of the former National Lead structure. The historical aerials are provided in Appendix *C*.

2.3 PREVIOUS SITE INVESTIGATION

In November 2013, BNSF collected samples from the site along the portion of railway between West 16th Street to the north and West 18th Street. BNSF collected a total of 31 soil samples including 2 duplicate samples from 15 sample locations. Sample locations ranged from P-22 on the south side of the railway near West 18th Street to P-36 on the north side of the railway to the south of the bridge over West 16th Street (Appendix A, Figure 3). All the soil samples were collected and composited from the 0-24 inch and the 24-48 inch intervals except for soil sample P-28 which was collected and composited from the 0-48 inch interval. The samples were analyzed for total lead and Toxicity Characteristic Leaching Procedure (TCLP) for lead

Analytical results showed seven of the fifteen sample locations had soil samples with total lead concentrations exceeding the EPA industrial Removal Management Level (RML) of 800 milligrams per kilogram (mg/kg) (EPA 2016a) collected from the 0-24 inch interval. These sample locations were P-23, P-24, P-26, P-29, P-31, and P-35. Sample location P-22 was the only sample location to have soil samples with total lead concentrations exceeding the total lead RML for industrial soils collected from both the 0-24 and 24-48 inch intervals. Analytical results showed samples from three of the fifteen sample locations had soil samples from the 0-24 inch interval with TCLP for lead concentrations exceeding the Code of Federal Regulations (CFR) Title 40 Part 261 Section 24 Toxicity Characteristic (EPA 2016b). These sample locations were P-23, P-26, and P-31. Soil sample IDs, locations, and sample total lead and TCLP for lead results, are identified on Figure 4 and provided in Appendix A

The site is currently owned and operated by BNSF. The site will be conveyed to the City of Chicago once the bridge over 16th Street on the north side of the site is removed, the metal rail and wooden ties are removed from the site, and soil excavation and removal is complete. The right of way is planned to be tied into the El Paseo trail which will be constructed by the City of Chicago from 16th to 21st Street along Sangamon Street and the former right of way.

3.0 FIELD INVESTIGATION

On October 27, 2016, Tetra Tech START performed site assessment activities, including soil sampling through the use of EPA Region 5's Geoprobe in accordance with Tetra Tech Standard Operating Procedure (SOP) 005-2 "Soil Sampling".

Tetra Tech START personnel, along with the EPA Region 5 Field Environmental Decision Support (FIELDS) team used a Geoprobe rig to advance thirteen (13) soil borings to a maximum depth of 4 feet below ground surface (bgs). Soil was collected and composited from the 0-24 inch and the 24-48 inch intervals. Tetra Tech START collected a soil sample from each interval of each sample location, resulting in 26 soil samples and 3 duplicate samples (Appendix D, Table 1). Sample locations SRWH-001 and SRWH-002 were inaccessible and therefore not sampled. Written and photographic documentation of all site assessment activities were maintained throughout the site assessment (Appendix E, Field Notes and Appendix F, Photographic Log).

3.1 SITE OBSERVATIONS

On October 27, 2016, EPA Region 5 and Tetra Tech START made field observations while on-site at Sangamon Right of Way OU1. The railway is abandoned and the former railway line remains in place and runs through the center of the site. There is fencing on the north, east, west, and south sides of the site. Portions of the fence on the east side had cut holes and some fencing parts were missing. Overgrown vegetation is present on the east and west sides. Grassy areas are present towards the center of the site (Appendix F, Photographic Log). West of the Sangamon Right of Way OU1 site is an industrial area and parking lot. East of the Sangamon Right of Way OU1 site is a vacant lot, the location of the former National Lead property.

3.2 SAMPLING ACTIVITIES

Sample collection activities were conducted in accordance with the final Sampling Analysis Plan (SAP) approved by EPA and submitted on April 8, 2016 (Tetra Tech 2016). On October 27, 2016, Tetra Tech collected 29 soil samples from the Sangamon Right Way OU1 site, including three duplicate samples. Samples were collected to determine potential risk of soils impacted with total metal concentrations above the EPA industrial RMLs and TCLP metal concentrations above the CFR Title 40 Part 261 Section 24 Toxicity Characteristic. The sample numbers, sample descriptions, and sample locations (Appendix A, Figure 3) are as follows:

- Locations SRWH-003-102716 through SRW-015-102716 were sampled on October 27, 2016, along the railway and on the boundary of Sangamon Right of Way OU1 site.
- Duplicate samples SRWH-004D-0204-102716, SRWH-007D-0204-102716, and SRWH-015D-0204-102716 were also collected from Sangamon Right of Way OU1 site on October 27, 2016.

Boring locations for soil sample collection areas were identified prior to arriving on site by satellite imagery and discussions between Tetra Tech START and EPA. Tetra Tech START developed proposed sample location figures for the site which were included in the final SAP (Tetra Tech 2016). Sample location points were collected onto a Global Positioning System (GPS) unit to mark previously identified sample locations with flags.

Soil samples were collected using a Geoprobe drill rig operated by the EPA Region 5 FIELDS team. The only access to the site for the Geoprobe drill rig was through the south side of the site. A fence without a gate was installed on the south side of the site prior to the sampling event. To gain access START contracted a local fencing company, J. Franco Wrought Iron Fencing (Franco Fencing), to dismantle the fence. Franco Fencing replaced the fence on the south side of the site following completion of sampling activities.

Samples were placed into Ziploc bags for homogenization, then directly transferred into sample jars to eliminate soil waste in accordance with SOP NO. 005-2 "Soil Sampling" (Tetra Tech 2009). The sample jars were labeled with the sample ID, date, and time collected in accordance with the final SAP (Tetra Tech 2016). Upon completion of sample collection, all soil sample locations were restored using any remaining soil not placed in the sample jar and bentonite. Photographic documentation was used to show the sample process. Sampling activities were recorded in a logbook in accordance with SOP No. 024-2 "Recording Notes in Field Logbooks" (Tetra Tech 2014b).

Soil sample IDs and locations from the site assessment are identified on Figure 3 and provided in Appendix A Soil sample IDs and locations, with their respective total lead and TCLP for lead results, are identified on Figure 4 and provided in Appendix A. A summary of boring log information and samples collected at each boring location are provided in Table 1 of Appendix D. Total metal results for each sample are summarized in Table 2 of Appendix D. Appendix E contains a copy of the field notes and boring logs. Appendix F contains a photographic log of sampling activities and general site observations. Copies of the chain-of-custody forms are included in Appendix G. Information on environmentally preferred practices used during this TDD are included in Appendix H. START implemented environmentally preferred practices to maximize sustainability; reduce energy, water use, and toxic air emissions; promote carbon neutrality; and encourage industrial material reuse and recycling. In accordance with contract requirements, U.S. Environmental Protection Agency (EPA) policies, and relevant guidance, START documented project-specific environmentally preferred practices and available metrics in the Environmental Field Practices Checklist and Green Metrics Table (ASTM International 2016; EPA 2012a, 2012b, and 2016c) (Appendix H).

3.3 SAMPLE SHIPMENT

The samples were labeled, packaged, and shipped to CT Laboratories located at 1230 Lange Court, in Baraboo, Wisconsin, in accordance with SOP No. 019-7 "Packaging and Shipping Samples" (Tetra Tech 2014a). Samples were shipped to CT Laboratories on October 27, 2016. Copies of the chain-of-custody forms are included in Appendix G.

3.4 SAMPLE ANALYSIS

All soil samples were analyzed by CT Laboratories for the Target Analyte List (TAL) metals, as well as tin and titanium, in accordance with EPA SW-846 Method 6010C, inductively coupled plasma-atomic emission spectrometry (ICP-AES), excluding mercury. All soil samples were also analyzed by CT Laboratories for mercury by EPA SW-846 Method 7471B, cold-vapor atomic absorption (CVAA). A sampling event conducted by BNSF in 2013 indicated TCLP for lead concentrations exceeding CFR Title 40 Part 261 Section 24 Toxicity Characteristic (EPA 2016b) at boring locations SRWH-013, SRWH-014, and SRWH-015. The samples collected at these boring locations were selected for TCLP for Resource Conservation and Recovery Act (RCRA) 8 metals analysis by CT Laboratories. RCRA 8 metals include arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. TCLP for RCRA 8 metals analysis was conducted by CT Laboratories in accordance with EPA SW-846 Method 6010C, ICP-AES, excluding mercury. TCLP for mercury analysis was conducted by CT Laboratories in accordance with EPA SW-846 Method 7471B, CVAA. The TCLP for lead analysis was selected by the EPA OSC to verify the lead concentrations submitted for TCLP analysis by BNSF if 2013. The remaining RCRA 8 metals were selected for TCLP analysis to determine if any additional TCLP metal concentrations exceeded CFR Title 40 Part 261 Section 24 Toxicity Characteristic (EPA 2016b).

4.0 ANALYTICAL RESULTS

Analytical results from CT Laboratories showed samples from five of the thirteen boring locations had soil samples with lead concentrations exceeding the RML for industrial soils (Appendix D, Table 2). Samples SRWH-009-0204-102716, SRWH-010-0002-102716, SRWH-011-0002-102716, SRWH-014-0202-102716, SRWH-014-0204-102716, SRWH-015-0002-102716 and SRWH-015-0204-102716 exceeded the total lead RML for industrial soils. The remainder of TAL total metal concentrations at these sample locations did not exceed applicable RMLs for industrial soils. These 5 sample locations were near each other at the south end of the site (Appendix A, Figure 4). Samples SRWH-003-0204-102716, SRWH-003-0204-102716, SRWH-004-0204-102716, SRWH-004-0204-102716, SRWH-005-0204-102716, SRWH-005-0204-102716, SRWH-005-0204-102716, SRWH-007-0204-102716, SRWH-006-0204-102716, SRWH-008-0204-102716, SRWH-007-0204-102716, SRWH-007-0204-102716, SRWH-008-0204-102716, SRWH-008-0204-102716, SRWH-007-0204-102716, SRWH-007-0204-102716, SRWH-008-0204-102716, SRWH-008-0204-102716, SRWH-008-0204-102716, SRWH-007-0204-102716, SRWH-008-0204-102716, SRWH-012-102716, these sample locations were all located at the north end of the site (Appendix A, Figure 4).

CT Laboratories also analyzed samples from boring locations SRWH-013, SRWH-014, and SRWH-015 for TCLP for RCRA 8 metals. The sample results for SRWH-014-0204-102716, SRWH-015-0204-102716, and SRWH-015D-0204-102716 show that the TCLP for lead concentrations exceeded CFR Title 40 Part 261 Section 24 Toxicity Characteristic. The remainder of RCRA 8 metals TCLP concentrations did not exceed CFR Title 40 Part 261 Section 24 Toxicity Characteristic at sample locations SRWH-014 and SRWH-015. Sample locations SRWH-014 and SRWH-015 were near each other at the south end of the site (Appendix A, Figure 4). RCRA 8 metals TCLP concentrations for sample location SRWH-013 did not exceed CFR Title 40 Part 261 Section 24 Toxicity Characteristic (Appendix D, Table 3). This sample location was on the north side of the site (Appendix A, Figure 4).

Most field duplicate results were within the Quality Assurance Project Plan (QAPP) limit of a 70 percent Relative Percentage Difference (RPD). The exceptions were tin in sample SRWH-004-0204-102716; beryllium, lead, and mercury in sample SRWH-007-0204-102716; and lead in the TCLP extract of sample SRWH-015-0204-102716 (QAPP 2015). These results indicate heterogeneous distributions of the metals (or of the metals' chemical form, in the case of the extract) within the field samples. The results for the affected metals in both portions of the field duplicate samples were qualified as estimated (flagged "J") (Appendix D, Table 2 and 3). The data validation is discussed in further detail in the final Data Validation Report submitted to EPA under document tracking number 1326. The full laboratory data package is provided in Attachment 1.

5.0 DISCUSSION

START was tasked by EPA Region 5 OSC, Steve Faryan, to collect surface and shallow subsurface soil samples from the site to submit to CT Laboratories for analysis of the TAL metals, tin, and titanium. Samples from borng locations SRWH-013, SRWH-014, and SRWH-015 were additionally analyzed for TCLP for RCRA 8 metals to verify TCLP for lead concentrations exceeding CFR Title 40 Part 261 Section 24 Toxicity Characteristic from the BNSF sampling event in 2013. The remaining RCRA 8 metals were selected for TCLP analysis to determine if any additional TCLP metal concentrations exceeded CFR Title 40 Part 261 Section 24 Toxicity Characteristic (EPA 2016b).

Of the thirteen boring locations advanced during the October 2016 site assessment activities, five had lead concentrations above the EPA industrial RML of 800 mg/kg. All five of these locations were on the south side of the site north of 18th Street. Sample location SRWH-012, was the only boring location on the south side of the site that did not have lead concentrations above the EPA industrial RML for lead. Of the three boring locations analyzed for TCLP for RCRA 8 metals, two had TCLP for lead concentrations above the CFR Title 261 Part 40 Section 24 Toxicity Characteristic (EPA 2016b). These two locations were located on the south side of the site (Appendix A, Figure 4). Analytical results from the 2016 sampling event indicate that samples did not contain any other total metal concentrations exceeding applicable EPA industrial RMLs or TCLP for RCRA 8 metal concentrations exceeding applicable CFR Title 261 Part 40 Section 24 Toxicity Characteristics at the Sangamon Right of Way OU1 site.

Sample results from the October 2016 sampling event did not indicate exceedances of total lead concentrations above the EPA industrial RML or TCLP for lead concentrations above the CFR Title 261 Part 40 Section 24 Toxicity Characteristic in the northern portion of the site. BNSF sample results from 2013 indicated soil samples with total lead concentrations exceeding the EPA industrial RML collected from the 0-24 inch interval at sample locations P-29, P-31, and P-35. The sample collected from the 0-24 inch interval at TCLP for lead concentration exceeding the CFR Title 261 Part 40 Section 24 Toxicity Characteristic. These samples were collected from the northern portion of the site (Appendix A, Figure 4). The 2016 START and 2013 BNSF sampling events indicate sample locations had soil samples with total lead and TCLP for lead concentrations exceeding the EPA industrial RML and the CFR Title 261 Part 40 Section 24 Toxicity Characteristic on both the north and south side of the site (Appendix A, Figure 4). Therefore, removal activities are recommended and may be warranted throughout the site.

The EPA Region 5 FIELDS team completed a report evaluating the possibility that contamination observed in soils at the Sangamon Right of Way OU1 site originated in the adjacent National Lead Site.

Basic statistics, correlations, ratios, and maps were used to analyze existing datasets for these two sites, as well as the surrounding area. Results showed that there was no distinct signature of soil metal concentrations linking the Sangamon Right of Way OU1 Site with National Lead Site that did not also extend to the surrounding residential and industrial areas. The EPA Region 5 FIELDS team report will be provided separately from this revised final Site Assessment Report.

6.0 **REFERENCES**

ASTM International. 2016. "Standard Guide for Greener Cleanups." E2893-16. April 1.

- U.S. Environmental Protection Agency (EPA). 2007. "Method 6010C (SW-846): Inductively Coupled Plasma-Atomic Emission Spectrometry," Revision 3.
- EPA. 2012a. "Methodology for Understanding and Reducing a Project's Environmental Footprint." Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation. EPA 542-R-12-002. February.
- EPA. 2012b. "U.S. EPA Region 5 Superfund Greener Cleanup Implementation Strategy." March 16.
- EPA. 2016a. Regional Removal Management Levels for Chemicals. Industrial Soil Supporting Table HQ3. May.
- EPA. 2016b. Code of Federal Regulations. Title 40 Part 261 Section 24. Toxicity Characteristic. September 2016.
- EPA 2016c. Memorandum Regarding Consideration of Greener Cleanup Activities in the Superfund Cleanup Process. From Woolford, James, Director, et. al. To Regional Superfund National Program Managers and Regional Counsels, Regions 1 – 10. August 2.
- EPA. Canar, J., Reents, C., and Roth, C. 2017. FIELDS Group U.S. EPA Region 5 Report for Comparison of Soil Metal Concentrations at Sangamon Corridor, National Lead, and Surrounding Area. February.

Tetra Tech, Inc. (Tetra Tech). 2009. Soil Sampling, SOP No. 005-2. June.

Tetra Tech. 2014a. Packaging and Shipping Samples, SOP No. 019-7. November.

- Tetra Tech. 2014b. Recording Notes in Field Logbooks, SOP No 024-2. November.
- Tetra Tech, Superfund Technical Assessment and Response Team (START IV), EPA Region 5, Contract No. EP-S5-EP-01, Quality Assurance Project Plan (QAPP), April 2015.
- Tetra Tech. 2016. Final Sampling Analysis Plan, Sangamon Right Of Way Hook (16th to 18th Street), Chicago, Cook County, Illinois. August.

APPENDIX A

FIGURES

v



Coordinate System: GCS WGS 1984 Datum: WGS 1984 Units: Degree



Coordinate System: GCS WGS 1984 Datum: WGS 1984 Units: Degree

File Path: G:\G\G9026-START IV\Illinois\East Pilsens Soil Site\mxd\2017-01\Fig3-SampleLocations.mxd





File Path: G:\GG026-START IV\IIIinois\East Pilsens Soil Site\mxd\2017-01\Fig4-SampleResults.mxd

APPENDIX B

HISTORIC SANBORN FIRE INSURANCE MAPS

National Lead

900 W. 18th Street Chicago, IL 60608

Inquiry Number: 4155874.3 December 09, 2014

Certified Sanborn® Map Report



6 Armstrong Road, 4th Floor Shelton, Connecticut 06484 Toll Free: 800.352.0050 www.edmet.com

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Site Name:	Client Name:		
National Lead	Tetra Tech EM, Inc.		
900 W. 18th Street	1 South Wacker Drive	(a son	
Chicago, IL 60608	Chicago, IL 60606	EDR	
EDR Inquiry # 4155874.3	Contact: Kevin Scott		

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Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.





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Volume 8, Sheet 62

Volume 8, Sheet 41

Volume 8, Sheet 42







Volume 8, Sheet 63

1991 Source Sheets









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Volume 8, Sheet 42



Volume 8, Sheet 6



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Outlined areas indicate map sheets within the collection.

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Volume 8, Sheet 41 Volume 8, Sheet 42 Volume 8, Sheet 62 Volume 8, Sheet 63 600

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Volume 8, Sheet 41 Volume 8, Sheet 42 Volume 8, Sheet 63 Volume 8, Sheet 62

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Volume 8, Sheet 42 Volume 8, Sheet 43 Volume 8, Sheet 63 Volume 8, Sheet 6







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APPENDIX C

HISTORICAL AERIALS
National Lead 900 W. 18th Street Chicago, IL 60608

Inquiry Number: 4155874.9 December 09, 2014

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th Floor Shelton, Connecticut 06484 Toll Free: 800.352.0050 www.edmet.com

EDR Aerial Photo Decade Package

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Date EDR Searched Historical Sources:

Target Property: 900 W. 18th Street

900 W. 18th Street Chicago, IL 60608

<u>Year</u>	Scale	Details	<u>Source</u>
1938	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1938	USGS
1952	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1952	USGS
1962	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1962	USGS
1972	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1972	USGS
1978	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1978	USGS
1984	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1984	USGS
1988	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1988	USGS
1994	Aerial Photograph. Scale: 1"=500'	Flight Date: January 01, 1994	USGS
1999	Aerial Photograph. Scale: 1"=500'	DOQQ - acquisition dates: March 27, 1999	USGS/DOQQ
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	USDA/NAIP
2007	Aerial Photograph. Scale: 1"=500'	Flight Year: 2007	USDA/NAIP
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	USDA/NAIP
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	USDA/NAIP
2011	Aerial Photograph. Scale: 1"=500'	Flight Year: 2011	USDA/NAIP
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	USDA/NAIP































APPENDIX D

SUMMARY TABLES

Final Table 1 Soil Borings and Sample Summary Sangamon Right of Way OU1 Site

Boring		Relative		
Locations	Composite Sample IDs	Location	Lithology	Sample Observations
SRWH-003	SRWH-003-0002-102716	approximately 50 feet north of	Gravel/loam	(0-4ft) Black sandy fill with gravel and trace slag
	SRWH-003-0204-102716	SRWH-004		ti ace siag
	SRWH-003-0002-102716	approximately	Constant de la constant	(0-1.5ft) Black sandy fill with gravel and trace slag
SRWH-004	SRWH-004-0204-102716	50 feet south of SRWH-003	Gravel/loam; clay	(1.5-3ft) Dark gray, moist, stiff clay (3-4ft) Black sandy fill with some gravel
	SRWH-004-0204-102716-D			and trace slag
SRWH-005	SRWH-005-0002-102716	approximately 50 feet south of	Gravel/loam;	(0-0.5ft) Black sandy fill with trace slag (0.5-2.5ft) Black sandy fill with frequent gravel and trace slag
3KWH-005	SRWH-005-0204-102716	SRWH-004	clay	(2.5-3ft) Black, stiff moist clay (3-4ft) Black, sandy fill with some gravel
SRWH-006	SRWH-006-0002-102716	approximately 50 feet south of	Gravel/loam;	(0-0.5ft) Black sandy fill with trace gravel and trace slag (0.5-1ft) Dark gray clay, moist, hard
SKWH-000	SRWH-006-0204-102716	SRWH-005	clay	(1-3.5ft) Black sandy fill with trace slag (3.5-4ft) Black sandy fill
	SRWH-007-0002-102716			(0-1ft) Black sandy fill with some gravel and trace slag (1-2ft) Black sandy fill with
SRWH-007	SRWH-007-0204-102716	approximately 50 feet south of SRWH-006	Gravel/loam; clay	frequent gravel and trace slag (2-2.5ft) Dark gray, moist stiff clay
	SRWH-007-0204-102716-D			(2.5-4ft) Black sandy moist fill with some gravel
SRWH-008	SRWH-008-0002-102716	approximately 50 feet south of	Gravel/loam;	(0-0.5ft) Black moist sandy fill with track gravel (0.5-1.5ft) Dark gray moist stiff clay
38001-008	SRWH-008-0204-102716	SRWH-007	clay	(1.5-4ft) Black moist sandy fill with some gravel and track slag
	SRWH-009-0002-102716	approximately 50 feet south of	Gravel/loam	(0-0.5ft) Black moist fill with track slag (0.5-1.5ft) Black moist sandy with track slag and frequent gravel (1.5-2ft) Dark gray moist clay with
SRWH-009 -	SRWH-009-0204-102716	SRWH-008	Sidveryiodiii	(1.3-211) Dark gray most citay with brown matting (2-4ft) Black moist sand with frequent gravel

Notes:

D = Duplicate

ft = feet

SRWH = Sangamon Right of Way Hook

Final Table 1 Soil Borings and Sample Summary Sangamon Right of Way OU1 Site

Boring Locations	Composite Sample IDs	Relative Location	Lithology	Sample Observations
SRWH-010	SRWH-010-0002-102716	approximately 25 feet south of	Gravel/loam	(0-1ft) Black sandy fill with frequent gravel and track slag (1-1.5ft) Dark gray, moist clay
5	SRWH-010-0204-102716	SRWH-015		(1.5-4ft) Black moist sandy fill with frequent gravel
SRWH-011	SRWH-011-0002-102716	approximately 50 feet south of	Gravel/loam	(0-0.5ft) Black sandy moist fill with track gravel (0.5-1.5ft) Black sandy moist fill with
5	SRWH-011-0204-102716	SRWH-010	Gravelyloan	frequent gravel and track slag (1.5-4ft) Black moist sandy fill with some gravel
SRWH-012	SRWH-012-0002-102716	approximately 50 feet south of		(0-1ft) Black moist sandy fill with track (1-1.5ft) Dark gray moist stiff clay
511011	SRWH-012-0204-102716	SRWH-011; near 18th street	clay	(1.5-4ft) Black moist sandy fill with frequent gravel and track slag
SRWH-013	SRWH-013-0002-102716	approximately 15 feet northeast of	Gravel/loam;	(0-0.5ft) Black sandy moist fill with some gravel (0.5-2ft) Black sandy moist fill with frequent gravel and track slag
510015	SRWH-013-0204-102716	SRWH-006; near 16th street	clay	(2-3ft) Dark gray moist stiff clay (3-4ft) Black moist sandy fill with some gravel
SRWH-014	SRWH-014-0002-102716	approximately 25 feet west of	Gravel/loam	(0-0.5ft) Black moist sandy fill with track slag; (0.5-1.5ft) Black moist sandy fill with
	SRWH-014-0204-102716	SRWH-009		some gravel (1.5-4ft) Black moist sandy fill with some gravel and track slag
	SRWH-015-0002-102716			(0-0.5ft) Black moist sandy fill with some gravel
SRWH-015	SRWH-015-0204-102716	approximately 25 feet north of SRWH-010	Gravel/loam; clay	(0.5-1.5ft) black moist sandy fill with frequent gravel and track slag
	SRWH-015-0204-102716-D			(1.5-2ft) dark gray moist stiff clay (2-4ft) Black moist sandy fill with gravel

Notes:

D = Duplicate

ft = feet

SRWH = Sangamon Right of Way Hook

Final Table 2 Soil Samples - Total Metal Result Summary Sangamon Right of Way OU1 Site

ample Number :		SRWH-003-	0002-102716	SRWH-003-0	0204-102716	SRWH-004-	0002-102716	SRWH-004-	0204-102716		204-102716-D		-0002-102716
epth (ft bgs):		C)-2	2	-4	(2-2	1	2-4		2-4		0-2
Aatrix :	United States Environmental Protection Agency (EPA)	5	oil	so	oil	s	oil	S	oil	5	oil	1	soil
Inits:	Regional Cumulative Removal Management Level (RML)	m	g/kg	mg	g/kg	m	g/kg	m	g/kg	m	g/kg	m	ng/kg
aboratory:	Soil Supporting Table (a target risk (TR) level of 10 ⁴ for	CT Lab	oratories	CT Labo	oratories	CT Lab	oratories	CT Lab	oratories	CT Lab	oratories	CT Lab	oratories
ample Date:	carcinogen and a hazard quotient (HQ) or hazard index (HI)	10/2	7/2016	10/27	7/2016	10/2	7/2016	10/2	7/2016	10/2	7/2016	10/2	7/2016
ample Time:	of 3 for non-carcinogen), May 2016 (mg/kg)	9	:20	9:	:22	9	:30	9	:32	9	:32	9	9:52
ample Collector:	or s for non-carcinogen), may zozo (mg/ mg/	E	PA	E	PA	E	PA	E	PA	1	PA		EPA
Duplicate:					the second			SRWH-004-0	204-102716-D	SRWH-004	0204-102716		
Compound CAS #	Industrial RML	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Juminum 7429-90-5	3400000	1450		4910		1840	T	3460	1	3120		1490	1
Antimony 7440-36-0	1400	3.1	J-	0.45	J-	3.2	J-	0.44	J-	0.39	J-	7.6	J-
Arsenic 7440-38-2	300	67.2		6.3		40.7		5.7		6.5		232	
Barium 7440-39-3	650000	21.1		27.6		27.9		50.2		37.7		30.5	
	6900	0.084		0.38		0.097		0.32		0.26		0.13	
	2900	1.5		0.25		1.9		0.55		0.29		2.0	
		68000		22700		73000		30800		31200		29000	-
		6.9		7.3		8.3		7.6		6.5		8.1	-
Chromium 7440-47-3	1000	2.8		5.1		4.5	-	4.3		4.2	+	3.4	
Cobalt 7440-48-4 Copper 7440-50-8	140000	30.7	1	19.1	J	4.5	1	26.5	J	17.8	L	69.2	1
	250000	26300	1	11500		25400		11300		10700		19100	
ron 7439-89-6	800	132	+	39.0		306		88.6		53.8		535	
ead 7439-92-1	800	24800		11000		37600		13600		16000		13000	
Magnesium 7439-95-4	77000	401		207		385		242		235		271	
Manganese 7439-96-5	140	0.047	J+	0.79	J+	0.072	J+	0.15	J+	0.22	J+	0.46	J+
Mercury 7439-97-6	67000	6.5	J+	11.0	J+	9.4		10.3		9.0		9.0	3.
Nickel 7440-02-0				451		289		429		384		215	
Potassium 7440-09-7		226		0.33	L	ND ND		0.15	J	0.27	1	ND	
Selenium 7782-49-2	18000	ND		0.33 ND	1	0.15		ND	- '	ND	,	0.18	
Silver 7440-22-4	18000	0.12		129		119		115		96.8		57.5	
Godium 7440-23-5		87.1		129 ND		0.24	1	ND		ND		0.58	J
Thallium 7440-28-0	35 2100000	0.91		3.0		9.7	1	35.2	1	6.3	J	26.9	
rin 7440-31-5		72.1		103		9.7		132	+'	103		82.6	-
litanium 7440-32-6		72.1		103		8.8		13.1		103		7.0	
/anadium 7440-62-2	17000	257		57.9		261		102	+	60.4		488	
Zinc 7440-66-6	1100000	Notes:	1	57.9		201		102		00.4		400	1
		CAS # = Cherr D = duplicate EPA = United ft = feet J = The analy J+ = The analy J+ = The analy mg/kg = milli ND = Not Det RML = Remov SRWH = Sang Color indicat	ground surface ical Abstracts : sample States Environ te was positively te was positively te was positive gram per kiloge tected val Managemen tamon Right of es highest RMI conc exceedit	Service Registry mental Protecti ly identified; the ely identified; th ely identified; th ram nt Level Way Hook L exceeded for a 5 EPA screening	ion Agency e associated va he associated v e associated va appropriate ma level for indus!	alue is the appr alue is the appr atrix trial soil (May 2	roximate conce roximate conce 2016)	entration of the	analyte in the s	sample and ma	ıy be biased hig y be biased low		

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Final Table 2 Soil Samples - Total Metal Result Summary Sangamon Right of Way OU1 Site

				0204-102716	SKWH-006-0	0002-102716	SRWH-006-	0204-102/10	SRWH-007-0	002-102/10	38448-007-	0204-102716	38441-007-0	0204-102716-0
Sample Number : Depth (ft bgs):			2	-4	0	-2	2	-4	0	-2	1	-4		2-4
Matrix :			SI	oil	so	oil	SI	oil	so	oil	s	oil	5	soil
Units:		EPA Regional Cumulative RML Soil Supporting Table (a TR	m	z/kg	mg	g/kg	mį	/kg	mg	/kg	m	z/kg		ig/kg
aboratory:		level of 10 ⁴ for carcinogen and a HQ or HI of 3 for non-		oratories	CT Labo	oratories	CT Labo	oratories	CT Labo	ratories	CT Lab	oratories	CT Lab	oratories
Sample Date:		carcinogen), May 2016 (mg/kg)	10/2	7/2016	10/27	7/2016	10/23	/2016	10/27	/2016	10/2	7/2016	10/2	7/2016
Sample Time:	-		9	:55	10	0:04	10	:07		:13		:15		0:15
Sample Collector:			E	PA	E	PA	E	PA	E	PA		PA		EPA
Duplicate:											SRWH-007-0	204-102716-D	SRWH-007	-0204-102716
Compound	CAS #	Industrial RML	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
	7429-90-5	3400000	2840	L	1960	1	2910		5650		2950		1820	
	7440-36-0	1400	0.50	J-	3.1	J-	0.62	J.	7.4	ŀ	0.28	J-	0.23	J-
	7440-38-2	300	5.2		139		7.3		130		3.9		2.9	
	7440-39-3	650000	28.7	J-	32.6		28.4		157		20.1	14	13.9	
	7440-41-7	6900	0.28	-ر	0.14		0.23		0.60		0.095	J	ND	
	7440-43-9	2900	0.43	J-	3.1		0.48		2.9		0.32		0.27	
	7440-70-2		52700	J+	68500		55900		15800		129000		106000	
	7440-47-3		6.1	٦	6.6		6.0		11.8		5.3		3.6	_
	7440-48-4	1000	· 3.8	J-	3.9		5.0		5.1		4.1		2.9	
	7440-50-8	140000	22.8	J	37.6	J	20.7	J	55.4	J	10.3	J	7.2	1
	7439-89-6	2500000	10300	J	18100		11500		35600		8790		6480	
	7439-92-1	800	168	L	464		43.2		282		16.6	J	7.8	I
	7439-95-4		19500	J-	34000		17100		4450		65100		56200	
	7439-96-5	77000	204		351		296		399		218		162	
	7439-97-6	140	0.082	J+	0.069	J+	0.26	J+	0.12	J+	0.063	J+	0.020	J+
	7440-02-0	67000	8.1	1	8.8		8.7		17.0		7.5		4.8	
	7440-09-7		439		351		352		823		471		320	
	7782-49-2	18000	0.38	1	ND		ND		ND		ND		ND	
Silver	7440-22-4	18000	ND		0.093	1	ND		0.11		ND		ND	
Sodium	7440-23-5		96.9	1	120		62.4		196		96.0	1	114	
Thallium	7440-28-0	35	ND		0.36	1	ND		1.1		ND		ND	
Tin	7440-31-5	2100000	4.8	J-	11.7	-	3.0		19.0		1.6	J+	1.1	J+
Titanium	7440-32-6		98.8	J-	97.8		94.9		229		89.9		68.4	
Vanadium	7440-62-2	17000	10.1	J.	8.8		14.1		17.0		9.6		6.5	
Zinc	7440-66-6	1100000	80.2	ŀ	586		50.9		402		26.8		23.7	
			CAS # = Cherr D = duplicate EPA = United ft = feet J = The analy J+ = The analy mg/kg = millik ND = Not Det RML = Remov SRWH = Sang Color indicat 894 -The cumulat	round surface nical Abstracts S sample States Environr te was positively te was positive te was positive gram per kilogr	mental Protecti y identified; thi ly identified; th y identified; th am at Level Way Hook exceeded for i EPA screening e can be located	ion Agency e associated va he associated v e associated vi appropriate ma level for indus d at https://ww	alue is the appr alue is the appr atrix trial soil (May 2 w.epa.gov/risk	oximate conce oximate concer 016) /regional-remo	ntration of the ntration of the i wal-manageme	analyte in the analyte in the :	sample and ma			

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Final Table 2 Soil Samples - Total Metal Result Sumn Sangamon Right of Way OU1 Site

Sample Numbe			SKWH-008-	0002-102716	SKWH-008-1	0204-102716	SRWH-009-	002-102/10	SRWH-009-	0204-102/10	SAMIFOLO	0002-102716		0204-102716
Depth (ft bgs):	••		0	-2	2	-4	0	-2	2	-4	C	-2		2-4
Matrix :		1	SI	oil	so	pil	SI	oil	S	oil	s	oil	s	ioil
Units:		EPA Regional Cumulative RML Soil Supporting Table (a TR	m	z/kg	ma	/kg	mį	/kg	m	z/kg	m	g/kg	m	g/kg
aboratory:		level of 10-4 for carcinogen and a HQ or HI of 3 for non-	CT Labo	oratories	CT Labo	oratories	CT Labo	oratories	CT Labo	oratories	CT Lab	oratories	CT Lab	oratories
Sample Date:		carcinogen), May 2016 (mg/kg)	10/2	7/2016	10/27	7/2016	10/23	/2016	10/2	/2016	10/2	7/2016		7/2016
Sample Time:			10	:23	10	:25	10	:30	10	:33	11	1:00		1:02
Sample Collect	or:		. E	PA	E	PA	E	PA	E	PA	E	PA	E	PA
Duplicate:														
Compound	CAS #	Industrial RML	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Juminum	7429-90-5	3400000	3340		4560		4000		5760		3180	J	3360	
Antimony	7440-36-0	1400	3.5	J-	ND		5.7	J-	ND		5.0	J-	ND	
rsenic	7440-38-2	300	52.3		3.7	1	64.2		10.9		104	J-	4.1	
Barium	7440-39-3	650000	43.7		36.7		67.9		72.0		47.3	J	30.6	
seryllium	7440-41-7	6900	0.29		0.36		0.47		2.4		0.34	J	0.068	
Cadmium	7440-43-9	2900	4.1		ND		3.0		0.90		1.5	j.	0.34	
alcium	7440-70-2		39300		48800		8750		27900		59000	J	104000	J+
hromium	7440-47-3	**	7.6		9.8		7.7		6.5		7.4		5.2	
Cobalt	7440-48-4	1000	5.4		6.6		5.5		4.7		7.0	J-	3.7	
Copper	7440-50-8	140000	60.8	J	27.3	l	43.1	J	98.1	J	42.6	J	8.1	1
ron	7439-89-6	250000	20300		19600		20700		12400		17500	L I	7820	
.ead	7439-89-0	800	238		54.0		276		5500	Section and the section of the	894	1	123	
Vagnesium	7439-95-4		17400		16900		1590		10800		23900	J	55000	
Vanganese	7439-96-5	77000	396		378		274		267		368	J	336	
Vianganese	7439-97-6	140	0.10	J+	0.059	J+	0.18	J+	0.037	J+	0.12	J+	0.0093	J+
Vickel	7440-02-0	67000	13.7		20.9		17.2		12.7		15.6	J-	6.6	
Potassium	7440-02-0		428		554		639		1060		626		413	
Selenium	7782-49-2	18000	ND		1.9	1	0.21	1	ND	-	ND		ND	
Silver	7440-22-4	18000	0.065	1	0.033	J	ND		0.085	J	0.094	J	ND	
Sodium	7440-23-5		135		112		416		432		174	J	92.4	
Thallium	7440-23-0	35	ND		ND		0.27	J	ND		ND	1000 10 10	ND	
Tin	7440-31-5	2100000	15.5	-	ND		14.3		12.3		19.5	J-	0.59	J+
Titanium	7440-32-6		159		171		231		216		142	1-	91.6	J-
Vanadium	7440-62-2	17000	12.1		19.7		14.0		18.3		11.8	· .	9.9	
Zinc	7440-66-6	1100000	579		90.3		878		256		176	1	23.7	
			CAS # = Cherr D = duplicate EPA = United ft = feet J = The analy J = The analy mg/kg = millik ND = Not Det RML = Remon SRWH = Sang Color indicate 894 -The cumulat	round surface hical Abstracts S sample States Environn te was positively te was positive te was positive gram per kilogr	mental Protecti y identified; thi ely identified; ti ily identified; ti am nt Level Way Hook exceeded for EPA screening e can be located	ion Agency e associated va he associated v e associated vi appropriate ma level for indus d at https://ww	alue is the appr alue is the appr atrix trial soil (May 2 w.epa.gov/risk	oximate conce oximate concer 016) /regional-remo	ntration of the ntration of the wal-manageme	analyte in the s analyte in the s	sample and ma			

Page 3 of 5

Final Table 2 Soil Samples - Total Metal Result Sumn Sangamon Right of Way OU1 Site ary

Sample Numbe	r:		SRWH-011-	0002-102716	SRWH-011-0	204-102716	SRWH-012-	0002-102716	SRWH-012-	0204-102716	SRWH-013-	0002-102716	SRWH-013-	-0204-102716
Depth (ft bgs):		1	()-2	2	-4	C	-2	2	-4	(0-2	1	2-4
Matrix :	1	1 1	s	oil	sc	il	SI	oil	s	oil	S	oil	5	soil
Units:		EPA Regional Cumulative RML Soil Supporting Table (a TR	m	g/kg	mg	/kg	mį	g/kg	m	z/kg	m	g/kg	m	ig/kg
Laboratory:		level of 10-4 for carcinogen and a HQ or HI of 3 for non-	CT Lab	oratories	CT Labo	ratories	CT Labo	oratories	CT Labo	oratories	CT Lab	oratories	CT Lab	oratories
Sample Date:		carcinogen), May 2016 (mg/kg)	10/2	7/2016	10/27	/2016	10/27	7/2016	10/2	/2016	10/2	7/2016	10/2	7/2016
Sample Time:			13	1:05	11	:07	11	:13	11	:15	9	:43	9	9:45
Sample Collect	or:		E	PA	E	PA	E	PA	E	PA	E	PA	f	EPA
Duplicate:		1									1000 0000			
Compound	CAS #	Industrial RML	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	7429-90-5	3400000	2570		1880		5410	J	2240		3190		3070	
Antimony	7440-36-0	1400	17.7	-ر	0.28	J-	2.7	J-	0.63	J-	7.7	J-	2.4	J-
Arsenic	7440-38-2	300	263		4.1		84.8	J+	3.4		269		62.7	
Barium	7440-39-3	650000	61.3		16.3		65.8	1	21.5		56.7		39.8	
Beryllium	7440-41-7	6900	0.38		0.0093	1	0.31	L	0.069		0.41		0.40	
Cadmium	7440-43-9	2900	3.5		0.31		1.2	1	0.30		5.6		1.7	
Calcium	7440-70-2		36300		161000		60700	J+	104000		16400		66900	
Chromium	7440-47-3	-	13.0		3.9		9.5		4.4		12.6		7.5	
Cobalt	7440-48-4	1000	3.6		2.7		4.6	ŀ	3.5		5.6		5.1	
Copper	7440-50-8	140000	1260	J	6.4	J	40.4	J	8.4	J	305	J	33.2	1
Iron	7439-89-6	2500000	22900		5890		10500	J	6990		18000		12100	
Lead	7439-92-1	800	1200		19.2		452	J	8.8		707		170	
Magnesium	7439-95-4		16100		63600		29500	J+	52000		7590		23900	
Manganese	7439-96-5	77000	275		184		310	J	269		336		285	
Mercury	7439-97-6	140	0.78	J+	ND		0.39	J+	ND		0.71	J+	0.28	J+
Nickel	7440-02-0	67000	12.9		4.8		10.9	J-	6.6		16.4		12.0	
Potassium	7440-09-7		326		324		531		400		403		390	
Selenium	7782-49-2	18000	ND		0.17	L I	ND		ND		ND		ND	
Silver	7440-22-4	18000	1.2		ND		0.085	J	ND		0.15		ND	
Sodium	7440-23-5	-	197		106		170		165		119		157	
Thallium	7440-28-0	35	0.19	Ĺ	ND		ND		ND		0.54	J	ND	
Tin	7440-31-5	2100000	131		0.56	J+	14.2	J	0.80	J+	40.0		7.0	
Titanium	7440-32-6	**	113		76.2		107	J.	96.8		78.5		125	
Vanadium	7440-62-2	17000	10.2		7.2		14.0	J-	8.4		12.5		12.8	
Zinc	7440-66-6	1100000	928		20.7		214		35.5		828		234	

Notes: - = No Standard bgs = below ground surface CAS # = Chemical Abstracts Service Registry Number

 GL # = chemical Abstracts Service Registry Number

 CAS # = Chemical Abstracts Service Registry Number

 D = duplicate sample

 EPA = United States Environmental Protection Agency

 ft = feet

 J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.

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 J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.

 mg/kg = milligram per klogram

 ND = Not Detected

 RML = Removal Management Level

 SRWH = Sangamon Right of Way Hook

 Color indicates highest RML acceeded for appropriate matrix

 B84
 Concercected EPA screening level for industrial soil (May 2016)

 -The cumulative RMLs are adjusted to a 10⁴ risk level for carcinogens and an HQ of 3 for noncarcinogens

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Final Table 2 Soil Samples - Total Metal Result Summary Sangamon Right of Way OU1 Site

Sample Numbe	er :		SRWH-014-	0002-102716	SRWH-014-	0204-102716	SRWH-015-	0002-102716	SRWH-015-	0204-102716	SRWH-015-0	204-102716-D
Depth (ft bgs):		1 1	C	-2	2	-4	()-2	2	-4	1	2-4
Matrix :		1	S	oil	5	oil	S	oil	s	oil .	s	oil
Units:	1.4.10	EPA Regional Cumulative RML Soil Supporting Table (a TR	m	g/kg	m	g/kg	m	g/kg	m	z/kg	m	g/kg
Laboratory:		level of 10-4 for carcinogen and a HQ or HI of 3 for non-	CT Lab	oratories	CT Lab	oratories	CT Lab	oratories	CT Lab	oratories	CT Lab	oratories
Sample Date:		carcinogen), May 2016 (mg/kg)	10/2	7/2016	10/2	7/2016	10/2	7/2016	10/2	7/2016	10/2	7/2016
Sample Time:			10):43	10	:45	10	0:50	10):53	10	0:53
Sample Collect	or:	1 1	E	PA	E	PA	E	PA	E	PA	E	PA
Duplicate:									SRWH-015-0	204-102716-D	SRWH-015-	0204-102716
Compound	CAS #	Industrial RML	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum	7429-90-5	3400000	2410		3690		6420		8920		9080	
Antimony	7440-36-0	1400	20.7	J-	0.60	J-	2.7	J-	ND		ND	
Arsenic	7440-38-2	300	236		5.5		45.9		10.6		9.9	
Barium	7440-39-3	650000	54.3		44.0		66.2		96.2		126	
Beryllium	7440-41-7	6900	0.43		1.1		0.97		1.8	(A	2.2	
Cadmium	7440-43-9	2900	3.8		0.50		3.1		0.85		0.73	
Calcium	7440-70-2		64500		72200		15200		21200		21800	
Chromium	7440-47-3				4.7		13.7		13.3		12.9	
Cobalt	7440-48-4	1000	5.1		4.3		9.3		5.4		4.9	1
Copper	7440-50-8	140000	246	J	36.1		86.8	1	79.6	J	78.4	J
Iron	7439-89-6	2500000	16000		13700		17200		12700		16300	
Lead	7439-92-1	800	1130		18800	Sector States of the	1210	A STREET	6340		9050	
Magnesium	7439-95-4		22100		34300		3350		6140		7640	
Manganese	7439-96-5	77000	332		208		706		1330		1360	
Mercury	7439-97-6	140	0.35	J+	0.051	J+	0.11	J+	0.0093	J+	0.012	J+
Nickel	7440-02-0	67000	16.1		8.0		31.3		12.2		10	
Potassium	7440-09-7		305		719		1210		1740		2250	
Selenium	7782-49-2	18000	ND 0.30		ND		ND		0.54	J+	0.59	J+
Silver	7440-22-4	18000			0.19		0.075	1	0.22		0.21	
Sodium	7440-23-5	-	252		285	1	299		788		1080	
Thallium	7440-28-0	35	0.39	J	ND		ND		ND		ND	
Tin	7440-31-5	2100000	109		2.0		16.7		7.2		7.0	
Titanium	7440-32-6	-	123		152		338	1	457		675	
Vanadium	7440-62-2	17000	10.7		10.4		20.5		21.2		25.1	
Zinc	7440-66-6	1100000	1210		36.4		513		110		107	

Notes: -- = No Standard

bgs = below ground surface CAS # = Chemical Abstracts Service Registry Number

 CAS # = Chemical Abstracts Service Registry Number

 D = duplicate sample

 EAA = United States Environmental Protection Agency

 ft = feet

 J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.

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 J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.

 J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.

 mg/kg = milligram per kilogram

 ND = Not Detected

 RML = Removal Management Level

 SRWH = Sangamon Right of Way Hook

 Color indicates highest RML exceeded for appropriate matrix

 SM

 SM

 -The cumulative RMLs above can be located at https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls

 -Cumulative RMLs are adjusted to a 10^T risk level for carcinogens and an HQ of 3 for noncarcinogens

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Final Table 3 Soil Samples - TCLP Metal Result Summary Sangamon Right of Way OU1 Site

Sample Number	r:		SRWH-013-0	0002-102716	SRWH-013-	0204-102716	SRWH-014-	0002-102716	SRWH-014-	0204-102716	SRWH-015-0	0002-102716	SRWH-015-	0204-102716	SRWH-015-0	204-102716-D
Depth (ft bgs):		1	0	-2	2	-4	(-2	2	-4	0	-2	2	-4	2	2-4
Matrix :			5	oil	s	oil	s	oil	s	oil	SI	lic	s	oil	s	soil
Units:		Maximum Concentration of	m	g/L	m	g/L	m	ig/L	m	ig/L	m	g/L	m	g/L	m	ng/L
Laboratory:		Contaminants for the Toxicity	CT Labo	oratories	CT Lab	oratories	CT Lab	oratories	CT Labo	oratories	CT Labo	oratories	CT Labo	oratories	CT Lab	oratories
Sample Date:	and the second second second	Characteristic, September	10/27	7/2016	10/2	7/2016	10/2	7/2016	10/27	7/2016	10/27	/2016	10/27	7/2016	10/2	7/2016
Sample Time:		2016 (mg/L)	9:	:43	9	:45	10):43	10	0:45	10	:50	10	:53	10	0:53
Sample Collecto	or:	1	E	PA	E	PA	E	PA	E	PA	E	PA	E	PA	E	PA
Duplicate:		1											SRWH-015-0	204-102716-D	SRWH-015-	-0204-102716
Compound	CAS #	Regulatory Level (mg/L)	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Arsenic	7440-38-2	5.0	0.074		0.0076	1	0.024		0.0080	J	0.018	J	0.0057	1	ND	
Barium	7440-39-3	100	0.28		0.26	1	0.51		0.39		0.14		0.64		0.41	
Cadmium	7440-43-9	1.0	0.014		0.0052		0.012		0.0033		0.0057		0.016		0.0078	
Chromium	7440-47-3	5.0	0.0048		ND		0.0024	J	ND		ND		0.0012	J	0.001	1
Lead	7439-92-1	5.0	0.16		0.14		0.26		14	SH Same	0.19		320	J	67	J
Mercury	7439-97-6	0.2	ND		ND		ND		ND		ND		ND		ND	
Selenium	7782-49-2	1.0	ND		ND		ND		ND		ND		ND		ND	
Silver	7440-22-4	5.0	ND		ND		ND		ND		0.00074	J	ND		ND	

 ND
 ND
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 Notes: bgs = below ground surface CAS # chemical Abstracts Service Registry Number D = duplicate sample EPA = United States Environmental Protection Agency ft = feet J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample. mg/t = milligram per liter ND = Not Detected SRWH = Samgamon Right of Way Hook TCLP = Toxicity Characteristic Leaching Procedure Color indicates highest exceedence for appropriate matrix 14 concentration exceeds CFR Title 40 Part 261 Section 24 Toxicity Characteristic (September 2016) -The CFR Title 40 Part 261 Section 24 Toxicity Characteristic September 2016) -The CFR Title 40 Part 261 Section 24 Toxicity Characteristic sabove can be located at 'https://www.gpo.gov/fdys/pkg/CFR-2012-title40-vol27/xml/CFR-2012-title40-vol27-part261.xml#seqnum261.24

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APPENDIX E

FIELD NOTES

INCH MADE IN TACOMA - --in the Kain 0 DEFYING MOTHER NATURE = Name START FIELD LOGBOOK Logbook Tracking Number <u>CH176</u> Site Name <u>Saingarman</u> <u>Right of Way OUT</u> Issue to <u>Maff Villicand</u> Date Issued ______ (0 -26-16 TDD # 0001-1610-004 C Arabia **RiteintheRain.com**

PAGE	REFERENCE		DATE
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		2			-	_					6-1.5' - BLK, SANDY FILL WY F GRAVIT TRACIT SLAC	R	රිං	ura:	T	
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					E						1-2' - BLK, SMDY FILL W/ PKKQ	IN	T	64	H	7	
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APPENDIX F

PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

EPA REGION 5 START – TDD 0001-S05-1610-004 Sangamon Right of Way OU1 Site Assessment Chicago, Cook County, Illinois

Photograph: 1

Direction: South

Date: 10/27/2016

Photographer: Matt Villicana

Description: View of EPA FIELDs utilizing Geoprobe to collect a soil boring for logging and sampling.



Photograph: 2

Direction: Overview

Date: 10/27/2016

Photographer: Matt Villicana

Description: View of soil collected from a boring, homogenized in a Ziploc bag, and transferred to a sample jar for shipment to a lab for analysis.





PHOTOGRAPHIC LOG

EPA REGION 5 START – TDD 0001-S05-1610-004 Sangamon Right of Way OU1 Site Assessment Chicago, Cook County, Illinois

Photograph: 3

Direction: Northwest

Date: 11/14/2016

Photographer: Paul Pallardy

Description: View of replaced chain link fence on the south side of the Site.



Photograph: 4

Direction: Northeast

Date: 11/14/2016

Photographer: Paul Pallardy

Description: View of replaced chain link fence on the south side of the Site.





APPENDIX G

CHAIN-OF-CUSTODY FORMS

Rev. 3/	2015				CHAIN OF CU	STOD	γ						Р	age _	1_of_3
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	0932	-		5	RWH-004-0201-102716		4	X					1		796369
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1	0952			4	SRWA-005-0002-102716		4	p	M				1		746371
	0955			5	FRWH-005-6204-102716		p	8	P				3	X	746372
-	1004			:	SRWH-CO6-0002-102716		P	0					1		796373
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CT Laboratories Terms and Conditions

a a purchaser (Client) places an order for laboratory, consulting or sampling services from CT Laboratories (CTL), CTL shall provide the ordered services pursuant to these Terms and Conditions, and the related Quotation, or as agreed in a negotiated contract. In the absence of a written ment to the contrary, the Order constitutes an acceptance by the Client of CTL's offer to do business under these Terms and Conditions, and an agreement to be bound by these Terms and Conditions. No contrary or additional terms and conditions expressed in a Client's document shall emed to become a part of the contract created upon acceptance of these Terms and Conditions, in advance of the start of the project and in writing. Where a purch

2. PAYMENT TERMS

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4. WARRANTIES AND LIABILITY 4.1 Where applicable CTL will u

4. WARANTES AND LABLUT
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5.2 Data and sample materials provided by CILent or at Client's nequest, and the result obtained by CTL hall be held in confidence (unless such information is generally available to the public or is in the public domain or Client has failed to pay CTL for all services rendered or is otherwise in browsholl by CTL end by CH

6. INSURANCE 6.1 CTL shall main shall also maintain e. Insurverve: 6.1 CTL shall maintain in force during the performance of services under these Terms and Conditions, Workers' Compensation and Employer's Liability Insurance in accordance with the laws of the states having jurisdiction over CTL's employees who are engaged in the performance of the work. CTL shall maintain during such period, Comprehensive General and Conditions, Workers' Compensation and Employer's Liability Insurance in accordance with the laws of the states having jurisdiction over CTL's employees who are engaged in the performance of the work. CTL shall associate during such period. Comprehensive General and Contractual Liability (limit of \$2,000,000 per occurrence/aggregate), Comprehensive Automobile Liability, owned and hired, (\$1,000,000 combined single limit), and Professional/Pollution Liability Insurance (limit of \$5,000,000 per occurrence/aggregate). Any Client required changes to these limits or conditions may result in a change in cost to the Client.

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1. ORDERS AND RECEIPT OF SAMPLES (Sample Acceptance Policy)
1. The Ciert may place the Order (i.e., specify a Scope of Work) either by submitting a suchase order to CTL in writing, by telephone (confirmed in writing) or by negotiated contract. Whichever option the Client selects for placing the Order, the Order shall not be accepted by the laboratory or will be qualified. The Start may place the Order (i.e., specify a Scope of Work) either by submitting a suchase order to CTL in writing, by telephone (confirmed in writing) or by negotiated contract. Whichever option the Client selects for placing the Order, the Order shall not be accepted by the laboratory or will be qualified. The samples asymptite date in the information; if unable to contact the client to obtain the information; if unable to contact the client to obtain the information; if unable to obtain

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5. RESULTS, WORK PRODUCT

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 1 Data or information provided to CTL or generated by services performed under this agreement shall only become the property of the Client upon receipt in full by CTL of payment for the whole Order. Ownership of any analytical method, QAVQC protocols, software programs or equipment developed by CTL for performance of work will be retained by CTL, and Client shall not disclose such information to any third party.
 5.2 Data and sample metarials provided by CTL bused by the Client or client's request, and the result obtained by CTL shall be held in confidence (unless such information is generally available to the public or is in the public domain or Client has failed to pay CTL for all services rendered or is otherwise in breach of these Terms and Conditions, subject to any discusser services of the or Client's client. even though subsequently determined not to meet the warranties described in these Terms and Conditions, then the compensation will be adjusted based upon mutual agreement. In no case shall the Client state and the client's services and the result obtained by CTL subsections of the subcontract services or dered by the Client to another laboratory or laboratories, if, in CTL's sole judgment, it is reasonably necessary, appropriate or divisable to do so, and with the Client's permission. CTL will in no way be liable for any subcontracted services and all applicable warrantes, guarantes and instrumetes and instrumetes and instrumetes and instrumetes and instrumetes and instrumetes on torse instrumetes and torse there induces of the Client's language provises. The analytical importance is often on to cloen the manylical importance are those of the subcontracted or not accepted, or for which methows requested, will be returned to the client samples to projects that are canceled or not accepted, or or which methows requested will be returned to the field proves. CTL reserves the right to return to the Client in any sample or unused portion of a sa

6. INSURANCE 6.1 CTL, shall maintain in force during the performance of services under these Terms and Conditions, Workers' Compensation and Engloyer's Liability Insurance in accordance with the laws of the states having jurisdiction over CTL's employees who are engaged in the performance of the work. CTL shall also maintain during such period. Comprehensive General and Contractual Liability (limit of \$2,000,000 per occurrence/ aggregate). Comprehensive Automobile Liability, owned and hired, (\$1,000,000 combined single limit), and Professional/Pollution Liability Insurance (limit of \$5,000,000 per occurrence/aggregate). Any Client required changes to these limits or conditions may result in a change in cost to the Client.

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 5.4 CTL reserves the right to subcontract and insurance are those of the analytical reports in the new of the reports of the reports and explained by Client or at Client's client, then analytical store toor theorem and Conditions, super reports and explained by the client to another laboratory or laboratories, if, in CTL's sole judgment, it is reasonably necessary, appropriate or advisable to do so, and with the Client's permission. CTL will in no way be liable for any subcontracted laboratory.
 5.4 CTL reserves the right to return such samples to the Client, in a manner consistent with U.S. Environmental Protection Agency regulators or ther applicable protects that are canceled or not accepted, or to which return was returned to the Client any sample or unused portion of a sample that is not within CTL's permitted capability or the capability interference in the presonal engority. So for

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Cooler Receipt Form





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	0922				58004-003-0204-102716	-	X	p					1		
\vdash	0930	-	\vdash		SRWH-CO4-COCA-102716	-	6	۴	5				1		
	0932 0932				PWH-004-0204-102716	+	44	29		╾╉╶╂╼╊╼╉╼╏╴╂╍┤			1.		
	0952	-			5RWH-004-0204-102716-15	+	4	p		┍╾╋╴┼╼┾╸╋╼╁╼┼╴╬			1		
	0955				FWH-005-5204-102716	+	Ý	2				+ +-	3	X	
	1004				SEWH-006-0002-102716		P	8	6				1	1	
	1007				DRUNH - 006 -0204- 102716		p	P					1		
	1013	_			5HWH - 007-0002-1027114	1	P	6					1		
1	1015				SFWH-007-0204-102716		8	p					1		
ijnglijeh	IGS ed By:	V	V		Date/Time	Rece	ived	11	P		Date/Time		1	lce	Lob Use Only Present Yes No
eceived t	у:				Date/Time	Rece	ived	for Lat	orato	ry by:	Date/Time				npIR Gun oler #



Rev. 3/2					CHAIN OF	CUSTO	DY													P	age _	<u>3 of 3</u>
Project		t: PAU	IL PA	HLAP!	SY CT LABORAT	O R I	{}	TH.		-	1230 La 608-		2760	Barabo Fax 6 .ctlabo	08-35	6-276	i6 E m C	MAI	IL: Pi	PAN	- PA	ALLARDY LLARDY CTOTRACTION
Project Project		Sang	Amor	S Ret			re:			QS Sol	lid Was	CRA	SDW Othe	A N	PDES	2420		Addro nvoice MAI	ess: e To:' IL:	C.m.C	774 774	ACKUTE DR FLR FLR 10, 12 60606
	in: CH									PO) # 						4	Addre	ess:			
	ed By:			-1 CAA	n n		1	_					Party li	isted is r	espons	ble foi	раул	nent of	f invoi	ce as	per CT	Laboratories' terms and conditions
Matrix: GW ~ grou	undwater			WW - wa	stewater DW - drinking water	Filtered? Y/N	A Mittai		WUINALI			ALYS	SES RE	QUEST	ED					Total # Containers	Designated MS/MSD	Turnacound Time Normal RUSH* Date Needed: Rush analysis requires prior CT Laboratories' approval Surcharges: 24 hr 200% 2-3 days 100%
-	ection	SL - sludg	Grab		M - misc/waste Sample ID Description		t		F	1	Eill	in Sr		with Bo	ttloc		ort			4	0	4-9 days 50%
Date	Time 1043	SOIL	Comp			N	×	x	tic	1		1	T			Т	T	[]		1		Lab use only
T	loy	1	1	-	SRWH-04-0002-102716 SRWH-04-0204-102716	1	X		F			+	+		+-	-	-			1		
	lose				SPWH-DIS-0602-102716		X		C						+	+	1			i		
	105	5		/	52001-015-0204-102716		1	à	F											1		
V	1053	sd	4		SRWH-015-0204-102716-	× ×	7	P	ŕ	>		-								1		
												+	_									
			-					-				-				-			-			
Relinquin	ler:	A	I		Date/Time 10/27/16 / 1800	Rec	eived	By:							Di	ite/Tin	ne				lce	Lab Use Only Present Yes No
Received	by:		_		Date/Time	Rec	eived	for La	borat	ory by	r:			8	Di	ite/Tir	ne					mp IR Gun oler #



Sample Condition Report

Folder # 123270	Print Date / Time	10/28/2016	13 40
Client ⁻ TETRA TECH	Received Date / Time / By	10/28/2016	11 30 JLS
Project Name SRWH SITE	Log-In Date / Time / By	10/28/2016	13:38 BNA
Project Phase:	Project #.		PM BMS
Coolers 5539	Temperature	3.1 C	On Ice [.] Y
Custody Seals Present . Y	COC Present:? Y	Complete?	Y
Seal Intact? Y Ship Method: FEDEX EXPRESS Adequate Packaging Y		GIGNED AND DATE 0201700781676595 Y	-

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT, BOTH DATED 10/27/16 AND SIGNED

TCLP RCRA METALS ANALYSIS WAS ADDED TO THE FOLLOWING SAMPLES PER THE CLIENT'S REQUEST

SRWH-013-0002-102716, SRWH-013-0204-102716, SRWH-014-0002-102716, SRWH-014-0204-102716, SRWH-015-0002-102716, SRWH-015-0204-102716, SRWH-015-0204-102716-D

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796366 SRWH-003-0002-102716	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Contain	ers of Type (SC	<i>DLIDS</i>) = 1	
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796367 SRWH-003-0204-102716				
	SOLIDS Total # of Contain	ers of Type (So	DLIDS) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796368 SRWH-004-0002-102716				
	SOLIDS Total # of Contain	ا ers of Type (So	<i>DLIDS</i>) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796369 SRWH-004-0204-102716				
	SOLIDS Total # of Contain	1 ers of Type (So	/ DLIDS)= 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1 %SOL,HG,ICP,K,NA

ption 005-0204-102716 005-0204-102716	SOLIDS Total # of Contains Container Type SOLIDS SOLIDS SOLIDS Total # of Contains	Cond. Code	/ OLIDS) = 1 pH OK?/Filtered? /	%SOL,HG,ICP,K,NA Tests
ption 005-0204-102716	Total # of Container Container Type SOLIDS SOLIDS SOLIDS SOLIDS	ers of Type (SC Cond. Code 1 1 1		
005-0204-102716	Container Type SOLIDS SOLIDS SOLIDS SOLIDS	Cond. Code		Tests
005-0204-102716	SOLIDS SOLIDS SOLIDS	1 1 1	pH OK?/Filtered?	Tests
	SOLIDS SOLIDS	1 1	/	
	SOLIDS SOLIDS	1 1	1	
ption	SOLIDS	1		%SOL,HG,ICP,K,NA
ption			1	%SOL,HG,ICP,K,NA
ption	Total # of Contain		/	%SOL,HG,ICP,K,NA
ption		ers of Type (SC	OLIDS) = 3	
	Container Type	Cond. Code	pH OK?/Filtered?	Tests
006-0002-102716				
	SOLIDS	1		%SOL,HG,ICP,K,NA
	Total # of Contain	ers of Type (SC	OLIDS)= 1	
ption	Container Type	Cond. Code	pH OK?/Filtered?	Tests
006-0204-102716		4	1	
	SOLIDS Total # of Contain	1 ers of Type / S/	<i>OLIDS</i>) = 1	%SOL,HG,ICP,K,NA
ption	Container Type	Cond. Code	pH OK?/Filtered?	Tests
007-0002-102716				
007-0002-102716	SOLIDS	1	1	%SOL,HG,ICP,K,NA
	Total # of Contain	ers of Type (So	<i>OLID</i> S)= 1	
ption	Container Type	Cond. Code	pH OK?/Filtered?	Tests
007-0204-102716	201100	4	1	
	SOLIDS Total # of Contain	ers of Type (S(<i>/</i> OLIDS) = 1	%SOL,HG,ICP,K,NA
		cia ci i Abe (or		
ption	Container Type	Cond. Code	pH OK?/Filtered?	Tests
007 0004 400740 0	SOLIDS	1	1	%SOL,HG,ICP,K,NA
007-0204-102716-D		•	<i>OLIDS</i>) = 1	ACCE, IC, ICF, R, INA
007-0204-102716-D	Container Type	Cond. Code	pH OK?/Filtered?	Tests
ipti		7-0204-102716-D SOLIDS Total # of Contain	7-0204-102716-D SOLIDS 1 Total # of Containers of Type (S	7-0204-102716-D SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1

SOLIDS1/Total # of Containers of Type(SOLIDS) = 1

%SOL,HG,ICP,K,NA

Sample ID) / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796380	SRWH-008-0204-102716	SOLIDS	1		%SOL,HG,ICP,K,NA
		Total # of Contain	ers of Type (So	OLIDS)= 1	
Sample ID) / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796381	SRWH-009-0002-102716			· · · · · · · · · · · · · · · · · · ·	
		SOLIDS Total # of Contain	ers of Type (So	<i>OLIDS</i>) = 1	%SOL,HG,ICP,K,NA
Sample ID) / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796382	SRWH-009-0204-102716		1		
		SOLIDS Total # of Contain	1 ers of Type (S	<i>OLIDS</i>) = 1	%SOL,HG,ICP,K,NA
Sample ID	0 / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796383	SRWH-010-0002-102716				
		SOLIDS SOLIDS	1 1		%SOL,HG,ICP,K,NA %SOL,HG,ICP,K,NA
		SOLIDS	1	I	%SOL,HG,ICP,K,NA
		Total # of Contain	ers of Type (S	OLIDS) = 3	
Sample ID) / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796384	SRWH-010-0204-102716				
		SOLIDS Total # of Contain	1 ers of Type (S	OLIDS) = 1	%SOL,HG,ICP,K,NA
Sample ID) / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796385	SRWH-011-0002-102716				
		SOLIDS Total # of Contain	ers of Type (S	<i>OLIDS</i>) = 1	%SOL,HG,ICP,K,NA
Sample IC) / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
796386	SRWH-011-0204-102716				
		SOLIDS Total # of Contain	ers of Type (S	<i>OLIDS</i>) = 1	%SOL,HG,ICP,K,NA
	D / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1

%SOL,HG,ICP,K,NA

Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796388 SRWH-012-0204-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796389 SRWH-013-0002-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796390 SRWH-013-0204-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796416 SRWH-014-0002-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796417 SRWH-014-0204-102716	SOLIDS 1 / Total # of Containers of Type (<i>SOLIDS</i>) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796418 SRWH-015-0002-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796419 SRWH-015-0204-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	%SOL,HG,ICP,K,NA
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796420 SRWH-015-0204-102716-D	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	%SOL,HG,ICP,K,NA
		123270

Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796970 SRWH-013-0002-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	HG,ICP
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796972 SRWH-013-0204-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	HG,ICP
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796973 SRWH-014-0002-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	HG,ICP
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796974 SRWH-014-0204-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	HG,ICP
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796975 SRWH-015-0002-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	HG,ICP
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796976 SRWH-015-0204-102716	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	HG,ICP
Sample ID / Description	Container Type Cond. Code pH OK?/Filtered?	Tests
796977 SRWH-015-0204-102716-D	SOLIDS 1 / Total # of Containers of Type (SOLIDS) = 1	HG,ICP

 Condition Code
 Condition Description

 1
 Sample Received OK

Folder #:	123270		Company	TETI	RA TECH			P	roject: SRWH	SITE		
Folder #:	123270]			OGIN C		RMATION 2995			JSH PRO. RT DUE 1		
Company:	TETRA TECH	-		P	roject:	SRW	SITE			Proj #:		
Project Phas	e.			P	O Numbei	r 111	1200			Invoice #	•	123806
Project Mana	ger: BMS	Date Rece	ived. 10/28/16	Le	og Date:	10/28/	/2016					
Report To PAL 1 S WACKER D SUITE 3700 CHICAGO, IL 6 Phone 630-46- Rep E-Mail	0606	ech com	CC Fax				Invoice To ACCOU 1 S WACKER DRIVE SUITE 3700 CHICAGO, IL 60606 Phone EMail	:	BLE CC chris Fax	s burns@tetratech c	om	
Collected By Collector's Phor	ne 630-464-4101						Arrival Temperature	31	oC			
SAMPLE # 796366	DESCR SRWH-0	003-0002-1027	16	PRIMARY	/ / DETAILE	DMATR	IX SOLID /	SOIL		SAMPLED: 10/27	//2016	Time: 0920
CLIENT SAMPLE #:				DETAILEI	D SITE/POI	NT ID IN	FORMATION					
TEST# TEST	TES	TMETHOD		TEST GR	OUP S	PECIAL	REQUIREMENTS		HOLD DATI	ANALYSIS DUE	RUSH	STATUS
8 SOLIDS,	PERCENT (E	PA 8000C)							11/10/2016	11/03/2016	Y	Logged
817 ICP QSM	1 (E	PA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum									
			Antimony Arsenic									
			Barium									
			Beryllium									
			Cadmium									
			Calcium									
			Chromium									
			Cobalt									
			Copper									
			Iron									
C UMSREPS/CONFIRMATION	RPT											

Fol	lder #: 12327	0	Company	y TETRA TE	СН	Project: SRWH S	TE		
SAMPLE	#. 796366 DESCR' SR	WH-003-0002-102	716	PRIMARY / DETA	AILED MATRIX: SOLID / SOIL		SAMPLED. 10/27/2	2016	Time: 0920
	SAMPLE #			DETAILED SITE/	POINT ID INFORMATION.				
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			Lead						
			Magnesium						
			Manganese						
			Nickel						
			Selenium						
			Silver						
			Thallium						
			Vanadium						
			Zinc						
827	ICP K QSM	(EPA 6010C)				04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)				04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)				11/24/2016 04/25/2017	11/03/2016 11/03/2016	Y Y	NeedPrep NeedPrep
1021	ICP METALS LISTZ QSM	(EPA 6010C)	Tın			04/25/2017	11/03/2016	r	NeedPiep
			Titanium						
		WH-003-0204-102	/16		AILED MATRIX SOLID / SOIL		SAMPLED 10/27/2	2016	Time 0922
CLIENT ?	SAMPLE #.			DETAILED SITE/	POINT ID INFORMATION				
	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
TEST#			ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS				
	SOLIDS, PERCENT	(EPA 8000C)	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE 11/10/2016 04/25/2017	11/03/2016	Y	Logged
TEST#			ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	11/10/2016			
TEST#	SOLIDS, PERCENT	(EPA 8000C)	Aluminum	TEST GROUP	SPECIAL REQUIREMENTS	11/10/2016	11/03/2016	Y	Logged
TEST#	SOLIDS, PERCENT	(EPA 8000C)		TEST GROUP	SPECIAL REQUIREMENTS	11/10/2016	11/03/2016	Y	Logged
TEST#	SOLIDS, PERCENT	(EPA 8000C)	Aluminum Antimony	TEST GROUP	SPECIAL REQUIREMENTS	11/10/2016	11/03/2016	Y	Logged
TEST#	SOLIDS, PERCENT	(EPA 8000C)	Aluminum Antimony Arsenic	TEST GROUP	SPECIAL REQUIREMENTS	11/10/2016	11/03/2016	Y	Logged

Fol	der #: 12327	0	Compan	Y TETRA TE	CH	Proj	ect: SRWH S	ITE		
SAMPLE	# 796367 DESCR: SR	WH-003-0204-102	716	PRIMARY / DET	AILED MATRIX: SOLID /	SOIL		SAMPLED: 10/27/	2016	Time 0922
	SAMPLE #			DETAILED SITE	POINT ID INFORMATION					
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
	·····									
			Calcium							
			Chromium							
			Cobalt							
			Copper							
			Iron							
			Lead							
			Magnesium							
			Manganese							
			Nickel							
			Selenium							
			Silver							
			Thallium							
			Vanadium							
			Zinc							
827	ICP K QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)					11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Tin							
			Titanium							
SAMPLE	# 796368 DESCR: SR	WH-004-0002-102	2716	PRIMARY / DET	AILED MATRIX SOLID /	SOIL		SAMPLED 10/27/	2016	Time 0930
CLIENT	SAMPLE #			DETAILED SITE	POINT ID INFORMATION					
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
8	SOLIDS,PERCENT	(EPA 8000C)					11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)					04/25/2017	11/03/2016	Ŷ	NeedPrep
		(2	Aluminum							

Fol	der #: 1232	270	Compar	ny TETI	RA TECH		Project	SRWH S	ITE		
SAMPLE	# 796368 DESCR SI	RWH-004-0002-102	716	PRIMARY	/ DETAILED MATRIX SOLID	/ SOIL			SAMPLED	10/27/2016	Time: 0930
CLIENT S	AMPLE #			DETAILED	D SITE/POINT ID INFORMATION						
TEST#	TEST	TEST METHOD	ANALYTE	TEST GRO	OUP SPECIAL REQUIREMEN	rs	н	OLD DATE	ANALYSIS	DUE RUSH	STATUS
			Antimony								
			Arsenic								
			Barium								
			Beryllium								
			Cadmium								
			Calcium								
			Chromium								
			Cobalt								
			Copper								
			Iron								
			Lead								
			Magnesium								
			Manganese								
			Nickel								
			Selenium								
			Silver								
			Thailium								
			Vanadium								
			Zinc								
827	ICP K QSM	(EPA 6010C)					0-	4/25/2017	11/03/2016	5 Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)					0-	4/25/2017	11/03/2016	5 Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)					1	1/24/2016	11/03/2016	i Y	NeedPrep
1021	ICP METALS LIST2 QS	M (EPA 6010C)					04	4/25/2017	11/03/2016	5 Y	NeedPrep
			Tin								
			Titanium								

Fol	ier #: 123	270	Compa	ny TETRA	ТЕСН		Project: SRWH SITE	
SAMPLE	* 796369 DESCR' S	RWH-004-0204-102	2716	PRIMARY / D	ETAILED MATRIX. SOLID /	SOIL	SAMPLED 10/27/2016	Time 0932
CLIENT S	AMPLE #·			DETAILED S	ITE/POINT ID INFORMATION:			
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROU	P SPECIAL REQUIREMENTS		HOLD DATE ANALYSIS DUE RU	SH STATUS
L								
8	SOLIDS, PERCENT	(EPA 8000C)					11/10/2016 11/03/2016 Y	Logged
817	ICP QSM	(EPA 6010C)					04/25/2017 11/03/2016 Y	NeedPrep
			Aluminum					
			Antimony					
			Arsenic					
			Banum					
			Beryllium					
			Cadmium					
			Calcium					
			Chromium					
			Cobalt					
			Copper					
			Iron					
			Lead					
			Magnesium					
			Manganese					
			Nickel					
			Selenium					
			Silver					
			Thailium					
			Vanadium					
			Zinc					
827	ICP K QSM	(EPA 6010C)					04/25/2017 11/03/2016 Y	NeedPrep
828	ICP NA OSM	(EPA 6010C)					04/25/2017 11/03/2016 Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)					11/24/2016 11/03/2016 Y	NeedPrep
1021	ICP METALS LIST2 QS	M (EPA 6010C)	_				04/25/2017 11/03/2016 Y	NeedPrep
			Tin					
C \UMSREPS\C(NFIRMATION RPT		Titanium					

Fol	der #: 12327	0	Comp	any:	TETRA TEC	н		Proje	ct [.] SRWH SI	TE		
SAMPLE	# 796370 DESCR SR	WH-004-0204-102	2716-D	PF	RIMARY / DETAI	LED MATRIX SOLID	/ SOIL			SAMPLED 10	/27/2016	Time: 0932
CLIENT S	AMPLE #			DE	ETAILED SITE/P	OINT ID INFORMATION:						
TEST#	TEST	TEST METHOD	ANALYTE	TE	EST GROUP	SPECIAL REQUIREMENT	s		HOLD DATE	ANALYSIS D	UE RUSH	STATUS
						· · · · · · · · · · · · · · · · · · ·						
8	SOLIDS, PERCENT	(EPA 8000C)							11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum									
			Antimony									
			Arsenic									
			Banum									
			Beryllium									
			Cadmium									
			Calcium									
			Chromium									
			Cobalt									
			Copper									
			Iron									
			Lead									
			Magnesium									
			Manganese									
			Nickel									
			Selenium									
			Silver									
			Thallium									
			Vanadium									
			Zinc									
827	ICP K QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Tin									
			Titanium									
LIMSREPSICC	NFIRMATION RPT											

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Fold	der #: 12327(0	Compa	ny	TETRA TEC	н		Proje	ct: SRWH SI	TE		
SAMPLE	# 796371 DESCR SRV	VH-005-0002-102	716	PRI	MARY / DETAI	LED MATRIX. SOLID	/ SOIL		:	SAMPLED: 10/27/	2016	Time [.] 0952
CLIENT S.	AMPLE #.			DET	TAILED SITE/P	DINT ID INFORMATIO	N					
TEST#	TEST	TEST METHOD	ANALYTE	TES	ST GROUP	SPECIAL REQUIREN	AENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
ł												
8	SOLIDS, PERCENT	(EPA 8000C)							11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum									
			Antimony									
			Arsenic									
			Barium									
			Beryllium									
			Cadmium									
			Calcium									
			Chromium									
			Cobalt									
			Copper									
			Iron									
			Lead									
			Magnesium									
			Manganese									
			Nickel									
			Selenium									
			Silver									
			Thallium									
			Vanadium									
			Zinc									
827	ICP K QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Τιπ									
			Titanium									
: ILIMSREPSICO	NFIRMATION RPT											

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SAMPLE	# 796372 DESCR SF	RWH-005-0204-102	716	PRIMARY / DE	TAILED MATRIX	SOLID /	SOIL		SAMPLED: 10/27/	2016	Time 095
CLIENT S	SAMPLE #			DETAILED SIT	E/POINT ID INFOI						
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL RE	QUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATU
8	SOLIDS, PERCENT	(EPA 8000C)				DESIGNATED N	ATRIX SPIKE	11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)				DESIGNATED N	MATRIX SPIKE	04/25/2017	11/03/2016	Y	NeedPr
			Aluminum								
			Antimony								
			Arsenic								
			Banum								
			Beryllium								
			Cadmium								
			Calcium								
			Chromium								
			Cobalt								
			Copper								
			Iron								
			Lead								
			Magnesium								
			Manganese								
			Nickel								
			Selenium								
			Silver								
			Thallium								
			Vanadium								
			Zinc								
827	ICP K QSM	(EPA 6010C)				DESIGNATED I	MATRIX SPIKE	04/25/2017	11/03/2016	Y	NeedPr
828	ICP NA QSM	(EPA 6010C)				DESIGNATED I	MATRIX SPIKE	04/25/2017	11/03/2016	Y	NeedPr
833	MERCURY QSM	(EPA 7471B)				DESIGNATED I	MATRIX SPIKE	11/24/2016	11/03/2016	Y	NeedPr
1021	ICP METALS LIST2 QSN	(EPA 6010C)				DESIGNATED	MATRIX SPIKE	04/25/2017	11/03/2016	Y	NeedPr
			Tin								
			Titanium								

Fol	der #: 123270	123270		ny TETRA TECH			Project SRWH SITE			
SAMPLE #: 796373 DESCR		SRWH-006-0002-102716		PRIMARY / DET	AILED MATRIX SOLID /	SOIL		SAMPLED 10/27/	2016	Time 1004
CLIENT S	SAMPLE #			DETAILED SITE	POINT ID INFORMATION.					
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
					· · · · ·		- <u>-</u>			
8	SOLIDS, PERCENT	(EPA 8000C)					11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum							
			Antimony							
			Arsenic							
			Barium							
			Beryilium							
			Cadmium							
			Calcium							
			Chromium							
			Cobalt							
			Copper							
			Iron							
			Lead							
			Magnesium							
			Manganese							
			Nickel							
			Selenium							
			Silver							
			Thallium							
			Vanadium							
			Zinc							
827	ICP K QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)					11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Tin							
			Titanium							
C & IMSREPSICONFIRMATION RPT										
Fol	der #:	123270	Compan	y: TETR	ATECH		Project [.] SRWH S	ITE		
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SAMPLE	# 796374 DES	CR: SRWH-006-0204-102	2716	PRIMARY /	DETAILED MATRIX SOLID /	SOIL		SAMPLED: 10/27	2016	Time: 1007
CLIENT S	SAMPLE #			DETAILED	SITE/POINT ID INFORMATION					
TEST#	TEST	TEST METHOD	ANALYTE	TEST GRO	UP SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
							· · · ·			
8	SOLIDS, PERCEN	T (EPA 8000C)					11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum							
			Antimony							
			Arsenic							
			Banum							
			Beryllium							
			Cadmium							
			Calcium							
			Chromium							
			Cobalt							
			Copper							
			fron							
			Lead							
			Magnesium							
			Manganese							
			Nickel							
			Selenium							
			Silver							
			Thallium							
			Vanadium							
			Zinc							
827	ICP K QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)					11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIS	T2 QSM (EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Tin							
			Titanium							
C \LIMSREPS\C	ONFIRMATION RPT									

FOI	der #: 12327	<u>′0</u>	Com	bany.	TETRA TEC	п			Project: SRWH S			
SAMPLE	#. 796375 DESCR SR	WH-007-0002-102	716	PRIM	ARY / DETAI	LED MATRIX	SOLID /	SOIL		SAMPLED. 10/27/	2016	Time 1013
CLIENT S	SAMPLE #			DETA	ILED SITE/P	OINT ID INFOR						
TEST#	TEST	TEST METHOD	ANALYTE	TEST	GROUP	SPECIAL RE	QUIREMENTS			ANALYSIS DUE	RUSH	STATUS
8	SOLIDS, PERCENT	(EPA 8000C)							11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum									
			Antimony									
			Arsenic									
			Banum									
			Beryllium									
			Cadmium									
			Calcium									
			Chromium									
			Cobalt									
			Copper									
			Iron									
			Lead									
			Magnesium									
			Manganese									
			Nickel									
			Selenium									
			Silver									
			Thailium									
			Vanadium									
			Zinc									
827	ICP K QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Tin									
			Titanium									

Folder #: 123270		Compa	ny TE	TRA TEC	н		Project SRWH S				
SAMPLE #	# 796376 DESCR SRV	VH-007-0204-102	716	PRIMAR	Y / DETAI	LED MATRIX. SOLID	/ SOIL		SAMPLED: 10/27/	2016	Time [.] 1015
CLIENT S	AMPLE #			DETAILE	ED SITE/P	OINT ID INFORMATION					
TEST#	TEST	TEST METHOD	ANALYTE	TEST GI	ROUP	SPECIAL REQUIREMENT	s	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
			· · · · ·								
8	SOLIDS, PERCENT	(EPA 8000C)						11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)						04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum								
			Antimony								
			Arsenic								
			Barium								
			Beryllium								
			Cadmium								
			Calcium								
			Chromium								
			Cobalt								
			Copper								
			Iron								
			Lead								
			Magnesium								
			Manganese								
			Nickel								
			Selenium								
			Silver								
			Thallium								
			Vanadium								
			Zinc								
827	ICP K QSM	(EPA 6010C)						04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)						04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)						11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)						04/25/2017	11/03/2016	Y	NeedPrep
			Tin								
			Titanum								
UIMSREPSICO	NFIRMATION RPT										

Fold	der #: 123	270	Company	y: TE	TRA TEC	н		Project: SRWH S			
SAMPLE	# 796377 DESCR S	RWH-007-0204-102	716-D	PRIMA	RY / DETAI	LED MATRIX: SOLID	SOIL		SAMPLED 1	0/27/2016	Time: 1015
CLIENT S	AMPLE #			DETAIL	ED SITE/P	DINT ID INFORMATION					
TEST#	TEST	TEST METHOD	ANALYTE	TEST G	ROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS I	DUE RUSH	STATUS
		_									
8	SOLIDS, PERCENT	(EPA 8000C)						11/10/2016	11/03/2016	Ŷ	Logged
817	ICP QSM	(EPA 6010C)						04/25/2017	11/03/2016	Ŷ	NeedPrep
			Aluminum								
			Antimony								
			Arsenic								
			Barium								
			Beryllium								
			Cadmium								
			Calcium								
			Chromium								
			Cobalt								
			Copper								
			fron								
			Lead								
			Magnesium								
			Manganese								
			Nickel								
			Selenium								
			Silver								
			Thallium								
			Vanadium								
			Zinc								
827	ICP K QSM	(EPA 6010C)						04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)						04/25/2017	11/03/2016	Ŷ	NeedPrep
833	MERCURY QSM	(EPA 7471B)						11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QS							04/25/2017	11/03/2016	Y	NeedPrep
		. ,	Tın								

Fold	der #: 12327	0	Compa	ny.	TETRA TEC	н			Projec	t: SRWH S	ITE			
SAMPLE	# 796379 DESCR SR	NH-008-0002-102	2716	PR	IMARY / DETAI	LED MATRIX S	OLID /	SOIL			SAMPLED	10/27/20	16 -	Time 1023
CLIENT S.	AMPLE #			DE	TAILED SITE/P	OINT ID INFORM	ATION							
TEST#	TEST	TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL REQU	IREMENTS			HOLD DATE	ANALYSIS	DUE R	USH	STATUS
			, <u> </u>					~ • • • •						
8	SOLIDS, PERCENT	(EPA 8000C)								11/10/2016	11/03/2016	5 Y	,	Logged
817	ICP QSM	(EPA 6010C)								04/25/2017	11/03/2016	6 Y	,	NeedPrep
			Aluminum											
			Antimony											
			Arsenic											
			Barium											
			Beryllium											
			Cadmium											
			Calcium											
			Chromium											
			Cobalt											
			Copper											
			Iron											
			Lead											
			Magnesium											
			Manganese											
			Nickel											
			Selenium											
			Silver											
			Thallium											
			Vanadium											
			Zinc											
827	ICP K QSM	(EPA 6010C)								04/25/2017	11/03/201	5 1	(NeedPrep
828	ICP NA QSM	(EPA 6010C)								04/25/2017	11/03/201	3 1	(NeedPrep
833	MERCURY QSM	(EPA 7471B)								11/24/2016	11/03/2010	5 Y	<i>,</i>	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)								04/25/2017	11/03/2010	5 1	<i>(</i>	NeedPrep
			Tin											
			Titanium											
COCCUMENTS	NFIRMATION RPT													

Fol	der #: 123270	0	Com	any:	TETRA TEC	сн			Projec	t: SRWH S	ITE		
SAMPLE	# 796380 DESCR SRV	VH-008-0204-102	716	PF	RIMARY / DETA	ILED MATRIX	SOLID /	SOIL		:	SAMPLED: 10/27/	2016	Time: 1025
CLIENT S	SAMPLE #			DI	ETAILED SITE/	POINT ID INFOR	MATION						
TEST#	TEST	TEST METHOD	ANALYTE	т	EST GROUP	SPECIAL REC	UIREMENTS			HOLD DATE	ANALYSIS DUE	RUSH	STATUS
												_	
8	SOLIDS, PERCENT	(EPA 8000C)								11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum										
			Antimony										
			Arsenic										
			Banum										
			Beryllium										
			Cadmium										
			Calcium										
			Chromium										
			Cobalt										
			Copper										
			Iron										
			Lead										
			Magnesium										
			Manganese										
			Nickel										
			Selenium										
			Silver										
			Thallium					`					
			Vanadium										
			Zinc										
827	ICP K QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)								11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
			Tin										
			Titanıum										
LIMSREPS\C	ONFIRMATION RPT												

Fol	der #: 123270	0	Company	/ [.] TE	TRA TEC	н			Project: SRV	/H SITE		
SAMPLE	# 796381 DESCR SRV	VH-009-0002-102	2716	PRIMAR	RY / DETAI	LED MATRIX	SOLID /	SOIL		SAMPLED	10/27/2016	Time 1030
CLIENT S	AMPLE #			DETAIL	ED SITE/P	OINT ID INFOR	MATION:					
TEST#	TEST	TEST METHOD	ANALYTE	TEST GR	ROUP	SPECIAL REG	UIREMENTS		HOLD D	ATE ANALYS	IS DUE RUSH	STATUS
_												
8	SOLIDS, PERCENT	(EPA 8000C)							11/10/20		16 Y	Logged
817	ICP QSM	(EPA 6010C)							04/25/20	17 11/03/20	16 Y	NeedPrep
			Aluminum									
			Antimony									
			Arsenic									
			Barium									
			Beryllium									
			Cadmium									
			Calcium									
			Chromium									
•			Cobalt									
			Соррег									
			lron									
			Lead									
			Magnesium									
			Manganese									
			Nickel									
			Selenium									
			Silver									
			Thallum									
			Vanadium									
			Zinc									
827	ICP K QSM	(EPA 6010C)							04/25/20	11/03/20	16 Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							04/25/20	11/03/20	16 Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							11/24/20	16 11/03/20	16 Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)							04/25/20	11/03/20	16 Y	NeedPrep
			Tin									
			Titanium									
VSREPS\CC	ONFIRMATION RPT											

Fol	der #: 12327(0	Compar	ny.	TETRA TEC	н			Project	: SRWH S	ITE		
SAMPLE	# 796382 DESCR. SRV	VH-009-0204-102	2716	PRI	MARY / DETA	LED MATRIX	SOLID /	SOIL			SAMPLED 10	/27/2016	Time 1033
CLIENT S	SAMPLE #:			DET	FAILED SITE/F	OINT ID INFOR	MATION						
TEST#	TEST	TEST METHOD	ANALYTE	TES	ST GROUP	SPECIAL REC	QUIREMENTS		1	HOLD DATE	ANALYSIS D	UE RUSH	STATUS
												_	
8	SOLIDS, PERCENT	(EPA 8000C)								11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)							(04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum										
			Antimony										
			Arsenic										
			Banum										
			Beryllium										
			Cadmium										
			Calcium										
			Chromium										
			Cobalt										
			Copper										
			Iron										
			Lead										
			Magnesium										
			Manganese										
			Nickel										
			Selenium										
			Silver										
			Thallium										
			Vanadium										
			Zinc										
827	ICP K QSM	(EPA 6010C)							(04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)								11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)								04/25/2017	11/03/2016	Ŷ	NeedPrep
			Tın										
			Titanium										
LIMSREPSIC	ONFIRMATION RPT												

Foic	der #: 12327	0	Compar	ny: TETRA TE	CH Proj	ect SRWH S	ITE		
SAMPLE	# 796383 DESCR SRV	VH-010-0002-102	716	PRIMARY / DETA	NILED MATRIX SOLID / SOIL		SAMPLED 10/27	2016	Time [.] 1100
CLIENT S	AMPLE #			DETAILED SITE/	POINT ID INFORMATION				
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
8	SOLIDS, PERCENT	(EPA 8000C)			DESIGNATED MATRIX SPIKE	11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)			DESIGNATED MATRIX SPIKE	04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum						
			Antimony						
			Arsenic						
			Barium						
			Beryllium						
			Cadmium						
			Calcium						
			Chromium						
			Cobalt						
			Copper						
			Iron						
			Lead						
			Magnesium						
			Manganese						
			Nickel						
			Selenium						
			Silver						
			Thallium						
			Vanadium						
			Zinc						
827	ICP K QSM	(EPA 6010C)			DESIGNATED MATRIX SPIKE	04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)			DESIGNATED MATRIX SPIKE	04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)			DESIGNATED MATRIX SPIKE	11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)			DESIGNATED MATRIX SPIKE	04/25/2017	11/03/2016	Y	NeedPrep
			Tin						
			Titanium						
LIMSREPS/CO	INFIRMATION RPT								

AMPLE	# 796384 DESCR S	RWH-010-0204-102	716	PRIMARY / DET	AILED MATRIX: SOLID /	SOIL		SAMPLED 10/27/	2016	Time. 1102
LIENTS	SAMPLE #			DETAILED SITE/	POINT ID INFORMATION					
EST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
8	SOLIDS, PERCENT	(EPA 8000C)					11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum							
			Antimony							
			Arsenic							
			Barium							
			Beryllium							
			Cadmium							
			Calcium							
			Chromium							
			Cobalt							
			Copper							
			Iron							
			Lead							
			Magnesium							
			Manganese							
			Nickel							
			Selenium							
			Silver							
			Thallium							
			Vanadium							
			Zinc							
827	ICP K QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPre
828	ICP NA QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPre
833	MERCURY QSM	(EPA 7471B)					11/24/2016	11/03/2016	Y	NeedPre
1021	ICP METALS LIST2 QS	GM (EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPre
			Tin							

Fol	der #: 123	270	Com	pany.	TETRA TEC	сн		Project SRWH	SITE		
SAMPLE	# 796385 DESCR: 5	RWH-011-0002-10	2716	PF	RIMARY / DETA	ILED MATRIX: SOLID /	SOIL		SAMPLED	10/27/2016	Time: 1105
CLIENT S	SAMPLE #			DE	ETAILED SITE/F	OINT ID INFORMATION					
TEST#	TEST	TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS	DUE RUSH	STATUS
8	SOLIDS, PERCENT	(EPA 8000C)						11/10/2016	11/03/2016	ìΥ	Logged
817	ICP QSM	(EPA 6010C)						04/25/2017	11/03/2016	S Y	NeedPrep
			Aluminum								
			Antimony								
			Arsenic								
			Banum								
			Beryllium								
			Cadmium								
			Calcium								
			Chromium								
			Cobalt								
			Copper								
			Iron								
			Lead								
			Magnesium								
			Manganese								
			Nickel								
			Selenium								
			Silver								
			Thallium								
			Vanadium								
			Zinc								
827	ICP K QSM	(EPA 6010C)						04/25/2017	11/03/2010	6 Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)						04/25/2017	11/03/2016	6 Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)						11/24/2016	11/03/2010	6 Y	NeedPrep
1021	ICP METALS LIST2 Q	M (EPA 6010C)						04/25/2017	11/03/2010	5 Y	NeedPrep
			Tın								
			Titanium								
C ILIMSREPSICO	ONFIRMATION RPT										

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Fa	der #. 1:	23270	c	ompany:	TETRA TEC	сн			Project SRWH	SITE		
SAMPLE	# 796386 DESCR:	SRWH-011-0204-10	2716	PR	IMARY / DETA	ILED MATRIX	SOLID /	SOIL		SAMPLED	10/27/2016	Time 1107
CLIENT S	SAMPLE #.			DE	TAILED SITE/P	OINT ID INFOR	MATION					
TEST#	TEST	TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL REC	UIREMENTS		HOLD DATE	ANALYSI	DUE RUSH	STATUS
L												
8	SOLIDS, PERCENT	(EPA 8000C)							11/10/2016	11/03/2010	5 Y	Logged
817	ICP QSM	(EPA 6010C)							04/25/2017	11/03/2016	5 Y	NeedPrep
			Aluminum									
			Antimony									
			Arsenic									
			Banum									
			Beryllium									
			Cadmium									
			Calcium									
		•	Chromium									
			Cobalt									
			Copper									
			Iron									
			Lead									
			Magnesium									
			Manganese									
			Nickel									
			Selenium									
			Silver									
			Thallium									
			Vanadium									
			Zinc									
827	ICP K QSM	(EPA 6010C)							04/25/2017	11/03/201	5 Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							04/25/2017	11/03/201	5 Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							11/24/2016	11/03/201	5 Y	NeedPrep
1021	ICP METALS LIST2	QSM (EPA 6010C)							04/25/2017	11/03/201	5 Y	NeedPrep
			Tin									
			Titanıum									
UIMSREPS/CO	ONFIRMATION RPT											

Fol	der #: 123270)		Company	TETRA TEC	н		P	roject: SRWH S	ITE		
SAMPLE	#. 796387 DESCR. SRV	VH-012-0002-102	2716	PF	RIMARY / DETAI	LED MATRIX	SOLID /	SOIL		SAMPLED	10/27/2016	Time: 1113
CLIENT	SAMPLE #			DE	ETAILED SITE/P	OINT ID INFORM	MATION					
TEST#	TEST	TEST METHOD	ANALYTE	ТЕ	EST GROUP	SPECIAL REQ	UIREMENTS		HOLD DATE	ANALYSIS	DUE RUSH	STATUS
8	SOLIDS, PERCENT	(EPA 8000C)							11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum									
			Antimony									
			Arsenic									
			Barium									
			Beryllium									
			Cadmium									
			Calcium									
			Chromium									
			Cobalt									
			Copper									
			Iron									
			Lead									
			Magnesium									
			Manganese									
			Nickel									
			Selenium									
			Silver									
			Thalkum									
			Vanadium									
			Zinc									
827	ICP K QSM	(EPA 6010C)							04/25/2017	11/03/2016	S Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							04/25/2017	11/03/2016	i Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							11/24/2016	11/03/2016		NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)							04/25/2017	11/03/2016	S Y	NeedPrep
			Tin									
			Titanium									
.IMSREPS\C	ONFIRMATION RPT											

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Fol	der #:	123270	Comp	any.	TETRA TEO	сн		Proje	ct [.] SRWH S			
SAMPLE	# 796388 DESC	R: SRWH-012-0204-102	2716	PR	RIMARY / DETA	ILED MATRIX SOLID	/ SOIL			SAMPLED. 10/27/	2016	Time [.] 1115
CLIENT S	SAMPLE #			DE	TAILED SITE/		ŀ					
TEST#	TEST	TEST METHOD	ΔΝΔΙ ΥΤΕ	TE	ST GROUP	SPECIAL REQUIREM	ENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
8	SOLIDS, PERCENT	(EPA 8000C)							11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum									
			Antimony									
			Arsenic									
			Barium									
			Beryllium									
			Cadmium									
			Calcium									
			Chromium									
			Cobalt									
			Copper									
			Iron									
			Lead									
			Magnesium									
			Manganese									
			Nickel									
			Selenium									
			Silver									
			Thallium									
			Vanadium									
			Zinc									
827	ICP K QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST	2 QSM (EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Tin									
			Titanium									
C \LIMSREPS\CC	ONFIRMATION RPT											

Fold	der #: 12327	0	Compa	ny.	TETRA TEC	н			Projec	t SRWH S	ITE		
SAMPLE	#: 796389 DESCR SR	VH-013-0002-102	.716	PR	RIMARY / DETAI	LED MATRIX: SO	DLID /	SOIL			SAMPLED: 10/27/	2016	Time 0943
CLIENT S	SAMPLE #			DE	ETAILED SITE/P	OINT ID INFORMA							
TEST#	TEST	TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL REQUI	REMENTS			HOLD DATE	ANALYSIS DUE	RUSH	STATUS
L											<u>-</u>		
8	SOLIDS, PERCENT	(EPA 8000C)								11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum										
			Antimony										
			Arsenic										
			Barium										
			Beryllium										
			Cadmium										
			Calcium										
			Chromium										
			Cobalt										
			Copper										
			Iron										
			Lead										
			Magnesium										
			Manganese										
			Nickel										
			Selenium										
			Silver										
			Thallium										
			Vanadium										
			Zinc										
827	ICP K QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)								11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)								04/25/2017	11/03/2016	Y	NeedPrep
			Tin										
			Titanum										
C \LIMSREP\$\CO	NFIRMATION RPT												

Fol	der #: 12327	0	Con	ipany:	TETRA TE	СН			Project [.]	SRWH S	ITE		
SAMPLE	# 796390 DESCR: SR	WH-013-0204-102	716	PR	MARY / DET	LED MATRIX	SOLID /	SOIL			SAMPLED	10/27/2016	Time [,] 0945
	SAMPLE #.			DE	TAILED SITE/	POINT ID INFOR	RMATION:						
TEST#	TEST	TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL RE	QUIREMENTS		н	OLD DATE	ANALYSIS	DUE RUS	I STATUS
				·					•				
8	SOLIDS, PERCENT	(EPA 8000C)							1	1/10/2016	11/03/2016	S Y	Logged
817	ICP QSM	(EPA 6010C)							0-	4/25/2017	11/03/2016	S Y	NeedPrep
			Aluminum										
			Antimony										
			Arsenic										
			Barium										
			Beryllium										
			Cadmium										
			Calcium										
			Chromium										
			Cobalt										
			Copper										
			lron										
			Lead										
			Magnesium										
			Manganese										
			Nickel										
			Selenium										
			Silver										
			Thailium										
			Vanadium										
			Zinc										
827	ICP K QSM	(EPA 6010C)							0	4/25/2017	11/03/2010	5 Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							0	4/25/2017	11/03/2010	3 Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							1	1/24/2016	11/03/2010	5 Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)							0	4/25/2017	11/03/2010	6 Y	NeedPrep
			Tin										
			Titanium										

SAMPLE	# 796416 DESCR [,] SRV	VH-014-0002-102	716	PRIMARY / DET	AILED MATRIX SOLID / SO	DIL		SAMPLED 1)/27/2016	Time ⁻ 104
CLIENT S	AMPLE #:			DETAILED SITE	POINT ID INFORMATION:					
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS	I	HOLD DATE	ANALYSIS I	UE RUSH	STATU
8	SOLIDS, PERCENT	(EPA 8000C)					11/10/2016	11/03/2016	Ŷ	Logged
817	ICP QSM	(EPA 6010C)				(04/25/2017	11/03/2016	Ŷ	NeedP
			Aluminum							
			Antimony							
			Arsenic							
			Banum							
			Beryllium							
			Cadmium							
			Calcium							
			Chromium							
			Cobalt							
			Copper							
			Iron							
			Lead							
			Magnesium							
			Manganese							
			Nickel							
			Selenium							
			Silver							
			Thailium							
			Vanadium							
			Zinc							
827	ICP K QSM	(EPA 6010C)				4	04/25/2017	11/03/2016	Y	NeedF
828	ICP NA QSM	(EPA 6010C)				(04/25/2017	11/03/2016	Y	NeedF
833	MERCURY QSM	(EPA 7471B)					11/24/2016	11/03/2016	Y	NeedF
1021	ICP METALS LIST2 QSM	(EPA 6010C)				(04/25/2017	11/03/2016	Y	NeedF
			Tin							
			Titanium							

Fol	der #: 12327	0	Company	. TETRA TE	СН		Project SRWH S	TE		
SAMPLE	# 796417 DESCR. SRV	- NH-014-0204-102	716	PRIMARY / DET	AILED MATRIX SOLID /	SOIL		SAMPLED: 10/27/	2016	Time: 1045
CLIENT S	AMPLE #:			DETAILED SITE	POINT ID INFORMATION					
rest#	TEST	TEST METHOD	ANALYTE	TEST GROUP	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
	··· <u></u> ··· ·									
8	SOLIDS, PERCENT	(EPA 8000C)					11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum							
			Antimony							
			Arsenic							
			Banum							
			Beryilium							
			Cadmium							
			Calcium							
			Chromium							
			Cobalt							
			Copper							
			Iron							
			Lead							
			Magnesium							
			Manganese							
			Nickel							
			Selenium							
			Silver							
			Thallium							
			Vanadium							
			Zinc							
827	ICP K QSM	(EPA 6010C)					04/25/2017	11/03/2016	Ŷ	NeedPre
828	ICP NA QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)					11/24/2016	11/03/2016	Y	NeedPre
1021	ICP METALS LIST2 QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPre
			Tin							
			Titanium							

Fo	der #: 1232	70	Compan	ıy:	TETRA TEC	сн		Projec	t [.] SRWH S	ITE		
SAMPLE	# 796418 DESCR SF	WH-015-0002-102	2716	PRI	MARY / DETA	ILED MATRIX: SOLID /	SOIL			SAMPLED	10/27/2016	Time 1050
CLIENT	SAMPLE #:			DET	AILED SITE/P	OINT ID INFORMATION						
TEST#	TEST	TEST METHOD	ANALYTE	TES	T GROUP	SPECIAL REQUIREMENTS			HOLD DATE	ANALYSIS	DUE RUSH	I STATUS
8	SOLIDS, PERCENT	(EPA 8000C)							11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum									
			Antimony									
			Arsenic									
			Banum									
			Beryllium									
			Cadmium									
			Calcium									
			Chromium									
			Cobalt									
			Copper									
			iron									
			Lead									
			Magnesium									
			Manganese									
			Nickel									
			Selenium									
			Silver									
			Thallium									
			Vanadium									
			Zinc									
827	ICP K QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)							04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)							11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)							04/25/2017	11/03/2016	Ŷ	NeedPrep
			Tin									
			Titanium									
LIMSREPSIC	ONFIRMATION RPT											

Fol	der #: 12327	′0	Compa	ny <u>TETRA</u>	ТЕСН		Project [.] SRWH SI	ITE		
SAMPLE	#. 796419 DESCR SR	WH-015-0204-102	2716	PRIMARY / D	ETAILED MATRIX SOLID /	SOIL		SAMPLED. 10/27	2016	Time 1053
CLIENT	SAMPLE #			DETAILED S	TE/POINT ID INFORMATION.					
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROUI	SPECIAL REQUIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
L							· · · ·			
8	SOLIDS, PERCENT	(EPA 8000C)					11/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Aluminum							
			Antimony							
			Arsenic							
			Banum							
			Beryllium							
			Cadmium							
			Calcium							
			Chromium							
			Cobalt							
			Copper							
			Iron							
			Lead							
			Magnesium							
			Manganese							
			Nickel							
			Selenium							
			Silver							
			Thallium							
			Vanadium							
			Zinc							
827	ICP K QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)					11/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)					04/25/2017	11/03/2016	Y	NeedPrep
			Tın							
			Titanium							
LIMSREPSIC	ONFIRMATION RPT									

Fol	der #: 12327	0	Compa	ny <u>TETR</u>	A TECH		Project	SRWH S	ITE		
SAMPLE	# 796420 DESCR SR		716-D	PRIMARY /	DETAILED MATRIX: SOLID /	SOIL	-		SAMPLED 10/27/	2016	Time 1053
CLIENT S	SAMPLE #.			DETAILED	SITE/POINT ID INFORMATION.						
TEST#	TEST	TEST METHOD	ANALYTE	TEST GROU	JP SPECIAL REQUIREMENTS		нс	DLD DATE	ANALYSIS DUE	RUSH	STATUS
8	SOLIDS, PERCENT	(EPA 8000C)					11,	/10/2016	11/03/2016	Y	Logged
817	ICP QSM	(EPA 6010C)					04	/25/2017	11/03/2016	Y	NeedPrep
			Aluminum								
			Antimony								
			Arsenic								
			Barium								
			Beryllium								
			Cadmium								
			Calcium								
			Chromium								
			Cobalt								
			Copper								
			Iron								
			Lead								
			Magnesium								
			Manganese								
			Nickel								
			Selenium								
			Silver								
			Thallium								
			Vanadium								
			Zinc								
827	ICP K QSM	(EPA 6010C)					04	/25/2017	11/03/2016	Y	NeedPrep
828	ICP NA QSM	(EPA 6010C)					04	/25/2017	11/03/2016	Y	NeedPrep
833	MERCURY QSM	(EPA 7471B)						/24/2016	11/03/2016	Y	NeedPrep
1021	ICP METALS LIST2 QSM	(EPA 6010C)					04	/25/2017	11/03/2016	Y	NeedPrep
			Tın								
			Titanıum								
LIMSREPS\C	ONFIRMATION RPT										

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Fol	der #:	12327	70		Company [.]	TETRA TEC	н		Project S	RWH SI	ITE		
SAMPLE	# 796970	DESCR SR	WH-013-0002-102	716	PR	IMARY / DETAI	LED MATRIX AQUE	OUS / TCLP		:	SAMPLED. 10/27/	2016	Time: 0943
CLIENT S	SAMPLE #:				DE	TAILED SITE/P	DINT ID INFORMATIO	N.					
TEST#	TEST		TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL REQUIREM	AENTS	HOL	D DATE	ANALYSIS DUE	RUSH	STATUS
						-						-	
1045	ICP QSM T	CLP	(EPA 6010C)						04/2	5/2017	11/04/2016	Y	NeedExt
				Arsenic									
				Barium									
				Cadmium									
				Chromium									
				Lead									
				Selenium									
				Silver									
1048	MERCURY	QSM TCLP	(EPA 7470A)						11/2	4/2016	11/04/2016	Y	NeedExt
SAMPLE	# 796972	DESCR. SR	WH-013-0204-102	716	PR	IMARY / DETAI	LED MATRIX AQUE	OUS / TCLP			SAMPLED 10/27/	2016	Time 0945
CLIENT S	SAMPLE #				DE	TAILED SITE/P		N·					
TEST#	TEST		TEST METHOD	ANALYTE	те	ST GROUP	SPECIAL REQUIREM	IENTS	HOL	D DATE	ANALYSIS DUE	RUSH	STATUS
1045	ICP QSM T		(EPA 6010C)						0412	5/2017	11/04/2016	Y	NeedExt
1045			(EFA 6010C)	A					04/2	5/2017	11/04/2010		NEEUEX
				Arsenic									
				Barium									
				Cadmium									
				Chromium									
				Lead									
				Selenium									
1048	NEDOLIDY	QSM TCLP		Silver					11/2	4/2016	11/04/2016	Y	NeedExt
			(EPA 7470A)						11/2				
SAMPLE	# 796973	DESCR SR	RWH-014-0002-102	716	PF	RIMARY / DETAI	LED MATRIX AQUE	OUS / TCLP			SAMPLED 10/27/	2016	Time [,] 1043
CLIENT S	SAMPLE #				DE	ETAILED SITE/P	OINT ID INFORMATIC	N					
TEST#	TEST		TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL REQUIRE	MENTS	HOL	DDATE	ANALYSIS DUE	RUSH	STATUS
1045	ICP QSM T	CLP	(EPA 6010C)						04/2	5/2017	11/04/2016	Y	NeedExt

Fok	der #:	123270			Company	TETRA TEC	н		Project [.] SRWH SI	TE		
SAMPLE	# 796973	DESCR SRWH-0	14-0002-102	716	ſ	PRIMARY / DETAI	LED MATRIX: AQU	EOUS / TCLP	:	SAMPLED. 10/27/	2016	Time 1043
CLIENT S	SAMPLE #:				ſ	DETAILED SITE/P	OINT ID INFORMATI	ON:				
TEST#	TEST	TES	T METHOD	ANALYTE	I	TEST GROUP	SPECIAL REQUIRE	MENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
				Arsenic								
				Barrum								
				Cadmium								
				Chromium								
				Lead								
				Selenium								
				Silver								
1048	MERCURY	QSM TCLP (EI	PA 7470A)						11/24/2016	11/04/2016	Y	NeedExt
SAMPLE	# 796974	DESCR: SRWH-0	14-0204-102	716	1	PRIMARY / DETAI	LED MATRIX AQU	EOUS / TCLP	:	SAMPLED 10/27	2016	Time. 1045
CLIENT S	SAMPLE #					DETAILED SITE/P	OINT ID INFORMATI	ON				
TEST#	TEST	TES	T METHOD	ANALYTE	1	TEST GROUP	SPECIAL REQUIRE	MENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1045	ICP QSM T	CLP (EI	PA 6010C)						04/25/2017	11/04/2016	Y	NeedExt
				Arsenic								
				Barium								
				Cadmium								
				Chromium								
				Lead								
				Selenium								
				Silver								
1048	MERCURY	QSM TCLP (E	PA 7470A)			<u> </u>			11/24/2016	11/04/2016	Y	NeedExt
SAMPLE	# 796975	DESCR SRWH-0	15-0002-102	716	1	PRIMARY / DETAI	LED MATRIX AQU	EOUS / TCLP	:	SAMPLED 10/27	2016	Time [.] 1050
CLIENT S	SAMPLE #				1	DETAILED SITE/P	OINT ID INFORMATI	ON				
TEST#	TEST	TES	T METHOD	ANALYTE		TEST GROUP	SPECIAL REQUIRE	EMENTS	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1045	ICP QSM T	CLP (FI	PA 6010C)						04/25/2017	11/04/2016	Y	NeedExt
		(4		Arsenic							-	

Fol	der #:	1232	70	C	Company:	TETRA TEC	н		P	Project [.] SRWH SI	TE		
SAMPLE	#. 796975	DESCR SP	RWH-015-0002-102	716	PF	RIMARY / DETAI	LED MATRIX	AQUEOUS /	TCLP	:	SAMPLED. 10/27/2	2016	Time 1050
CLIENT S	SAMPLE #				DE	TAILED SITE/P		NATION					
TEST#	TEST		TEST METHOD	ANALYTE	те	ST GROUP	SPECIAL REQ	UIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
											<u></u>		
				Banum									
				Cadmium									
				Chromium									
				Lead									
				Selenium									
				Silver									
1048	MERCURY	QSM TCLP	(EPA 7470A)							11/24/2016	11/04/2016	Y	NeedExt
SAMPLE	#. 796976	DESCR SF	RWH-015-0204-102	716	PF	RIMARY / DETAI	LED MATRIX	AQUEOUS /	TCLP	:	SAMPLED: 10/27/	2016	Time [.] 1053
CLIENT S	SAMPLE #				DE	ETAILED SITE/P	OINT ID INFORM	NOTAN					
TEST#	TEST		TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL REQ	UIREMENTS		HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1045	ICP QSM T	CLP	(EPA 6010C)							04/25/2017	11/04/2016	Y	NeedExt
				Arsenic									
				Barium									
				Cadmium									
				Chromium									
				Lead									
				Selenium									
1010	MERONOV			Silver						11/21/2010	44/04/0040	~	No. JE.A
1048		QSM TCLP	(EPA 7470A)							11/24/2016	11/04/2016	Y	NeedExt
SAMPLE	#· 796977	DESCR S	RWH-015-0204-102	716-D	PF	RIMARY / DETAI	LED MATRIX	AQUEOUS /	TCLP	:	SAMPLED 10/27/	2016	Time 1053
CLIENT S	SAMPLE # [.]				DE	ETAILED SITE/P	OINT ID INFORM	NOTAN			,		
TEST#	TEST	<u>.</u>	TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL REQ	UIREMENTS	<u> </u>	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
1045	ICP QSM T	τά P	(EPA 6010C)							04/25/2017	11/04/2016	Y	NeedExt
1043		VLF		Arsonic						04/20/2017	1104/2010	'	NCOLA
				Arsenic									
				Banum									

Fol	der #:	123270)		Company:	TETRA TEC	ж			Project SRWH S	ITE		
SAMPLE	# 796977	DESCR SRW	/H-015-0204-102	716-D	PI	RIMARY / DETA	ILED MATRIX	AQUEOUS	/ TCLP		SAMPLED. 10/27/	2016	Time [,] 1053
CLIENT S	AMPLE #				DI	ETAILED SITE/P	OINT ID INFOR	RMATION.					
TEST#	TEST		TEST METHOD	ANALYTE	TE	ST GROUP	SPECIAL RE	QUIREMENTS	;	HOLD DATE	ANALYSIS DUE	RUSH	STATUS
				Cadmium									
				Chromium									
				Lead									
				Selenium									
				Silver									
1048	MERCURY	OSM TCLP	(EPA 7470A)							11/24/2016	11/04/2016	Y	NeedExt

Invoice Number: 123806	Preliminary Invoice Estima	te. \$ 4,079 00			
Item	Matrix	Quantity	Price	Expedited TAT Surcharge	Total
ICP K QSM	SOIL	29	\$ 4 00	0 00	\$ 116 00
ICP METALS LIST2 QSM Tin	SOIL	29	\$ 12 00	0 00	\$ 348 00
CP METALS LIST2 QSM Titanium	SOIL	29	\$ 12 00	0 00	\$ 348 00
CP NA QSM	SOIL	29	\$400	0 00	\$ 116 00
CP QSM Aluminum	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Antimony	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Arsenic	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Banum	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Beryllium	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Cadmium	SOIL	29	\$400	0 00	\$ 116 00
CP QSM Calcium	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Chromium	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Cobalt	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Copper	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Iron	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Lead	SOIL	29	\$400	0 00	\$ 116 00
CP QSM Magnesium	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Manganese	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Nickel	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Selenium	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Silver	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Thallium	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Vanadium	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM Zinc	SOIL	29	\$ 4 00	0 00	\$ 116 00
CP QSM TCLP Arsenic	TCLP	7	\$ 7 00	0 00	\$ 49 00
CP QSM TCLP Barium	TCLP	7	\$ 7 00	0 00	\$ 49 00
CP QSM TCLP Cadmium	TCLP	7	\$ 7 00	0 00	\$ 49 00
CP QSM TCLP Chromium	TCLP	7	\$700	0 00	\$ 49 00

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C ILIMSREPSICONFIRMATION RPT

Folder #:	123270	Company 1	ETRA TECH	P	roject [.] SRWH SITE	
ICP QSM TCLP	' Selenium	TCLP	7	\$ 7 00	0 00	\$ 49 00
ICP QSM TCLP	' Silver	TCLP	7	\$ 7 00	0 00	\$ 49 00
MERCURY QS	м	SOIL	29	\$ 12 00	0 00	\$ 348 00
MERCURY QS	MTCLP	TCLP	7	\$ 20 00	0 00	\$ 140 00
SOLIDS,PERCI	ENT	SOIL	29	\$ 0 00	0 00	\$ 0 00
Temporary Fue	I Surcharge on lab supplies	and services (if applicable)				\$ 0 00

Bottle Information				
Container	# Containers	Tests		
SOLIDS	40	HG,ICP		

APPENDIX H

ENVIRONMENTALLY PREFERRED PRACTICES

TDD #:	0001-1610-004	
Site Name:	Sangamon Right of Way OU1	
Site City, State:	Chicago, IL	
Site Project Manager:	Paul Pallardy	
EPA OSC:	Steve Faryan	

Environmentally Preferr	ed Gene	eral Fie	ld Prac	tices
If a general category is not applicable, then check N/A for the category box, not for each subcategory.	N= Not Used	N/A= Not Applicable	Y = Yes Implemented	Comments Section Justify in the comments for each BMP field as to why the practice was not used, not applicable, or implemented.
En	ergy			
Use of Energy Efficient Equipment				
Computer Equipment (FEMP/Energy Star)			Y	Dell Energy Star qualified computer was utilized
Installation of Electric Service		N/A		Not needed, assessment
Reduce Carbon Emissions from Transportation				
Use Internet Based Meetings/Conferences			Y	Calls were utilized for all project discussions
Maximize Carpooling		N/A		Only one START personnel onsite, so there was no way to carpool
Use of Local Labor/Suppliers/Waste Disposal Facilities (50 mile radius)			Y	Local fencing contractor to dismantle and reassemble fencing
No idling, except for extreme weather conditions			Y	
Use of Alternative Fuels, if available within 10 miles		N/A		Rental car
Properly Inflated Tires			Y	Rental car guaranteed properly inflated tires
Email Small Files (less than 8MB)			Y	All files were emailed
Reusable Electronic Storage Media or the Cloud			Y	Utilized Tetra Tech START server storage
W	ater			
Use of Low Flow Sampling Pumps		N/A		Not applicable to the sampling being conducted (soil sampling)
	Naste			
Use of Local Recycling Programs			Y	Recycled when possible
Use of Rechargeable Batteries			Y	Rechargeable batteries utilized for all electronics
Recycling – Other			Y	Recycled when possible
Plastic Reduction			Y	Use of plastic minimized
Reuse of Resources			Y	Resources reused when possible
Direct Push Boring			Y	Direct push utilized for soil sampling
Mat	erials			
Printing when Required				

Environmentally Preferr	ed Gene	eral Fie	ld Prad	ctices
If a general category is not applicable, then check N/A for the category box, not for each subcategory.	N= Not Used	N/A= Not Applicable	Y = Yes Implemented	Comments Section Justify in the comments for each BMP field as to why the practice was not used, not applicable, or implemented.
Double-sided Printing			Y	
100% post-consumer recycled paper			Y	Recycled paper was utilized
Land & E	cosyster	ns		
Minimize Disruption to Natural Vegetation			Y	Direct push sampling was utilized with minimal disruption to the natural vegetation
Use of Non-invasive Investigation Techniques			Y	Direct push sampling was utilized with minimal disruption to the natural vegetation
Environme	entally Pr	eferred		
Green Procurement				
Environmentally Preferred Vendors	5 - 21447-924		Y	CT Labs was utilized for analytical services (see below)
Green Lodging/Hotels		N/A		Local site, no hotel stays
Use of Green Laboratories			Y	CT Labs was utilized for analytical services. CT Laboratories LLC recycles 90-95% of plastic, paper, boxes, and packaging; reduced sample volume for analyses in the metals, wet chemistry, and semi- volatile laboratories, which downscaled solvent volumes, bottle size and disposal of non- hazardous soils and solid materials; utilizes energy efficient lighting throughout laboratory

TDD #:	0001-1610-004
Site Name:	Sangamon Right of Way OU1
Site City, State:	Chicago, IL
Site Project Manager:	Paul Pallardy
EPA OSC:	Steve Faryan

	Green Metrics	
Metric	Amount	Unit of Measure
Diesel Fuel Used		gallons
Distance Traveled ¹	10.00	Miles
Unleaded Fuel Used ²	0.38	gallons
Alternative/E-85 Fuel Used		gallons
Electricity from Coal	. ×	kW
Electricity from Natural Gas		kW
Electricity from solar/wind		kW
Electricity from grid/mix		kW
Solid waste reused		lbs
Solid waste recycled	2	lbs
Water Used	Construction of the second	gallons

	Green	nouse Gas Emissions (S	ite Specific)		
Source	Amount Used	Unit of Measure	Methane (CH4) (Grams) ³	Nitrous Oxide (N ₂ O) (Grams) ³	Carbon Dioxide (CO2) (Kilograms) ³
Gasoline	0.38	X gallons	0.07	0.16	3.39
Diesel		X gallons			
E-85		X gallons			
Electricity Office		X Kilowatts			
Natural Gas		X Therms			
Solid Waste		X lbs			
Other		X Unit of Measure			

Note:

¹ Distance traveled based on number of trips between the Sangamon Right of Way OU1 site in Chicago, IL, and Tetra Tech's Chicago Office (2.5 miles) in a large sport utility vehicle, which was required for cargo space. A total of 4 trips were made by one Tetra Tech personnel totaling 10 miles.

² Fuel consumption based on distance traveled in a large sport utility vehicle. An average fuel efficiency of 26.3 miles per gallon was assumed based on 2014 light duty truck fuel efficiency from "Average Fuel Efficiency of U.S. Light Duty Vehicles," U.S. Department of Transportation, Bureau of Statistics Table 4-23 (Accessed online at

http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_23.html on December 9, 2016).

³ Methane and nitrous oxide emissions based on emission factors of 0.0066 and 0.0163 grams per mile for EPA Tier 2 light duty gasoline trucks from "Voluntary Reporting of Greenhouse Gases Program, Fuel Emission Coefficients, Table 5" (Accessed online at http://205.254.135.7/oiaf/1605/coefficients.html on December 9, 2016)

⁴ Carbon dioxide emissions based on emission factors of 8.91 kilograms carbon dioxide per gallon of gasoline and 10.15 kilograms carbon dioxide per gallon of diesel fuel from "Voluntary Reporting of Greenhouse Gases Program, Fuel Emission Coefficients, Table 2" (Accessed online at http://205.254.135.7/oiaf/1605/coefficients.html on November 14, 2016).

ATTACHMENT 1

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LABORATORY DATA PACKAGE



delivering more than data from your environmental analyses

Case Narrative

Client: Tetra Tech Project: Sangamon Right of Way Hook (SRWH) Site; Chicago, IL Sample Receipt Date: 10/28/2016 SDG #: 123270

Twenty-nine soil samples were received and analyzed for TAL Metals, Tin, and Titanium. Eight of these soil samples were also analyzed for TCLP RCRA Metals. The assigned sample ID numbers, date sampled, and date received are indicated in the attached Project Summary. The samples were received intact and at a temperature within method specified acceptance limits. Any exceptions are noted below. The analyses were performed following the project requirements.

Sample Analysis and Quality Control

Metals Analysis:

The samples were analyzed using US EPA Methods 6010C (ICP Metals) and 7471B (Mercury). All samples were analyzed within the holding time except where indicated. The following summaries of quality control procedures are included:

Initial and Continuing Calibration Verification Blanks Summary ICP Interference Check Data Spike Sample Recovery Duplicates Data Laboratory Control Sample Data Analysis Run Log

All analysis results met the method specified quality control criteria with the following exceptions:

ICP Metals (6010C) Analysis

Continuing Calibration Verification (CCV) standards were analyzed at two levels (CCV1 & CCV2) with potentially differing wavelengths. Data associated with CCV's were evaluated based on the concentration of the element in the samples and compared to the appropriate CCV level/wavelength.

Some samples may have been analyzed and/or reanalyzed diluted to obtain results for all target analytes within the calibration range of the instrument.

Analytical Run # 132150

Magnesium was detected in the Initial Calibration Blank (ICB) standard greater than the Limit of Detection (LOD). No samples were affected by the ICB failure.

Aluminum, barium, and calcium were detected in the Continuing Calibration Blank (CCB) standard greater than the LOD. Affected samples were reported and qualified with a "B" flag and not reanalyzed because the CCB results were less than $1/10^{th}$ of the sample results.

Manganese and tin were detected in the Method Blank (MB) greater than the Method Detection Limit (MDL) but less than $\frac{1}{2}$ the Reporting Limit (RL). Affected samples were reported and qualified with a "B" flag when the MB raw results were greater than $\frac{1}{10}$ th of the sample raw results.

Aluminum, calcium, iron, and magnesium were detected in the MB above the MDL and greater than $\frac{1}{2}$ the RL. The samples were reported and not reanalyzed because the MB results were less than $1/10^{\text{th}}$ of the sample results.

The Serial Dilution (L) for sample # 796372 was not applicable for multiple elements because the parent sample raw results were less than 50 times the Limit of Quantitation (LOQ). A Post Digestion Spike (PDS) was analyzed and was unacceptable for multiple elements. The parent sample was reported and qualified with an "M" flag for the failing elements.

The L for sample # 796372 was not acceptable for multiple elements because the results exceeded the Relative Percent Difference (RPD) limit. A PDS was analyzed and was unacceptable for multiple elements. The parent sample was reported and qualified with an "M" flag for the failing elements.

The Duplicate (DUP) for sample # 796372 was not applicable for selenium, silver, thallium, beryllium, arsenic, and antimony because the parent sample results were less than five times the LOQ. A Matrix Spike Duplicate (MSD) was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The DUP for sample # 796372 was not acceptable for cadmium, calcium, cobalt, lead, magnesium, and nickel because the results exceeded the RPD limit. The parent sample was reported and qualified with a "Y" flag for the failing elements.

The Matrix Spike (MS) and MSD for sample # 796372 exceeded the recovery limit for multiple elements. A PDS was analyzed and was unacceptable for multiple elements. The parent sample was reported and qualified with an "M" flag for the failing elements.

The L for sample # 796383 was not applicable for multiple elements because the parent sample raw results were less than 50 times the LOQ. A PDS was analyzed and was unacceptable for multiple elements. The parent sample was reported and qualified with an "M" flag for the failing elements.

The L for sample # 796383 was not acceptable for multiple elements because the results exceeded the RPD limit. A PDS was analyzed and was unacceptable for multiple elements. The parent sample was reported and qualified with an "M" flag for the failing elements.

The DUP for sample # 796383 was not applicable for selenium, silver, thallium, and antimony because the parent sample results were less than five times the LOQ. An MSD was analyzed to demonstrate precision and was unacceptable for antimony. The parent sample was reported and qualified with a "Y" flag for the failing element.

The DUP for sample # 796383 was not acceptable for beryllium, calcium, cobalt, lead, magnesium, manganese, aluminum, and arsenic because the results exceeded the RPD limit. The parent sample was reported and qualified with a "Y" flag for the failing elements.

The MS and MSD for sample # 796383 exceeded the recovery limit for multiple elements. A PDS was analyzed and was unacceptable for aluminum, cobalt, iron, magnesium, manganese, vanadium, zinc, titanium, calcium, and lead. The parent sample was reported and qualified with an "M" flag for the failing elements.

Some samples were diluted and analyzed because of interference. The diluted samples were reported and qualified with a "V" flag when the sample final results were less than the adjusted RL.

Some sample QC results were over the calibration range and were not diluted and reanalyzed.

Analytical Run # 132152

Aluminum was detected in the CCB standard greater than the LOD. Affected samples were reported and qualified with a "B" flag and not reanalyzed because the CCB results were less than 1/10th of the sample results.

Barium, selenium, and tin were detected in the MB greater than the MDL but less than $\frac{1}{2}$ the RL. Affected samples were reported and qualified with a "B" flag when the MB raw results were greater than $1/10^{\text{th}}$ of the sample raw results.

Aluminum, calcium, iron, magnesium, and manganese were detected in the MB above the MDL and greater than $\frac{1}{2}$ the RL. The samples were reported and not reanalyzed because the MB results were less than $\frac{1}{10}$ th of the sample results.

The L for sample # 796387 was not applicable for silver, beryllium, cadmium, cobalt, selenium, antimony, thallium, and tin because the parent sample raw results were less than 50 times the LOQ. A PDS was analyzed and was unacceptable for cobalt and thallium. The parent sample was reported and qualified with an "M" flag for the failing elements.

The L for sample # 796387 was not acceptable for calcium, magnesium, aluminum, arsenic, barium, iron, manganese, lead, and titanium because the results exceeded the RPD limit. A PDS was analyzed and was unacceptable for calcium, magnesium, aluminum, arsenic, iron, manganese, lead, and titanium. The parent sample was reported and qualified with an "M" flag for the failing elements.

The DUP for sample # 796387 was not applicable for selenium, silver, thallium, beryllium, and antimony because the parent sample results were less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The DUP for sample # 796387 was not acceptable for cadmium, copper, lead, aluminum, arsenic, and tin because the results exceeded the RPD limit. The parent sample was reported and qualified with a "Y" flag for the failing elements.

The MS and MSD for sample # 796387 exceeded the recovery limit for multiple elements. A PDS was analyzed and was unacceptable for aluminum, arsenic, cobalt, copper, iron, manganese, nickel, lead, thallium, vanadium, zinc, titanium, calcium, and magnesium. The parent sample was reported and qualified with an "M" flag for the failing elements.

Some sample QC results were over the calibration range and were not diluted and reanalyzed.

Sample # 796389 exceeded the calibration range for copper. The sample was not diluted and reanalyzed. The sample was reported and qualified with an "X" flag for copper.

Analytical Run # 132294

Selenium was detected in the MB greater than the MDL but less than $\frac{1}{2}$ the RL. Affected samples were reported and qualified with a "B" flag when the MB raw result was greater than $\frac{1}{10}$ th of the sample raw results.

The L for sample # 796972 was not applicable for silver, arsenic, cadmium, chromium, lead, and selenium because the parent sample raw results were less than 50 times the LOQ. A PDS was analyzed and was unacceptable for cadmium. The parent sample was reported and qualified with an "M" flag for the failing element.

The L for sample # 796972 was not acceptable for barium because the result exceeded the RPD limit. A PDS was analyzed and was acceptable for barium. The parent sample was reported and not qualified.

The DUP for sample # 796972 was not applicable for silver, arsenic, cadmium, chromium, and selenium because the parent sample results were less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The MS and/or MSD for sample # 796972 exceeded the recovery limit for arsenic and selenium. A PDS was analyzed and was acceptable. The parent sample was reported and not qualified.

ICP Sodium and Potassium (6010C) Analysis

Analytical Run # 132151

The L for sample # 796372 was not applicable for sodium and potassium because the parent sample raw results were less than 50 times the LOQ. A PDS was analyzed and was acceptable. The parent sample was reported and not qualified.

The DUP for sample # 796372 was not applicable for sodium because the parent sample result was less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The L for sample # 796383 was not applicable for sodium and potassium because the parent sample raw results were less than 50 times the LOQ. A PDS was analyzed and was acceptable. The parent sample was reported and not qualified.

The DUP for sample # 796383 was not acceptable for sodium because the result exceeded the RPD limit. The parent sample was reported and qualified with a "Y" flag for the failing element.

Analytical Run # 132154

The L for sample # 796387 was not applicable for sodium and potassium because the parent sample raw results were less than 50 times the LOQ. A PDS was analyzed and was acceptable. The parent sample was reported and not qualified.

CVAA Mercury (7471B) Analysis

Analytical Run # 132103

The DUP for sample # 796372 was not acceptable for mercury because the result exceeded the RPD limit. The parent sample was reported and qualified with a "Y" flag for the failing element.
The MS and MSD for sample # 796372 exceeded the recovery limit for mercury. The parent sample was reported and qualified with an "M" flag for mercury.

The DUP for sample # 796383 was not acceptable for mercury because the result exceeded the RPD limit. The parent sample was reported and qualified with a "Y" flag for the failing element.

The MS and MSD for sample # 796383 exceeded the recovery limit for mercury. The parent sample was reported and qualified with an "M" flag for mercury.

Analytical Run # 132104

The DUP for sample # 796387 was not applicable for mercury because the parent sample result was less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

The MS and MSD for sample # 796387 exceeded the recovery limit for mercury. The parent sample was reported and qualified with an "M" flag for mercury.

Analytical Run # 132334

The DUP for sample # 796974 was not applicable for mercury because the parent sample result was less than five times the LOQ. An MSD was analyzed to demonstrate precision and was acceptable. The parent sample was reported and not qualified.

ABORATORI T

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Data Qualifiers

Code Description

- A Analyte averaged calibration criteria within acceptable limits.
- B Analyte detected in associated Method Blank.
- C Toxicity present in BOD sample.
- D Diluted Out.
- E Safe, No Total Coliform detected.
- F Unsafe, Total Coliform detected, no E. Coli detected.
- G Unsafe, Total Coliform detected and E. Coli detected.
- H Holding time exceeded.
- J Estimated value.
- L Significant peaks were detected outside the chromatographic window.
- M Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
- N Insufficient BOD oxygen depletion.
- O Complete BOD oxygen depletion.
- P Concentration of analyte differs more than 40% between primary and confirmation analysis.
- **Q** Laboratory Control Sample outside acceptance limits.
- R See Narrative at end of report.
- S Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
- T Sample received with improper preservation or temperature.
- U Analyte concentration was not above the detection level.
- V Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
- W Sample amount received was below program minimum.
- X Analyte exceeded calibration range.
- Y Replicate/Duplicate precision outside acceptance limits.
- Z Calibration criteria exceeded.



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MANUAL INTEGRATION REASON CODES

CTLaboratories has identified four general cases with valid reasons supporting the use of manual integration techniques. These codes are used on chromatograms in this data package to document the reasons for manual integrations per CTLaboratories' SOP SS-10 current revision.

#1: Data system failed to select the correct peak or missed the peak entirely.

In some cases the chromatography system selects and integrates the "wrong peak". In this case the analyst must correct the selection and force the system to integrate the proper peak. In other instances the system may miss the peak completely. In this case the analyst manually integrated the peak

#2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.

This phenomenon is common at low concentrations where the signal to noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low or high area counts for the target compound.

#3: Improperly Integrated Isomers and/or coeluting compounds.

For when the system fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations may be inaccurate, and they must be corrected by manual integration. Prime examples are compounds that are unresolved and integrated improperly when present at low concentrations in standards or samples.

#4: System Established Incorrect Baseline.

There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and may be corrected via manual procedures.

#5: Miscellaneous.

Some situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the group supervisor. If the form of manual integration is not clearly covered by these four cases, then review and approval by the group supervisor or the *QA/QC* Supervisor will be required.



1230 Lange Court • Baraboo, WI 53913 • 608-356-2760 www.ctlaboratories.com

Sample Delivery Group 123270

Project Name

Project #

SRWH SITE

3X90260001S051610004

TETRA TECH PAUL PALLARDY 1 S WACKER DRIVE SUITE 3700 CHICAGO, IL 60606

rps367 123270 SRW+003-0204-102716 SOIL 10/27/2016 10/28/2016 rps6368 123270 SRW+004-002-102716 SOIL 10/27/2016 10/28/2016 rps6369 123270 SRW+004-0204-102716 SOIL 10/27/2016 10/28/2016 rps6370 123270 SRW+004-0204-102716- SOIL 10/27/2016 10/28/2016 rps6371 123270 SRW+005-0204-102716- SOIL 10/27/2016 10/28/2016 rps6373 123270 SRW+005-0204-102716 SOIL 10/27/2016 10/28/2016 rps6375 123270 SRW+007-0204-102716 SOIL 10/27/2016 10/28/2016 rps6376 123270 SRW+007-0204-102716 SOIL 10/27/2016 10/28/2016 rps6376 123270 SRW+007-0204-102716 SOIL 10/27/2016 10/28/2016 rps6376 123270 SRW+007-0204-102716 SOIL 10/27/2016 10/28/2016 rps6381 123270 SRW+007-0204-102716 SOIL 10/27/2016 10/28/2016 rps6383 <th>CHICAGO, IL</th> <th>Folder #</th> <th>Client Sample #</th> <th>Sample Description</th> <th>Matrix</th> <th>Date Sampled</th> <th>Date Received</th>	CHICAGO, IL	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
Separation SRWH-004-002-102716 SOIL 10/27/2016 10/28/2016 798368 123270 SRWH-004-0204-102716 SOIL 10/27/2016 10/28/2016 798370 123270 SRWH-004-0204-102716-D SOIL 10/27/2016 10/28/2016 798371 123270 SRWH-005-0204-102716 SOIL 10/27/2016 10/28/2016 798372 123270 SRWH-006-0204-102716 SOIL 10/27/2016 10/28/2016 798373 123270 SRWH-006-0204-102716 SOIL 10/27/2016 10/28/2016 798374 123270 SRWH-006-0204-102716 SOIL 10/27/2016 10/28/2016 798375 123270 SRWH-007-0204-102716 SOIL 10/27/2016 10/28/2016 798377 123270 SRWH-007-0204-102716 SOIL 10/27/2016 10/28/2016 798374 123270 SRWH-008-0022-102716 SOIL 10/27/2016 10/28/2016 798381 123270 SRWH-008-0024-102716 SOIL 10/27/2016 10/28/2016 798383 12327	796366	123270		SRWH-003-0002-102716	SOIL	10/27/2016	10/28/2016
Server and	796367	123270		SRWH-003-0204-102716	SOIL	10/27/2016	10/28/2016
Segara SRWH-004-0204-102716-D SOIL 1027/2016 10282016 798371 123270 SRWH-005-0002-102716 SOIL 1027/2016 10282016 798373 123270 SRWH-005-0204-102716 SOIL 1027/2016 10282016 798373 123270 SRWH-005-0204-102716 SOIL 1027/2016 10282016 798374 123270 SRWH-006-0204-102716 SOIL 1027/2016 10282016 798375 123270 SRWH-007-0024-102716 SOIL 1027/2016 10282016 798375 123270 SRWH-007-0204-102716 SOIL 1027/2016 10282016 798376 123270 SRWH-007-0204-102716 SOIL 1027/2016 10282016 798371 123270 SRWH-008-0002-102716 SOIL 1027/2016 10282016 798381 123270 SRWH-008-002-102716 SOIL 1027/2016 10282016 798381 123270 SRWH-010-020-102716 SOIL 1027/2016 10282016 798382 123270 SRWH-010-020-102716	796368	123270		SRWH-004-0002-102716	SOIL	10/27/2016	10/28/2016
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796388 123270 SRWH-012-0204-102716 SOIL 10/27/2016 10/28/2016 796389 123270 SRWH-013-0002-102716 SOIL 10/27/2016 10/28/2016 796390 123270 SRWH-013-0204-102716 SOIL 10/27/2016 10/28/2016 796416 123270 SRWH-014-0002-102716 SOIL 10/27/2016 10/28/2016 796417 123270 SRWH-014-0204-102716 SOIL 10/27/2016 10/28/2016 796418 123270 SRWH-015-0002-102716 SOIL 10/27/2016 10/28/2016 796419 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796420 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796420 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0002-102716-D SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0204-102716-D SOIL 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716-D TCLP 10/27/2016 10	796386	123270		SRWH-011-0204-102716	SOIL	10/27/2016	10/28/2016
796389 123270 SRWH-013-0002-102716 SOIL 10/27/2016 10/28/2016 796390 123270 SRWH-013-0204-102716 SOIL 10/27/2016 10/28/2016 796416 123270 SRWH-014-0002-102716 SOIL 10/27/2016 10/28/2016 796417 123270 SRWH-014-0204-102716 SOIL 10/27/2016 10/28/2016 796418 123270 SRWH-015-0002-102716 SOIL 10/27/2016 10/28/2016 796419 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796420 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-015-0204-102716-D SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0002-102716-D SOIL 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716-D SOIL 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796387	123270		SRWH-012-0002-102716	SOIL	10/27/2016	10/28/2016
796390 123270 SRWH-013-0204-102716 SOIL 10/27/2016 10/28/2016 796416 123270 SRWH-014-0002-102716 SOIL 10/27/2016 10/28/2016 796417 123270 SRWH-014-0204-102716 SOIL 10/27/2016 10/28/2016 796418 123270 SRWH-015-0002-102716 SOIL 10/27/2016 10/28/2016 796419 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796420 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0002-102716-D SOIL 10/27/2016 10/28/2016 796972 123270 SRWH-013-0002-102716 TCLP 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796388	123270		SRWH-012-0204-102716	SOIL	10/27/2016	10/28/2016
796416 123270 SRWH-014-0002-102716 SOIL 10/27/2016 10/28/2016 796417 123270 SRWH-014-0204-102716 SOIL 10/27/2016 10/28/2016 796418 123270 SRWH-015-0002-102716 SOIL 10/27/2016 10/28/2016 796419 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796420 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0002-102716 TCLP 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796389	123270		SRWH-013-0002-102716	SOIL	10/27/2016	10/28/2016
796417 123270 SRWH-014-0204-102716 SOIL 10/27/2016 10/28/2016 796418 123270 SRWH-015-0002-102716 SOIL 10/27/2016 10/28/2016 796419 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796420 123270 SRWH-015-0204-102716-D SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0002-102716 TCLP 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796390	123270		SRWH-013-0204-102716	SOIL	10/27/2016	10/28/2016
796418 123270 SRWH-015-0002-102716 SOIL 10/27/2016 10/28/2016 796419 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796420 123270 SRWH-015-0204-102716-D SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0002-102716 TCLP 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796416	123270		SRWH-014-0002-102716	SOIL	10/27/2016	10/28/2016
796419 123270 SRWH-015-0204-102716 SOIL 10/27/2016 10/28/2016 796420 123270 SRWH-015-0204-102716-D SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0002-102716 TCLP 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796417	123270		SRWH-014-0204-102716	SOIL	10/27/2016	10/28/2016
796420 123270 SRWH-015-0204-102716-D SOIL 10/27/2016 10/28/2016 796970 123270 SRWH-013-0002-102716 TCLP 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796418	123270		SRWH-015-0002-102716	SOIL	10/27/2016	10/28/2016
796970 123270 SRWH-013-0002-102716 TCLP 10/27/2016 10/28/2016 796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796419	123270		SRWH-015-0204-102716	SOIL	10/27/2016	10/28/2016
796972 123270 SRWH-013-0204-102716 TCLP 10/27/2016 10/28/2016	796420	123270		SRWH-015-0204-102716-D	SOIL	10/27/2016	10/28/2016
	796970	123270		SRWH-013-0002-102716	TCLP	10/27/2016	10/28/2016
796973 123270 SRWH-014-0002-102716 TCLP 10/27/2016 10/28/2016	796972	123270		SRWH-013-0204-102716	TCLP	10/27/2016	10/28/2016
	796973	123270		SRWH-014-0002-102716	TCLP	10/27/2016	10/28/2016



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SRWH SITE

3X90260001S051610004

Sample Delivery Group 123270

TETRA TECHProject NamePAUL PALLARDYProject #:1 S WACKER DRIVESUITE 3700CHICAGO, IL 60606CHICAGO

CT Sample #	Folder #	Client Sample #	Sample Description	Matrix	Date Sampled	Date Received
796974	123270		SRWH-014-0204-102716	TCLP	10/27/2016	10/28/2016
796975	123270		SRWH-015-0002-102716	TCLP	10/27/2016	10/28/2016
796976	123270		SRWH-015-0204-102716	TCLP	10/27/2016	10/28/2016
796977	123270		SRWH-015-0204-102716-D	TCLP	10/27/2016	10/28/2016

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QC Batch Cross Reference Summary

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TETRA TECH PAUL PALLARDY 1 S WACKER DRIVE SUITE 3700 CHICAGO, IL 60606

Project Name	SRWH SITE
Project #	3X90260001S051610004
Report Date	11/16/2016
Date Received:	10/28/2016
SDG #.	123270

Inorganic Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
796366	Solids, Percent	EPA 8000C	SOIL		132115
796367	Solids, Percent	EPA 8000C	SOIL		132115
796368	Solids, Percent	EPA 8000C	SOIL		132115
796369	Solids, Percent	EPA 8000C	SOIL		132115
796370	Solids, Percent	EPA 8000C	SOIL		132115
796371	Solids, Percent	EPA 8000C	SOIL		132115
796372	Solids, Percent	EPA 8000C	SOIL		132115
796373	Solids, Percent	EPA 8000C	SOIL		132115
796374	Solids, Percent	EPA 8000C	SOIL		132115
796375	Solids, Percent	EPA 8000C	SOIL		132115
796376	Solids, Percent	EPA 8000C	SOIL		132115
796377	Solids, Percent	EPA 8000C	SOIL		132115
796379	Solids, Percent	EPA 8000C	SOIL		132115
796380	Solids, Percent	EPA 8000C	SOIL		132115
796381	Solids, Percent	EPA 8000C	SOIL		132115
796382	Solids, Percent	EPA 8000C	SOIL		132115
796383	Solids, Percent	EPA 8000C	SOIL		132116
796384	Solids, Percent	EPA 8000C	SOIL		132115
796385	Solids, Percent	EPA 8000C	SOIL		132115
796386	Solids, Percent	EPA 8000C	SOIL		132115
796387	Solids, Percent	EPA 8000C	SOIL		132115
796388	Solids, Percent	EPA 8000C	SOIL		132116
796389	Solids, Percent	EPA 8000C	SOIL		132116
796390	Solids, Percent	EPA 8000C	SOIL		132116
796416	Solids, Percent	EPA 8000C	SOIL		132116
796417	Solids, Percent	EPA 8000C	SOIL		132116
796418	Solids, Percent	EPA 8000C	SOIL		132116

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Project Name Project #: SDG #.

SRWH SITE 3X90260001S051610004 123270

		Analytical Run #
EPA 8000C	SOIL	132116
EPA 8000C	SOIL	132116

Metal Parameters

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
796366	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796367	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796368	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796369	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796370	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796371	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796372	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796373	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796374	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796375	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796376	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796377	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796379	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796380	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796381	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796382	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796383	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796384	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796385	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796386	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796387	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796388	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796389	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796390	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796416	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796417	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796418	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796419	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796420	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
796366	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796368	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796372	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796373	ICP Metals QSM	EPA 6010C	SOIL	59873	132150



Project Name Project # SDG #

SRWH SITE 3X90260001S051610004 123270

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
796374	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796375	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796376	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796377	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796379	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796380	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
796382	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
96383	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
/96384	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
96385	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
96386	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
96387	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
96388	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
96390	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
96416	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
96417	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
96419	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
96420	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
96373	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
96380	ICP Metals QSM	EPA 6010C	SOIL	59873	132150
96417	ICP Metals QSM	EPA 6010C	SOIL	59874	132152
TI LAB#	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
96366	Potassium QSM	EPA 6010C	SOIL	59873	132151
96367	Potassium QSM	EPA 6010C	SOIL	59873	132151
96368	Potassium QSM				
96369		EPA 6010C	SOIL	59873	132151
	Potassium QSM	EPA 6010C EPA 6010C	SOIL SOIL	59873 59873	132151 132151
96370	Potassium QSM Potassium QSM				
		EPA 6010C	SOIL	59873	132151
96371	Potassium QSM	EPA 6010C EPA 6010C	SOIL SOIL	59873 59873	132151 132151
96371 96372	Potassium QSM Potassium QSM	EPA 6010C EPA 6010C EPA 6010C	SOIL SOIL SOIL	59873 59873 59873	132151 132151 132151
796371 796372 796373	Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL	59873 59873 59873 59873	132151 132151 132151 132151 132151
796371 796372 796373 796374	Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151
96371 96372 96373 96374 96375	Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151
796371 796372 796373 796374 796375 796376	Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151 132151
96371 96372 96373 96374 96375 96376 96377	Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151 132151 132151
796371 796372 796373 796374 796375 796376 796377 796379	Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151 132151 132151 132151
796371 796372 796373 796374 796375 796376 796377 796379 796380	Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873 59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151 132151 132151 132151 132151
796370 796371 796372 796373 796374 796375 796376 796377 796379 796380 796381 796382	Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873 59873 59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151 132151 132151 132151 132151 132151
796371 796372 796373 796374 796375 796376 796377 796379 796380 796381 796382	Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873 59873 59873 59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151 132151 132151 132151 132151 132151 132151
796371 796372 796373 796374 796375 796376 796377 796379 796380 796381	Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM Potassium QSM	EPA 6010C EPA 6010C	SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL	59873 59873 59873 59873 59873 59873 59873 59873 59873 59873 59873 59873 59873	132151 132151 132151 132151 132151 132151 132151 132151 132151 132151 132151 132151

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Sodium QSM

deliverir	L N V N N ng more than data from your e	IVNICI-+++ nvtronmental analyses	SDG #	3X90260001S0516 123270	10004
TI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
96386	Potassium QSM	EPA 6010C	SOIL	59873	132151
96387	Potassium QSM	EPA 6010C	SOIL	59874	132154
96388	Potassium QSM	EPA 6010C	SOIL	59874	132154
96389	Potassium QSM	EPA 6010C	SOIL	59874	132154
96390	Potassium QSM	EPA 6010C	SOIL	59874	132154
96416	Potassium QSM	EPA 6010C	SOIL	59874	132154
96417	Potassium QSM	EPA 6010C	SOIL	59874	132154
96418	Potassium QSM	EPA 6010C	SOIL	59874	132154
6419	Potassium QSM	EPA 6010C	SOIL	59874	132154
96420	Potassium QSM	EPA 6010C	SOIL	59874	132154
TI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
6366	Sodium QSM	EPA 6010C	SOIL	59873	132151
96367	Sodium QSM	EPA 6010C	SOIL	59873	132151
96368	Sodium QSM	EPA 6010C	SOIL	59873	132151
6369	Sodium QSM	EPA 6010C	SOIL	59873	132151
6370	Sodium QSM	EPA 6010C	SOIL	59873	132151
6371	Sodium QSM	EPA 6010C	SOIL	59873	132151
6372	Sodium QSM	EPA 6010C	SOIL	59873	132151
6373	Sodium QSM	EPA 6010C	SOIL	59873	132151
96374	Sodium QSM	EPA 6010C	SOIL	59873	132151
96375	Sodium QSM	EPA 6010C	SOIL	59873	132151
96376	Sodium QSM	EPA 6010C	SOIL	59873	132151
96377	Sodium QSM	EPA 6010C	SOIL	59873	132151
6379	Sodium QSM	EPA 6010C	SOIL	59873	132151
96380	Sodium QSM	EPA 6010C	SOIL	59873	132151
96381	Sodium QSM	EPA 6010C	SOIL	59873	132151
96382	Sodium QSM	EPA 6010C	SOIL	59873	132151
96383	Sodium QSM	EPA 6010C	SOIL	59873	132151
96384	Sodium QSM	EPA 6010C	SOIL	59873	132151
96385	Sodium QSM	EPA 6010C	SOIL	59873	132151
96386	Sodium QSM	EPA 6010C	SOIL	59873	132151
6387	Sodium QSM	EPA 6010C	SOIL	59874	132154
6388	Sodium QSM	EPA 6010C	SOIL	59874	132154
6389	Sodium QSM	EPA 6010C	SOIL	59874	132154
6390	Sodium QSM	EPA 6010C	SOIL	59874	132154
6416	Sodium QSM	EPA 6010C	SOIL	59874	132154
6417	Sodium QSM	EPA 6010C	SOIL	59874	132154
6418	Sodium QSM	EPA 6010C	SOIL	59874	132154
6419	Sodium QSM	EPA 6010C	SOIL	59874	132154

SOIL

EPA 6010C

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Project Name Project # SDG #.

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SRWH SITE 3X90260001S051610004 123270

CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
796366	Mercury QSM	EPA 7471B	SOIL	59865	132103
796367	Mercury QSM	EPA 7471B	SOIL	59865	132103
796368	Mercury QSM	EPA 7471B	SOIL	59865	132103
96369	Mercury QSM	EPA 7471B	SOIL	59865	132103
796370	Mercury QSM	EPA 7471B	SOIL	59865	132103
96371	Mercury QSM	EPA 7471B	SOIL	59865	132103
96372	Mercury QSM	EPA 7471B	SOIL	59865	, 132103
96373	Mercury QSM	EPA 7471B	SOIL	59865	132103
96374	Mercury QSM	EPA 7471B	SOIL	59865	132103
96375	Mercury QSM	EPA 7471B	SOIL	59865	132103
96376	Mercury QSM	EPA 7471B	SOIL	59865	132103
96377	Mercury QSM	EPA 7471B	SOIL	59865	132103
96379	Mercury QSM	EPA 7471B	SOIL	59865	132103
96380	Mercury QSM	EPA 7471B	SOIL	59865	132103
96381	Mercury QSM	EPA 7471B	SOIL	59865	132103
96382	Mercury QSM	EPA 7471B	SOIL	59865	132103
96383	Mercury QSM	EPA 7471B	SOIL	59865	132103
96384	Mercury QSM	EPA 7471B	SOIL	59865	132103
96385	Mercury QSM	EPA 7471B	SOIL	59865	132103
96386	Mercury QSM	EPA 7471B	SOIL	59865	132103
96387	Mercury QSM	EPA 7471B	SOIL	59866	132104
96388	Mercury QSM	EPA 7471B	SOIL	59866	132104
96389	Mercury QSM	EPA 7471B	SOIL	59866	132104
96390	Mercury QSM	EPA 7471B	SOIL	59866	132104
96416	Mercury QSM	EPA 7471B	SOIL	59866	132104
96417	Mercury QSM	EPA 7471B	SOIL	59866	132104
96418	Mercury QSM	EPA 7471B	SOIL	59866	132104
96419	Mercury QSM	EPA 7471B	SOIL	59866	132104
96420	Mercury QSM	EPA 7471B	SOIL	59866	132104
TI LAB#	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
96366	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96367	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96368	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96369	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96370	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96371	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96372	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96373	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96374	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
96375	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150

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Project Name SRWH SITE Project # 3X90260001S051610004 SDG # 123270

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CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
796377	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796379	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796380	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796381	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796382	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796383	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796384	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796385	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796386	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796387	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796388	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796389	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796390	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796416	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796417	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796418	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796419	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796420	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796380	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59873	132150
796419	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
796420	ICP Metals, List 2 QSM	EPA 6010C	SOIL	59874	132152
			Mahulu	Dron Batch #	Applicat Dup #
CTI LAB#:	Parameter	Method	Matrix	Prep Batch #	Analytical Run #
CTI LAB#: 796970	Parameter ICP Metals QSM TCLP	Method EPA 6010C	TCLP	Prep Batch # 59969	132294
796970	ICP Metals QSM TCLP	EPA 6010C	TCLP	59969	132294
796970 796972	ICP Metals QSM TCLP ICP Metals QSM TCLP	EPA 6010C EPA 6010C	TCLP TCLP	59969 59969	132294 132294
796970 796972 796973	ICP Metals QSM TCLP ICP Metals QSM TCLP ICP Metals QSM TCLP	EPA 6010C EPA 6010C EPA 6010C	TCLP TCLP TCLP	59969 59969 59969	132294 132294 132294
796970 796972 796973 796974	ICP Metals QSM TCLP ICP Metals QSM TCLP ICP Metals QSM TCLP ICP Metals QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C	TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969	132294 132294 132294 132294 132294
796970 796972 796973 796974 796975	ICP Metals QSM TCLP ICP Metals QSM TCLP ICP Metals QSM TCLP ICP Metals QSM TCLP ICP Metals QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969	132294 132294 132294 132294 132294 132294
796970 796972 796973 796974 796975 796976	ICP Metals QSM TCLP ICP Metals QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	TCLP TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969 59969	132294 132294 132294 132294 132294 132294 132294
796970 796972 796973 796974 796975 796976 796977	ICP Metals QSM TCLP ICP Metals QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	TCLP TCLP TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969 59969 59969	132294 132294 132294 132294 132294 132294 132294 132294
796970 796972 796973 796974 796975 796976 796977 796976	ICP Metals QSM TCLP ICP Metals QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	TCLP TCLP TCLP TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969 59969 59969 59969	132294 132294 132294 132294 132294 132294 132294 132294 132294
796970 796972 796973 796974 796975 796976 796976 796976 CTI LAB#.	ICP Metals QSM TCLP ICP Metals QSM TCLP Parameter	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C	TCLP TCLP TCLP TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969 59969 59969 59969 Prep Batch #	132294 132294 132294 132294 132294 132294 132294 132294 132294 Analytical Run #
796970 796972 796973 796974 796975 796976 796976 CTI LAB#. 796970	ICP Metals QSM TCLP ICP Metals QSM TCLP Parameter Mercury QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 7470A	TCLP TCLP TCLP TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969 59969 59969 Prep Batch # 59983	132294 132294 132294 132294 132294 132294 132294 132294 Analytical Run # 132334
796970 796972 796973 796974 796975 796976 796976 CTI LAB#. 796970 796970	ICP Metals QSM TCLP ICP Metals QSM TCLP Parameter Mercury QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 7470A EPA 7470A	TCLP TCLP TCLP TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969 59969 59969 59969 Prep Batch # 59983 59983	132294 132294 132294 132294 132294 132294 132294 132294 132294 Analytical Run # 132334 132334
796970 796972 796973 796974 796975 796976 796976 CTI LAB#. 796970 796970 796972 796973 796974	ICP Metals QSM TCLP ICP Metals QSM TCLP Parameter Mercury QSM TCLP Mercury QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 7470A EPA 7470A EPA 7470A	TCLP TCLP TCLP TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969 59969 59969 59969 Prep Batch # 59983 59983 59983	132294 132294 132294 132294 132294 132294 132294 132294 132294 Analytical Run # 132334 132334 132334
796970 796972 796973 796974 796975 796976 796976 CTI LAB#. 796970 796972 796973	ICP Metals QSM TCLP ICP Metals QSM TCLP Mercury QSM TCLP Mercury QSM TCLP Mercury QSM TCLP	EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 6010C EPA 7470A EPA 7470A EPA 7470A	TCLP TCLP TCLP TCLP TCLP TCLP TCLP TCLP	59969 59969 59969 59969 59969 59969 59969 Prep Batch # 59983 59983 59983 59983	132294 132294 132294 132294 132294 132294 132294 132294 132294 Analytical Run # 132334 132334 132334 132334

METALS CLP FORMS DOCUMENTS

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livering mare than data har	r your environmental analyses		`		Sar	mple Descrip	tion
	INC	' DRGANIC ANALYSIS D	ATA SHEET		SRWH-00	03-0002-1027	16
Lab Name.	CT Laboratories	(Contract TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	SOIL	\$	SDG No	123270	1		
% Solids	85 7	L	_ab Sample ID	796366			
Analytical Method	EPA 7471B	(Date Received	10/28/2	016		
Dilution Factor	1.00	٦٢	TCLP/SPLP Extraction	on Date/tir	ne _		
Analytical Run #	132103	/	Analysis Date/Time	11/0)3/2016	10 51	
Analytical Prep Batch #	59865	F	Prep Date/Time	10/3	31/2016	11 00	
ICAL Calibration #:	11032016	(Concentration Units.	mg/	kg		
CAS #	Analyte	Concentration	n Qualifiers	DL	LOD	LOQ	RL
7439-97-6 Merc		0 047		0 0025	0 0049	0 0097	0 0097

Sample Description

		1 INORGANIC ANALYSIS	DATA SHEET		SRWH-0	03-0002-1027	716
Lab Name	CT Laboratories		Contract: TETRA T	ECH-SRWH	ISITE		
Matrix (soil/water)	SOIL		SDG No	123270	1		
% Solids [.]	85 7		Lab Sample ID [.]	796366			
Analytical Method	EPA 6010C		Date Received.	10/28/2	016		
Dilution Factor	1.00		TCLP/SPLP Extract	tion Date/tir	ne _		
Analytical Run #	132150		Analysis Date/Time	11/()2/2016	12 50	
Analytical Prep Batch #	59873		Prep Date/Time	11/0)1/2016	12 00	
ICAL Calibration #.			Concentration Units	mg/	kg		
CAS #	Analyte	Concentrati	ion Qualifiers	DL	LOD	LOQ	RL
7429-90-5 Alumi	num	1450	В	0 043	0 13	0 26	0 26
7440-36-0 Antım	ony	31		0.14	0 43	0 86	0.86
7440-38-2 Arsen	IC	67 2		0 14	0 43	0 86	0.86
7440-39-3 Bariui	n	21 1	В	0 0097	0 027	0 054	0 054
7440-41-7 Beryll	ium	0 084		0 0043	0 013	0 043	0 043
7440-43-9 Cadm	ium	15		0 0065	0 022	0 043	0 043
7440-47-3 Chror	nium	6 9		0 025	0.075	0.15	0 15
7440-48-4 Coba	it	2 8		0 043	0 13	0 26	0 26
7440-50-8 Copp	er	30 7		0 075	0 22	0 43	0.43
7439-89-6 Iron		26300		0 32	0 97	19	1.9
7439-92-1 Lead		132		0 043	0 13	0 27	0.27
7439-95-4 Magn	esium	24800		0 15	0.43	0 86	0 86
7439-96-5 Mang	anese	401		0 027	0 081	0 16	0 16
7440-02-0 Nicke	1	6 5		0 023	0 065	0 13	0 13
7782-49-2 Selen	ium	0 22	U	0 065	0 22	0 43	0 43
7440-22-4 Silver		0 12		0 018	0 054	0 11	0 11
7440-28-0 Thallı	um	0 91		0 086	0 26	0 52	0 52
7440-62-2 Vana	dıum	7 2		0 013	0 043	0 086	0 086
7440-66-6 Zinc	<u>.</u>	257		0 054	0 16	0 32	0 32
7440-31-5 Tin		12 6		0 097	0 27	0 54	0 54
7440-32-6 Titani	um	72 1		0 043	0 13	0 26	0 26

CΤ	L	A	B	0	R	A	Т	0	R	1	£	\$	the second the
doiworing	mor	a tha	m da	nta fi	ן האט	<i>POUR</i>	aviv	tronn	nonit	əł a	ոսի	-506	

Sample Description

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			1 INORGANIC ANALYSIS D	ATA SHEET		SRWH-0	03-0002-1027	16	
Lab Name		CT Laboratories	(Contract TETRA TE	ECH-SRWH SITE				
Matrix (soil/water	r)	SOIL	s	DG No	123270				
% Solids:		85 7	L	ab Sample ID:	796366				
Analytical Metho	d	EPA 6010C	C	Date Received	10/28/2	2016			
Dilution Factor		1.00	1	CLP/SPLP Extraction	n Date/time				
Analytical Run #	#	132151	<i>F</i>	Analysis Date/Time	11/03/2016 14 42				
Analytical Prep	Batch #	59873	F	Prep Date/Time	11/(01/2016	12.00		
ICAL Calibration	n # [.]			Concentration Units	mg/	/kg			
CAS #		Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL	
7440-09-7	Potas	sium	226		12	35 ່	71	71	
7440-23-5	Sodiu	m	87 1		43	13	26	26	

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	INORGANIC ANAL	YSIS DATA SHEET		SRWH-0	03-0002-1027	16		
Lab Name	CT Laboratories	Contract. TETRA TE	CH-SRWH	ISITE				
Matrix (soil/water)	SOIL	SDG No	123270)				
% Solids	85 7	Lab Sample ID	796366	;				
Analytical Method	EPA 6010C	Date Received	10/28/2	2016				
Dilution Factor	10,00	TCLP/SPLP Extraction	TCLP/SPLP Extraction Date/time					
Analytical Run #	132150	Analysis Date/Time	11/(03/2016	18 05			
Analytical Prep Batch #	59873	Prep Date/Time	11/0	01/2016	12 00			
CAL Calibration #		Concentration Units	mg/	kg				
CAS #	Analyte Conce	ntration Qualifiers	DL	LOD	LOQ	RL		
7440-70-2 Calci	um 680		2.6	7 5	15	15		

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		1 INORGANIC ANALYSIS E	DATA SHEET		SRWH-0	03-0204-1027	716
Lab Name	CT Laboratories		Contract TETRA TI	ECH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270			
% Solids:	85 0		Lab Sample ID	796367			
Analytical Method	EPA 6010C		Date Received:	10/28/2	016		
Dilution Factor	1.00	······································	TCLP/SPLP Extracti	on Date/tin	ne:		
Analytical Run #:	132150		Analysis Date/Time	11/0	2/2016	12 57	
Analytical Prep Bate	ch # 59873		Prep Date/Time	11/01/2016		12 00	
CAL Calibration #			Concentration Units				
CAS #	Analyte	Concentratio	n Qualifiers	DL	LOD	LOQ	RI
7429-90-5	Aluminum	4910	В	0 049	0 15	0 29	0 2
7440-36-0	Antimony	0 45	J	0 16	0 49	0 98	0 9
7440-38-2	Arsenic	63		0 16	0 49	0 98	0 9
7440-39-3	Barium	27.6	В	0 011	0.030	0 061	0 0
7440-41-7	Beryllium	0 38		0 0049	0 015	0 049	00
7440-43-9	Cadmium	0 25		0 0073	0 024	0 049	0 0
7440-70-2	Calcium	22700	В	0 29	0 85	17	1
440-47-3	Chromium	73		0 028	0 085	0 17	0
7440-48-4	Cobalt	5 1		0 049	0 15	0 29	0 2
7440-50-8	Copper	19 1		0 085	0 24	0 49	04
7439-89-6	Iron	11500		0 37	1.1	22	2
7439-92-1	Lead	39 0		0 049	0 15	0 30	03
439-95-4	Magnesium	11000		0.17	0 49	0 98	0 9
7439-96-5	Manganese	207		0 030	0 091	0 18	0
7440-02-0	Nickel	11 0		0 026	0 073	0 15	0
7782-49-2	Selenium	0 33	J	0 073	0 24	0 49	04
440-22-4	Silver	0 061	U	0 021	0 061	0 12	0
7440-28-0	Thallium	0 29	U	0 098	0 29	0 59	0.9
7440-62-2	Vanadium	13 3		0 015	0 049	0.098	0 0
440-66-6	Zinc	57 9		0 061	0.18	0 37	0 :
7440-31-5	Tın	30		0.11	0 30	0 61	0.6
7440-32-6	Titanium	103		0 049	0 15	0 29	0 :

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		1 INORGANIC ANALYSIS E	ANIC ANALYSIS DATA SHEET				SRWH-003-0204-102716				
Lab Name	CT Laboratories	(Contract	TETRA TE	CH-SRWH	SITE					
Matrix (soil/water)	SOIL	:	SDG No		123270						
% Solids	85 0		.ab Samp	le ID	796367						
Analytical Method	EPA 7471B		Date Rece	eived	10/28/2	016					
Dilution Factor	10.00		ICLP/SPL	P Extractio	on Date/tin	ne: _					
Analytical Run #.	132103		Analysis D	Date/Time	11/0	3/2016	14 45				
Analytical Prep Batch #:	59865		Prep Date	e/Time	10/3	1/2016	11 00				
ICAL Calibration #	11032016		Concentra	ition Units	mg/l	kg					
CAS #	Analyte	Concentratio	n Qua	alifiers	DL	LOD	LOQ	RL			

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			1 INORGANIC ANALYSIS	DATA SHEET	SRWH-003-0204-102716						
Lab Name		CT Laboratories		Contract TETRA T	ECH-SRWH	ISITE					
Matrix (soil/water	.)	SOIL		SDG No	123270)					
% Solids:		85 0		Lab Sample ID.	796367	,					
Analytical Metho	d	EPA 6010C		Date Received	10/28/2016						
Dilution Factor		1.00		TCLP/SPLP Extract	on Date/tii	me					
Analytical Run #	ŧ	132151		Analysis Date/Time	11/0	03/2016	14:45				
Analytical Prep	Batch #	59873		Prep Date/Time:	11/0	01/2016	12 [.] 00				
ICAL Calibration	# [.]			Concentration Units	mg/	'kg					
CAS #		Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL			
7440-09-7	Potas	sium	451	· · · · · · · · · · · · · · · · · · ·	13	40	80	80			
7440-23-5	Sodiu	m	129		4.9	15	29	29			

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	INORGANIC	1 CANALYSIS	DATA SHEET		SRWH-004-0002-102716				
Lab Name:	CT Laboratories	<u> </u>	Contract. TETRA	TECH-SRWH	SITE				
Matrix (soil/water)	SOIL		SDG No	<u>123270</u>	I		<u></u> .		
% Solids	91 1		Lab Sample ID	796368					
Analytical Method	EPA 7471B		Date Received.	10/28/2	016				
Dilution Factor	1.00		TCLP/SPLP Extrac	tion Date/tir	ne _				
Analytical Run #	132103		Analysis Date/Time	11/0	3/2016	10.56			
Analytical Prep Batch #	59865		Prep Date/Time:	10/3	31/2016	11.00			
ICAL Calibration #	11032016		Concentration Units	s:/	kg				
CAS #	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL		

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CT LABORATORIES

Sample Description

			1 INORGANIC ANALYSIS	S DATA SHEET		SRWH-004-0002-102716				
Lab Name		CT Laboratories		Contract TETR	TECH-SRWH	SITE		<u> </u>		
Matrix (soil/water)		SOIL		SDG No	123270		<u></u>	<u> </u>		
% Solids		<u>91</u> .1		Lab Sample ID.	796368		<u> </u>			
Analytical Method		EPA 6010C		Date Received	10/28/2	016				
Dilution Factor:		1.00	<u> </u>	_ TCLP/SPLP Extra	action Date/tir	ne:	<u></u>	<u> </u>		
Anaiytical Run #		132150		Analysis Date/Tin	ne 11/0	11/02/2016 13.04				
Analytical Prep B	Batch #.	59873		- Prep Date/Time.	11/0					
ICAL Calibration	#:	<u></u>	······································	- Concentration Un						
CAS #		Analyte	Concentrat	- ion Qualifiers	DL	LOD	LOQ	RL		
7429-90-5	Alumir	านท	1840	В	0 045	0 14	0 27	0 27		
7440-36-0	Antimo	ony	32		0.15	0 45	0 91	0 91		
7440-38-2	Arsen	ic	40 7		0 15	0 45	0 91	0 91		
7440-39-3	Bariun	n	27 9	В	0 010	0 028	0.057	0 057		
7440-41-7	Beryllı	um	0 097		0 0045	0 014	0.045	0 045		
7440-43-9	Cadm	ium	19		0 0068	0 023	0.045	0 045		
7440-47-3	Chron	1um	83		0 026	0 079	0 16	0.16		
7440-48-4	Cobal	t	4 5		0 045	0 14	0 27	0 27		
7440-50-8	Coppe	er	41 9		0 079	0 23	0 45	0 45		
7439-89-6	fron		25400	~ ~ ~	0 34	10	20	20		
7439-92-1	Lead		306		0 045	0 14	0 28	0 28		
7439-96-5	Manga	anese	385		0 028	0.085	0 17	0 17		
7440-02-0	Nickel	l	94		0 024	0 068	0 14	0.14		
7782-49-2	Selen	ium	0 23	U	0 068	0.23	0 45	0 45		
7440-22-4	Silver		0 15		0 019	0 057	0.11	0 11		
7440-28-0	Thallu		0 24	J	0 091	0.27	0 54	0 54		
7440-62-2	Vanad	dium	8.8		0 014	0 045	0 091	0 091		
7440-66-6	Zinc		261		0 057	0.17	0 34	0 34		
7440-31-5	Tin		97		0 10	0 28	0 57	0 57		
7440-32-6	Titanii	um			0 045	0 14	0 27	0 27		

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Sample Description

			1 INORGANIC ANALYSIS DA	TA SHEET	SRWH-004-0002-102716					
Lab Name		CT Laboratories	c	ontract TETRA TE	ECH-SRWH SITE					
Matrix (soil/water	r)	SOIL	S	SDG No . <u>123270</u>						
% Solids		91 1	Li	ab Sample ID.	796368					
Analytical Metho	d	EPA 6010C	D	ate Received:	<u>10/28/2</u>	2016				
Dilution Factor.		1.00 TCLP/SPLP Extraction Date/time.						·		
Analytical Run #	4	132151	Α	nalysis Date/Time	11/	03/2016	14 47			
Analytical Prep	Batch #	59873	P	rep Date/Time	11/0	01/2016	12 00			
ICAL Calibration	ı #:		c	oncentration Units	mg	/kg	· · ·			
CAS #		Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL		
7440-09-7	Potas	sium	289		12	37	75	75		
7440-23-5	Sodiu	um119			4 5	14	27	27		

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			INORGANIC ANALYSIS	DATA SH	EET	SRWH-004-0002-102716					
Lab Name:		CT Laboratories		Contract	TETRA TE	CH-SRWH	I SITE				
Matrix (soil/water)		SOIL		SDG No		123270)				
% Solids		91 1		Lab Sam	ple ID	796368	3				
Analytical Method		EPA 6010C		Date Red	ceived	10/28/2016					
Dilution Factor		10.00		TCLP/SF	PLP Extractio	n Date/ti	me _				
Analytical Run # [.]		132150		Analysis	Date/Time	11/	03/2016	18 12			
Analytical Prep Bat	ich #	59873		Prep Da	te/Time	11/	01/2016	12 00			
ICAL Calıbration #				Concent	ration Units	mg/	/kg				
CAS #		Analyte	Concentrat	ion Q	ualifiers	DL	LOD	LOQ	RL		
7440-70-2	Calciur	n	73000			27	7.9	16	16		
7439-95-4	Magne	sium	37600			16	4.5	91	9 1		

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LABORATORIE n data from man anvinannan Sample Description 1 SRWH-004-0204-102716 INORGANIC ANALYSIS DATA SHEET TETRA TECH-SRWH SITE Lab Name. **CT** Laboratories Contract[.] SDG No Matrix (soil/water) SOIL 123270 % Solids Lab Sample ID 816 796369 Analytical Method Date Received 10/28/2016 EPA 7471B **Dilution Factor** 1.00 TCLP/SPLP Extraction Date/time Analysis Date/Time Analytical Run # 132103 11/03/2016 11 02 Analytical Prep Batch # Prep Date/Time-59865 10/31/2016 11:00 ICAL Calibration # **Concentration Units** 11032016 mg/kg CAS# Analyte Concentration Qualifiers DL LOD LOQ RL 7439-97-6 0 15 Mercury 0 0028 0 0056 0 011 0 011

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Sample Description

		1 INORGANIC ANALYSIS	DATA SHEET		SRWH-004-0204-102716					
Lab Name	CT Laboratories		Contract TETRA T	ECH-SRWH	I SITE					
Matrix (soil/water)	SOIL		SDG No	123270	1					
% Solids	81 6		Lab Sample ID:	796369)					
Analytical Method	EPA 6010C		Date Received.	10/28/2	016					
Dilution Factor	1.00		TCLP/SPLP Extract	on Date/tin	ne _					
Analytical Run #	132150		Analysis Date/Time	11/0	2/2016	13 [.] 11				
Analytical Prep Batch #	59873		Prep. Date/Time	11/0)1/2016	12 00				
ICAL Calibration #			Concentration Units	mg/l	kg					
CAS#	Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL			
7429-90-5 Al	uminum	3460	В	0 051	0 15	0 30	0.30			
7440-36-0 Ar	ntimony	0 44	J	0 17	0 51	10	10			
7440-38-2 Ar	senic	57		0 17	0 51	10	1.0			
7440-39-3 Ba	arium	50.2	В	0 011	0.032	0 063	0 063			
7440-41-7 Be	eryllium	0 32		0 0051	0 015	0 051	0 051			
7440-43-9 Ca	admium	0 55		0 0076	0 025	0 051	0 051			
7440-70-2 Ca	alcium	30800	В	0 30	0 89	18	18			
7440-47-3 Cł	hromium	76		0 029	0 089	0 18	0 18			
7440-48-4 Co	obalt	4 3		0.051	0 15	0 30	0 30			
7440-50-8 Co	opper	26 5		0 089	0 25	0 51	0 51			
7439-89-6 Irc	วท	11300		0 38	11	2 3	23			
7439-92 - 1 Le	ead	88 6		0 051	0 16	0 32	0 32			
7439-95-4 Ma	agnesium	13600		0 18	0 51	10	10			
7439-96-5 Ma	anganese	242		0 032	0 095	0 19	0.19			
7440-02-0 Ni	ickel	10.3		0 027	0 076	0 15	0.15			
7782-49-2 Se	elenium	0 15	J	0 076	0 25	0 51	0 51			
7440-22-4 Si	lver	0 063	U	0 022	0 063	0 13	0 13			
7440-28-0 Th	nallium	0 30	U	0 10	0 30	0 61	0 61			
7440-62-2 🔗 Va	anadium	13 1		0 015	0 051	0 10	0 10			
7440-66-6 Zıı	nc	102		0 063	0 19	0 38	0 38			
7440-31-5 Tii	n	35 2		0 11	0 32	0 63	0 63			
7440-32-6 Til	tanıum	132		0 051	0 15	0 30	0 30			

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Sample Description

		IN	1 IORGANIC ANALYSIS DA	SRWH-004-0204-102716				
Lab Name		CT Laboratories	Co	ntract. TETRA TE	CH-SRWH	I SITE		
Matrix (soil/water	r)	SOIL	SC	IG No	123270)		
% Solids		81 6		Lab Sample ID 796369			<u>_</u>	
Analytical Metho	d	EPA 6010C	Da	te Received	10/28/2	2016		
Dilution Factor		1.00	тс	LP/SPLP Extractio	n Date/tı	me [.]		
Analytical Run #	Analytical Run # 132151		An	alysis Date/Time	11/0	03/2016	14 [.] 50	
Analytical Prep	Batch #	59873	Pro	ep Date/Time	11/01/2016		12 00	
ICAL Calibration	ICAL Calibration #		Co	incentration Units	mg/	/kg		
CAS #		Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Potas	sium	429		14	42	84	84
7440-23-5	Sodiu	im	115		5 1	15	30	30

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_ab Name [.]	CT Laboratories	INORGANIC ANAL 1313		ECH-SRWH	SITE		
Matrix (soil/water)	SOIL	······································	SDG No	123270			
% Solids	75 8		Lab Sample ID	796370			
Analytical Method	EPA 7471B		Date Received	10/28/2	016		
Dilution Factor	1.00		TCLP/SPLP Extraction	on Date/tin	ne:		
Analytical Run #	132103		Analysis Date/Time	11/0	3/2016	11.04	
Analytical Prep Batch #.	59865		Prep Date/Time	10/3	1/2016	11 00	
ICAL Calibration #:	11032016		Concentration Units	mg/l	kg		
CAS #	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL.
7439-97-6 Merci	ury	0 22	<u> </u>	0 0028	0 0055	0 011	0.01

CT LABORATORIES

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-004-0204-102716-D

					L				
Lab Name		CT Laboratories	··	Contract [.]	TETRA TE	ECH-SRWH	SITE		
Matrix (soil/water)		SOIL		SDG No		123270		- <u>-</u> .	
% Solids:		75.8		Lab Samp	le ID:	<u>796370</u>			
Analytical Method		EPA 6010C		Date Reco	eived	10/28/20	016		
Dilution Factor		1.00		TCLP/SP	_P Extracti	on Date/tın	ne		
Analytical Run #		132150		Analysis (Date/Time	11/0	2/2016	13 18	
Analytical Prep Bat	ch #	59873		Prep Date/Time		11/0	1/2016	12 00	
ICAL Calibration #					Concentration Units		(g	_	
CAS #		Analyte	alyte Concentratio		alifiers	DL	LOD	LOQ	RL
7429-90-5	Alumin	um	3120	· · · · · · · · · · · · · · · · · · ·	В	0 053	0 16	0 32	0 32
7440-36-0	Antimo	ny	0 39	J		0.17	0 53	11	1.1
7440-38-2	Arsenio	>	65			0 17	0.53	11	11
7440-39-3	Barium		37.7		В	0 012	0 033	0.066	0 066
7440-41-7	Beryllıı	Im	0 26			0 0053	0.016	0 053	0 053
7440-43-9	Cadmi	Jm	0 29			0 0079	0 026	0 053	0 053
7440-70-2	Calciur	n	31200		В	0 32	0 92	18	18
7440-47-3	Chrom	ium	65			0.030	0 092	0 18	0 18
7440-48-4	Cobalt		4 2			0 053	0 16	0 32	0 32
7440-50-8	Coppe	r	17 8			0 092	0 26	0 53	0 53
7439-89-6	Iron		10700			0 39	12	2 4	2 4
7439-92-1	Lead		53 8			0 053	0 16	0 33	0 33
7439-95-4	Magne	sium	16000			0 18	0.53	11	1.1
7439-96-5	Manga	nese	235			0 033	0 098	0 20	0 20
7440-02-0	Nickel		90			0 028	0 079	0 16	0.16
7782-49-2	Seleni	ım	0 27	J.		0 079	0 26	0 53	0 53
7440-22-4	Silver	<u></u>	0 066	U		0 022	0 066	0 13	0 13
7440-28-0	Thalliu	m	0 32	U		0 11	0.32	0 63	0 63
7440-62-2	Vanad	um	12 7		<u> </u>	0 016	0.053	0 11	0 11
7440-66-6	Zınc		60 4			0 066	0 20	0 39	0 39
7440-31-5	Tin		6 3			0 12	0 33	0 66	0 66
7440-32-6	Titaniu	m	103			0 053	0.16	0.32	0 32

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			1 INORGANIC ANALYSIS	DATA SHEET		SRWH-00	4-0204-10271	6-D
Lab Name		CT Laboratories		Contract TETRA TE	CH-SRWH	I SITE		
Matrix (soil/water)	SOIL		SDG No	<u>123270</u>)		
% Solids		75 8		Lab Sample ID	796370)		
Analytical Method		EPA 6010C	Date Received:	10/28/2	2016			
Dilution Factor		1.00		TCLP/SPLP Extraction	n Date/tir	me _		
Analytical Run #		132151		Analysis Date/Time	11/0	03/2016	14 53	
Analytical Prep I	Batch #	59873		Prep Date/Time	11/01/2016		12 00	
ICAL Calibration #				Concentration Units:	mg/	′kg		
		Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Potas	sium	384		14	43	87	87
7440-23-5	Sodiu	m	96 8		53	16	32	32

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	INO	1 RGANIC ANALYSIS D	ATA SHEET	SRWH-005-0002-102716			
ab Name	CT Laboratories	C	Contract: TETRA TEC	CH-SRWH	SITE		
Matrix (soil/water)	SOIL	S	DG No	123270		<u></u>	
6 Solids	78 3	L	ab Sample ID [.]	796371			
analytical Method	EPA 7471B		ate Received	10/28/20	016		
Dilution Factor	1.00	T	CLP/SPLP Extraction	n Date/tim	ne: _		
Analytical Run #	132103	A	nalysis Date/Time	11/0	3/2016	11:07	
Analytical Prep Batch #:	59865	P	Prep Date/Time	10/3	1/2016	11 00	
CAL Calibration #.	11032016	c	Concentration Units	mg/k	g		
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL

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Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-005-0002-102716

				L			
Lab Name	CT Laboratories		Contract TETRA T	ECH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No.	123270			
% Solids	78 3		Lab Sample ID	796371			
Analytical Method	EPA 6010C		Date Received:	10/28/20	016		
Dilution Factor.	1 00		TCLP/SPLP Extract	ion Date/tim	ne:		
Analytical Run #	132150		Analysis Date/Time	11/0	1/02/2016 13·25		
- Analytical Prep Batch #	59873		Prep Date/Time	11/0	1/2016	12:00	
ICAL Calibration #:			Concentration Units	mg/l	kg .		
CAS #	Analyte	Concentratio	n Qualifiers	DL	LOD	LOQ	RL
7429-90-5 Alun	nınum	1490	В	0 053	0 16	0 32	0.32
7440-36-0 Anti	mony	7 6	· · · · · · · · · · · · · · · · · · ·	0.17	0.53	11	1.1
7440-38-2 Arse	enic	232		0 17	0.53	11	1.1
7440-39-3 Bari	um	30 5	В	0.012	0 033	0.067	0 067
7440-41-7 Bery	yllium	0 13		0.0053	0 016	0 053	0 053
7440-43-9 Cad	imium	2 0	•	0 0080	0 027	0 053	0 053
7440-70-2 Calo	cium	29000	В	0 32	0 94	19	1.9
7440-47-3 Chro	omium	8 1		0 031	0.094	0 19	0 19
7440-48-4 Cob	alt	3 4		0 053	0.16	0.32	0 32
7440-50-8 Cop	per	69 2		0 094	0 27	0 53	0 53
7439-89-6 Iron		19100		· 0 40	12	24	2.4
7439-92-1 Lea	d	535		0 053	0 17	0 33	0.33
7439-95-4 Mag	gnesium	13000		0 19	0.53	11	1.1
7439-96-5 Mar	nganese	271		0.033	0.10	0 20	0.20
7440-02-0 Nick	kel	90		0 028	0 080	0 16	0 16
7782-49-2 Sele	enium	0 27	U	0 080	0 27	0 53	0.53
7440-22-4 Silve	er	0 18		0 023	0 067	0 13	0.13
7440-28-0 Tha	llium	0 58	J	0 11	0 32	0 64	0 64
7440-62-2 Van	adium	7 0		0.016	0.053	0 11	0 11
7440-66-6 Zinc		488		0 067	0 20	0 40	0 40
7440-31-5 Tin		26 9		0 12	0.33	0 67	0 67
7440-32-6 Tita	nium	82 6		0.053	0.16	0 32	0 32

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		1 INORGANIC ANALYSIS	DATA SHEET	SRWH-005-0002-102716			
Lab Name	CT Laboratories		Contract TETRA TE	CH-SRWH	I SITE		
Matrix (soil/water)	SOIL	···· ·	SDG No	123270			
% Solids:	78 3		Lab Sample ID	796371	1	<u></u>	
Analytical Method	EPA 6010C		Date Received:	10/28/2	2016		
Dilution Factor	1.00		TCLP/SPLP Extraction	on Date/ti	me: _		
Analytical Run #	132151		Analysis Date/Time	11/0	03/2016	15.02	
Analytical Prep Batch #.	59873		Prep. Date/Time	11/0	01/2016	12 00	
ICAL Calibration #.			Concentration Units	mg/	/kg		
CAS #	Analyte	Concentrat	on Qualifiers	DL	LOD	LOQ	RL
7440-09-7 Potas	sium	215		15	44	88	88
7440-23-5 Sodu	ım	57 5		53	16	32	32

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		C ANALYSIS DA				0.75			
Lab Name.	CT Laboratories	C	ontract:	TETRATE	ECH-SRWH SITE				
Matrix (soil/water)	SOIL	SI	DG No		123270				
% Solids	78 0	La	ab Sampl	e ID:	<u>796372</u>				
Analytical Method	EPA 7471B	Da	ate Recei	ived	<u>10/28/2</u>	016			
Dilution Factor	1.00	T(CLP/SPL	P Extraction	on Date/tin	ne _			
Analytical Run #.	132103	A	nalysis D	ate/Time	11/0	3/2016	11 09		
Analytical Prep Batch #.	59865		Prep Date/Time		10/31/2016 11 00				
ICAL Calibration #.	11032016	c	oncentrat	tion Units:	mg/l	kg			
CAS #	Analyte	Concentration	Qua	lifiers	DL	LOD	LOQ	RL	
7439-97-6 Merc	ury	0 082		Y,M	0 0029	0 0058	0 011	0 011	

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Sample Description

		1 INORGANIC ANALYSIS		SIS DATA SHEET SRWH-005-0204-102716							
Lab Name		CT Laboratories		Contract	TETRA T	ECH-SRWH	SITE				
Matrix (soil/wate	r)	SOIL		SDG No	1	<u>123270</u>					
% Solids		78 0		Lab Sam	ple ID:	<u>7</u> 96372					
Analytical Metho	bd	EPA 6010C_		Date Re	ceived	<u>10/28/2</u>	016				
Dilution Factor		1.00		TCLP/SF	PLP Extract	ion Date/tin	on Date/time.				
Analytical Run	#	132150		Analysis Date/Time		11/0	2/2016	13.32			
Analytical Prep	Batch #·	59873		- Prep Da	te/Time		1/2016	12.00			
ICAL Calibration				- Concent	ration Units	mg/l	mg/kg				
CAS #		Analyte	Concentrat	- ion Qualifiers		 DL	LOD	LOQ			
7429-90-5	Alumi		2840		B,M	0 051	0 15	0 30	0 30		
7440-36-0	Antım	· · · · · · · · · · · · · · · · · · ·	0 50	J		0 16	0 51	10	10		
7440-38-2	Arsen	· ··	52			0 16	0 51	10	10		
7440-39-3	Bariu	n	28 7		B,M	0 011	0 032	0 063	0 063		
7440-41-7	Beryll	ium	0.28		M	0 0051	0 015	0.051	0 051		
7440-43-9	Cadm	num	0.43		Y,M	0 0076	0.025	0 051	0 051		
7440-47-3	Chror	nium	61.		М	0 029	0 088	0 18	0 18		
7440-48-4	Coba	lt	38		Y,M	0 051	0 15	0 30	0 30		
7440-50-8	Copp	er	22 8		М	0.088	0.25	0 51	0.51		
7439-89-6	Iron		10300		М	0 38	11	2 3	2 3		
7439-92-1	Lead		168		Y,M	0 051	0 16	0 32	0.32		
7439-95-4	Magn	esium	19500		M,Y	0 18	0 51	10	10		
7439-96-5	Mang	anese	204		М	0 032	0 095	0 19	0 19		
7440-02-0	Nicke	l	8 1		Y,M	0 027	0 076	0 15	0 15		
7782-49-2	Selen	lium	0 38	J		0.076	0 25	0 51	0 51		
7440-22-4	Silver		0 063	U	М	0 021	0 063	0.13	0.13		
7440-28-0	Thall	um	0 30	U	M	0 10	0 30	0 61	0 61		
7440-62-2	Vana	dium	10 1		М	0 015	0 051	0 10	0 10		
7440-66-6	Zinc		80 2		Y,M	0 063	0 19	0 38	0.38		
7440-31-5	Tin		4 8		М	0 11	0.32	0 63	0 63		
7440-32-6	Titani	um	98 8		м	0.051	0 15	0 30	0 30		

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			1 INORGANIC ANALYSIS	DATA SHEET		SRWH-005-0204-102716			
Lab Name		CT Laboratories		Contract TETRA TE	CH-SRWH	SITE			
Matrix (soil/water)).	SOIL		SDG No	123270)		_	
% Solids		78 0		Lab Sample ID	796372	2			
Analytical Method	Analytical Method EPA 6010C		_ _	Date Received	10/28/2	2016			
Dilution Factor 1.00			TCLP/SPLP Extraction Date/time:						
Analytical Run #		132151		Analysis Date/Time	11/(03/2016	15.04		
Analytical Prep E	Batch #	59873		Prep Date/Time	11/0	01/2016	12 00		
ICAL Calibration	#			Concentration Units:	mg/	/kg			
CAS #		Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL	
7440-09-7	Potass	um	439		14	42	83	83	
7440-23-5	Sodium)	96 9		51	15	30	30	

					Sample Descriptio			
	'n	1 NORGANIC ANALYSIS DA	ATA SHE	ET	SRWH-005-0204-102716			
_ab Name	CT Laboratories	c	ontract	TETRA TEC	CH-SRWH SITE			
Matrix (soil/water)	SOIL	s	DG No		123270			
% Solids	78 0	L:	ab Sampl	e ID	<u>796372</u>			
Analytical Method	D	ate Rece	ived	10/28/2	016			
Dilution Factor	10.00	т	TCLP/SPLP Extraction Date/time					
Analytical Run #	132150	Α	nalysis D	ate/Time	11/0	03/2016	18 19	
Analytical Prep Batch #	59873	P	rep Date	:/Time	11/0)1/2016	12 00	
ICAL Calibration #		c	Concentra	tion Units [.]	mg/l	kg		
CAS #	Analyte	Concentration	Qua	lifiers	DL	LOD	LOQ	RL
vering more than data from	n your onvironmental analyse	NG				Sai	mple Descrip	tion
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	IN	1 ORGANIC ANALYSIS I.	DATA SHE	ET		SRWH-0	06-0002-1027	716
Lab Name	CT Laboratories		Contract.	TETRA TE	CH-SRWH	SITE	·	
Matrix (soil/water)	SOIL		SDG No		123270			
% Solids	914		Lab Samp	le ID	796373			
Analytical Method	EPA 7471B		Date Rece	lived	10/28/2	016		
Dilution Factor.	1.00		TCLP/SPL	P Extraction	on Date/tir	ne:		
Analytical Run #	132103		Analysis D	ate/Time	11/0	3/2016	11 18	
Analytical Prep Batch #	59865	_	Prep Date	e/Time	10/3	31/2016	11 00	
ICAL Calibration #	11032016		Concentra	tion Units	mg/	kg		
CAS #	Analyte	Concentratio	n Qua	lifiers	DL	LOD	LOQ	RL

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Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-006-0002-102716

Lab Name CT Laboratories Matrix (soil/water) SOIL % Solids 91.4 Analytical Method EPA 6010C Dilution Factor 1.00 Analytical Run # 132150 Analytical Prep Batch # 59873 ICAL Calibration #:		Contract: TETRA TEC SDG No Lab Sample ID: Date Received TCLP/SPLP Extraction	2H-SRWH 123270 796373 10/28/20	SITE		
% Solids 91 4 Analytical Method EPA 6010C Dilution Factor 1.00 Analytical Run # 132150 Analytical Prep Batch # 59873 ICAL Calibration #: Analyte		Lab Sample ID [.] Date Received	796373			
Analytical Method EPA 6010C Dilution Factor 1.00 Analytical Run # 132150 Analytical Prep Batch # 59873 ICAL Calibration #:		Date Received				
Dilution Factor 1.00 Analytical Run # 132150 Analytical Prep Batch # 59873 ICAL Calibration #:			10/28/20			
Analytical Run # 132150 Analytical Prep Batch # 59873 ICAL Calibration #:		TCLP/SPLP Extraction)16		
Analytical Prep Batch # 59873 ICAL Calibration #: CAS # Analyte	<u>.</u>		n Date/tim	ie		
ICAL Calibration #: CAS # Analyte	· · · · · · · · · · · · · · · · · · ·	Analysis Date/Time	11/0:	2/2016	14.34	
CAS # Analyte		Prep Date/Time	11/0	1/2016	12 00	
-		Concentration Units:	 mg/k	a		
7420.00.5 Aluminum	Concentrat	ion Qualifiers	DL	LOD	LOQ	RL
7429-50-J Aluminum	1960	В	0 044	0 13	0 27	0 27
7440-36-0 Antimony	31		0.14	0 44	0 88	0 88
7440-38-2 Arsenic	139		0.14	0 44	0 88	0 88
7440-39-3 Banum	32 6	В	0 0099	0 028	0 055	0 055
7440-41-7 Beryllium	0 14		0 0044	0 013	0 044	0 044
7440-43-9 Cadmium	3 1		0 0066	0 022	0 044	0 044
7440-47-3 Chromium	66		0.025	0 077	0 15	0.15
7440-48-4 Cobalt	3 9		0 044	0.13	0 27	0 27
7440-50-8 Copper	37 6	· · · · · · · · · · · · · · · · · · ·	0 077	0 22	0 44	0 44
7439-89-6 Iron	18100		0 33	0 99	2 0	2 0
7439-92-1 Lead	464		0.044	0 14	0 28	0.28
7439-96-5 Manganese	351		0 028	0 083	0 17	0.17
7440-02-0 Nickel	88		0 023	0 066	0 13	0.13
7782-49-2 Selenium	0 22	U	0 066	0 22	0 44	0 44
7440-22-4 Silver	0 093	J	0 019	0 055	0 11	0 11
7440-28-0 Thallium	0 36	J	880 0	0 27	0 53	0 53
7440-62-2 Vanadium	88		0 013	0 044	0 088	0 088
7440-66-6 Zinc	586		0.055	0.17	0 33	0.22
7440-31-5 Tin			0 055	0.17	0.00	0 33
7440-32-6 Titanium	11.7		0 055	0.17	0 55	0 55

vering more than data fro	n your environmental ar	nalyees			Sa	mple Descript	tion
		1 INORGANIC ANALYSIS	DATA SHEET		SRWH-0	06-0002-1027	16
Lab Name	CT Laboratories		Contract TETRA TE	CH-SRWI	I SITE		
Matrıx (soil/water)	SOIL		SDG No	123270)		
% Solids	91 4		Lab Sample ID	796373			
Analytical Method	EPA 6010C		Date Received	10/28/2	2016		
Dilution Factor	1.00		TCLP/SPLP Extraction	tion Date/time			
Analytical Run #	132151		Analysis Date/Time	11/	03/2016	15 22	
Analytical Prep Batch #	59873	-	Prep. Date/Time.	11/	01/2016	12 00	
ICAL Calibration #			Concentration Units	mg	/kg		<u>-</u>
CAS#	Analyte	Concentrat	ion Qualifiers	DL	LOD	LOQ	RL
7440-09-7 Pota	ssium		12	36	73	73	
7440-23-5 Sod	ium 120			44	13	27	27

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Sample Description

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		"	1 NORGANIC ANALYSIS DA	TA SHEET	SRWH-006-0002-102716				
Lab Name		CT Laboratories	C	ontract TETRA TE	CH-SRWH	I SITE			
Matrix (soil/wate	r)	SOIL	S	DG No	123270)			
% Solids:		91 4	La	ab Sample ID [.]	796373	3			
Analytical Metho	d	EPA 6010C	D	ate Received	10/28/2	2016			
Dilution Factor		10.00	TO	CLP/SPLP Extraction	n Date/tir	me: _			
Analytical Run #	# .	132150	A	nalysis Date/Time	11/0	03/2016	18:26		
Analytical Prep	Batch #	59873	P	rep Date/Time [.]	11/01/2016 mg/kg		12 00		
ICAL Calibration	n #		c	oncentration Units					
CAS #		Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL	
7440-70-2	Calcu	Jm	68500		27	77	15	15	
7439-95-4	Magn	esium	34000		15	4.4	88	88	

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		1 INORGANIC ANALYSIS	DATA SHEET		SRWH-0	06-0204-1027	/16
Lab Name	CT Laboratories	<u> </u>	Contract. TETRA TE	CH-SRWF	ISITE		
Matrix (soil/water) [,]	SOIL	<u>.</u>	SDG No	123270)		
% Solids	83 7		Lab Sample ID:	796374	·		
Analytical Method	EPA 7471B		Date Received	10/28/2	016		
Dilution Factor	1.00		TCLP/SPLP Extraction	on Date/tir	me [.]		
Analytical Run #:	132103		Analysis Date/Time	11/0)3/2016	11 20	
Analytical Prep Batch #	59865		Prep Date/Time	10/3	31/2016	11 00	
ICAL Calibration #.	11032016	· · · · · · · · · · · · · · · · · · ·	Concentration Units:	mg/	kg		
CAS#	Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL

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CT LABORATORIES delivering more than data from your environmental analyses 7

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-006-0204-102716

			KGANIC ANAL 1313						
Lab Name.		CT Laboratories		Contract	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)		SOIL		SDG No		123270			<u></u>
% Solids		83 7		Lab Sample	e ID	<u>796374</u>			
Analytical Method		EPA 6010C		Date Receiv	ved.	10/28/2	016		
Dilution Factor:		1.00		TCLP/SPLF	P Extraction	on Date/tin	ne _		
Analytical Run #		132150		Analysis Da	ate/Time	11/0	2/2016	14 41	
Analytical Prep Bate	:h #	59873		Prep Date/	Time	11/0	1/2016	12 00	
ICAL Calibration #				Concentrati	on Units	mg/ł	kg		
CAS #	Atical Method EPA 6010C on Factor: 1.00 ytical Run # 132150 ytical Prep Batch # 59873 Calibration #	Concentratio	on Qual	ifiers	DL	LOD	LOQ	RL	
7429-90-5	Aluminu	um	2910		В	0 047	0.14	0 28	0 28 .
7440-36-0	Antimor	ıy	0 62	J		0.15	0.47	0 95	0 95
7440-38-2	Arsenic		7 3			0 15	0.47	0 95	0 95
7440-39-3	Barium		28.4		В	0 011	0.030	0 059	0 059
7440-41-7	Berylliu	m	0 23			0 0047	0 014	0 047	0 047
7440-43-9	Cadmiu	im	0 48			0 0071	0 024	0 047	0 047
7440-47-3	Chrom	um	6 0			0 027	0.083	0 17	0 17
7440-48-4	Cobalt		5 0		-	0 047	0 14	0 28	0 28
7440-50-8	Copper		20.7	_		0 083	0 24	0 47	0 47
7439-89-6	iron		11500			0 35	11	2 1	2.1
7439-92-1	Lead	····	43 2			0 047	0 15	0 30	0 30
7439-95-4	Magnes	sium	17100			0 17	0 47	0 95	0 95
7439-96-5	Mangar	1ese	296			0 030	0 089	0 18	0 18
7440-02-0	Nickel		8 7			0 025	0 071	0 14	0 14
7782-49-2	Seleniu	m	0 24	U		0 071	0 24	0 47	0 47
7440-22-4	Silver		0 059	U		0 020	0 059	0 12	0 12
7440-28-0	Thalliun	n	0 28	U		0 095	0 28	0 57	0 57
7440-62-2	Vanadıı	JW	14 1			0 014	0.047	0 095	0.095
7440-66-6	Zinc		50 9			0 059	0.18	0 35	0 35
7440-31-5	Tin		3 0			0.11	0.30	0 59	0 59
7440-32-6	Titaniur	n	94 9			0 047	0 14	0 28	0 28

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1 SRWH-006-0204-102716 INORGANIC ANALYSIS DATA SHEET TETRA TECH-SRWH SITE Lab Name **CT** Laboratories Contract[.] Matrix (soil/water) SOIL SDG No 123270 % Solids 83 7 Lab Sample ID: 796374 Analytical Method Date Received EPA 6010C 10/28/2016 **Dilution Factor** 1.00 TCLP/SPLP Extraction Date/time Analytical Run #: 132151 Analysis Date/Time 11/03/2016 15 25 Analytical Prep Batch # Prep Date/Time 59873 11/01/2016 12 00 ICAL Calibration # Concentration Units: mg/kg CAS# Analyte Concentration Qualifiers DL LOD LOQ RL 7440-09-7 Potassium 352 13 39 78 78 7440-23-5 Sodium 62 4 4.7 14 28 28

Sample Description

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	INOF	RGANIC ANALYSIS DA	TA SHEET		SRWH-0	06-0204-1027	16
ab Name	CT Laboratories	Co	ntract: TETRA TEC	CH-SRWH	ISITE		
Matrix (soil/water)	SOIL	SD	G No	123270)	<u>_</u>	
% Solids	83 7	Lal	o Sample ID	<u>796374</u>	ļ		
Analytical Method	EPA 6010C	Da	te Received	10/28/2	2016		
Dilution Factor.	10.00	TCLP/SPLP Ext	LP/SPLP Extraction	n Date/time			
Analytical Run #	132150	An	alysis Date/Time	11/0	03/2016	18 32	
Analytical Prep Batch #	59873	Pre	ep Date/Time ⁻	11/0	01/2016	12 00	
CAL Calibration #		Co	ncentration Units	mg/	kg		
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-70-2 Caicu		55900	<u></u>	2.8	83	17	17

voring more than data from	your environmental analyses					Sar	nple Descrip	tion
	INOR	1 CGANIC ANALYSIS D	ATA SHEI	Ŧ	SRWH-007-0002-102716			
_ab Name	CT Laboratories	(Contract	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	SOIL	s	SDG Noʻ		123270			
% Solids [.]	82 2	L	.ab Sampl	e ID.	796375			
Analytical Method	EPA 7471B		Date Rece	ved:	10/28/2	016		
Dilution Factor	1.00	ן	TCLP/SPL	Extractio	n Date/tin	ne _		
Analytical Run #	132103	/	Analysis D	ate/Time	11/0	3/2016	11.22	
Analytical Prep Batch #.	59865	F	Prep Date	Time	10/3	1/2016	11 00	
CAL Calibration #	11032016		Concentrat	ion Units:	mg/l	kg		
CAS #	Analyte	Concentration	n Qua	lifiers	DL	LOD	LOQ	RL
7439-97-6 Mercury 0 12		0 12			0 0026	0 0053	0 010	0 010

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		1 INORGANIC ANALYSIS I	DATA SHEET		SRWH-0	07-0002-1027	'16
Lab Name	CT Laboratories		Contract TETRA T	ECH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270			
% Solids [.]	82 2		Lab Sample ID [.]	796375			
Analytical Method	EPA 6010C		Date Received	10/28/2	016		
Dilution Factor			TCLP/SPLP Extract	ion Date/tin	ne		
Analytical Run #	132150		Analysis Date/Time	11/0	2/2016	14 48	
Analytical Prep Bat			Prep Date/Time		1/2016	12 00	
ICAL Calibration #			Concentration Units	mg/l			
CAS #	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	R
7429-90-5	Aluminum	5650	В	0 046	0 14	0 28	02
7440-36-0	Antimony	7 4		0 15	0 46	0 92	0 9
7440-38-2	Arsenic	130		0 15	0 46	0 92	0 9
7440-39-3	Banum	157	В	0 010	0 029	0 057	0 0
7440-41-7	Beryllium	0 60		0 0046	0 014	0.046	0.0
7440-43-9	Cadmium	29		0 0069	0.023	0 046	0.0
7440-70-2	Calcium	15800	В	0 28	0 80	16	1
7440-47-3	Chromium	11 8		0 026	0 080	0 16	0 -
7440-48-4	Cobait	5 1		0 046	0 14	0 28	0 2
7440-50-8	Copper	55.4		0 080	0 23	0 46	0.4
7439-92-1	Lead	282		0 046	0.14	0 29	0.2
7439-95-4	Magnesium	4450		0 16	0.46	0 92	0 9
7439-96-5	Manganese	399		0 029	0.086	0 17	0 1
7440-02-0	Nickel	17 0	• • • • • • • • •	0 024	0 069	0 14	0 1
7782-49-2	Selenium	0 23	U	0 069	0 23	0 46	0 4
7440-22-4	Silver	0 11		0 020	0 057	0 11	0 1
7440-28-0	Thallium	11		0 092	0 28	0 55	0.5
7440-62-2	Vanadium	17 0		0 014	0 046	0 092	0 0
7440-66-6	Zinc	402		0 057	0 17	0 34	03
7440-31-5	Tın	19 0		0 10	0 29	0 57	0.5
7440-32-6	Titanium	229		0 046	0 14	0 28	0 2

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	I	1 NORGANIC ANALYSIS DA	TA SHEET	SRWH-007-0002-102716			
_ab Name	CT Laboratories	Co	ntract TETRA TE	CH-SRWI	H SITE		
Matrix (soil/water)	SOIL	SD	OG No	123270)		
% Solids	82 2	La	b Sample ID	796375	5	<u>-</u> ,	
Analytical Method	EPA 6010C	Da	te Received	10/28/2	2016		
Dilution Factor	1.00	тс	LP/SPLP Extraction	n Date/ti	me _		
Analytical Run #.	132151	An	alysis Date/Time	11/	03/2016	15 28	
Analytical Prep Batch #	59873	Pre	ep. Date/Time	11/	01/2016	12 00	
ICAL Calibration #		Co	ncentration Units:	mg/	/kg		
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	R
7440-09-7 Pc	tassium	823		13	38	76	7
7440-23-5 Sc	dium	196		46	14	28	2

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	INORGA	NIC ANALYSIS DATA	LYSIS DATA SHEET				16
_ab Name	CT Laboratories	Contra	act TETRA TE	CH-SRWF	ISITE		
Matrix (soil/water)	SOIL	SDG	No	<u>123270</u>)	·	
% Solids	82 2	Lab S	ample ID	<u>7</u> 96375	5		
Analytical Method	EPA 6010C	Date F	Received	<u>1</u> 0/28/2	016		
Dilution Factor:	10.00		SPLP Extractio	n Date/tı	me		
Analytical Run #.	132150	Analy	sıs Date/Tıme	11/(03/2016	18 [.] 39	_
Analytical Prep Batch #	59873	Prep	Date/Time	11/0	01/2016	12.00	
CAL Calibration #		Conce	entration Units	mg/	kg		
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7439-89-6 Iron		35600		34	10		21

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		1 INORGANIC ANALYSIS	DATA SHE	ET		SRWH-0	07-0204-1027	'16
lame [.]	CT Laboratories		Contract	TETRA TE	CH-SRWH	SITE		
x (soil/water)	SOIL		SDG No		<u>123270</u>	1		
lids.	90 5		Lab Samp	le ID:	<u>796376</u>			
rtical Method	EPA 7471B	<u></u>	Date Rece	eived	10/28/2	016		
on Factor	1.00		TCLP/SPL	P Extraction	on Date/tin	ne		
ytical Run #	132103		Analysis D	ate/Time	11/0	3/2016	11 29	
vtical Prep Batch #	59865	-	Prep Date	e/Time	10/3	31/2016	11 00	
Calibration #	11032016		Concentra	tion Units:	mg/l	kg		
CAS#	Analyte	Concentrati	on Qua	alifiers	DL	LOD	LOQ	RL
	Analyte	Concentrati	on Qua	alifiers	DL 0 0024	LOD	LOQ 0 0095	-

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Sample Description

			1 INORGANIC ANALYSIS	S DATA	SHEET		SRWH-0	07-0204-1027	'16
Lab Name		CT Laboratories		Contr	act TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)		SOIL		SDG	No	123270	. <u></u>	<u></u>	
% Solids [.]		90 5		Lab S	ample ID [.]	796376			
Analytical Method		EPA 6010C		Date	Received.	10/28/2	016		
Dilution Factor		1.00			SPLP Extraction	on Date/tin	ne:		
Analytical Run #:		132150		Analy	sis Date/Time	11/0	2/2016	14:55	
Analytical Prep Bate	ch #	59873		-	Date/Time	<u> </u>	1/2016	12:00	<u>-</u>
ICAL Calibration #			· · · · · ·		entration Units.	mg/l		12.00	
CAS #		Analyte	Concentrat	-	Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Alumir		2950		B	0 039	0 12	0 24	0 24
7440-36-0	Antimo	ony	0 28		J	0 13	0 39	0 79	0 79
7440-38-2	Arseni	c	39			0 13	0.39	0 79	0 79
7440-39-3	Bariun	<u>יי</u>	20 1		В	0 0088	0 025	0.049	0 049
7440-41-7	Berylli	um	0 095	-		0 0039	0 012	0.039	0 039
7440-43-9	Cadmi	um	0 32			0.0059	0 020	0.039	0 039
7440-47-3	Chrom	แนฑ	53			0 023	0 069	0.14	0 14
7440-48-4	Cobalt		4.1			0 039	0.12	0 24	0 24
7440-50-8	Сорре	r	10.3			0 069	0 20	0.39	0 39
7439-89-6	Iron		8790			0 29	0 88	18	1.8
7439-92-1	Lead		16 6			0 039	0 12	0 25	0 25
7439-96-5	Manga	inese	218	<u> </u>		0 025	0.074	0 15	0 15
7440-02-0	Nickel		7 5			0 021	0 059	0 12	0.12
7782-49-2	Seleni	um	0 20		U	0 059	0 20	0 39	0 39
7440-22-4	Silver		0 049		U	0 017	0 049	0 098	0 098
7440-28-0	Thalliu	m	0 24		U	0 079	0 24	0 47	0 47
7440-62-2	Vanad	ium	96			0 012	0 039	0 079	0 079
7440-66-6	Zinc		26 8			0 049	0.15	0 29	0 29
7440-31-5	Tin		16		B	0 088	0 25	0 49	0 49
7440-32-6	Titaniu	ım	89.9			0 039	0.12	0 24	0.24

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			1 INORGANIC ANALYSIS	DATA SHEET		SRWH-0	07-0204-1027	16
Lab Name		CT Laboratories		Contract TETRA TE	CH-SRWH	H SITE		
Matrix (soil/water)		SOIL		SDG No	123270)		
% Solids		90 5		Lab Sample ID [.]	796376	3		
Analytical Method		EPA 6010C		Date Received	10/28/2	2016		
Dilution Factor		1.00		TCLP/SPLP Extraction	on Date/tu	me _		
Analytical Run #		132151		Analysis Date/Time	11/0	03/2016	15 37	
Analytical Prep Bate	ch #:	59873		Prep Date/Time	11/0	01/2016	12.00	
ICAL Calibration #				Concentration Units	mg/	/kg		
CAS #		Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Potassi	um	471		11	32	65	65
7440-23-5	Sodium		96 0		39	12	24	24

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-007-0204-102716

Lab Name	CT Laboratories		Contract	TETRA TEC	H-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No		123270	1		
% Solids	90 5		Lab Sample	e ID:	796376			
Analytical Method	EPA 6010C		Date Recei	ved	10/28/2	016		
Dilution Factor:	10.00	······································	TCLP/SPLI	P Extractior	n Date/tir	ne.		
Analytical Run #	132150		Analysis Da	ate/Time	11/0	3/2016	19:06	
Analytical Prep Batch #:	59873		Prep Date/	/Time	11/0	- 1/2016	12 00	
ICAL Calibration #:			Concentrat	ion Units:	mg/	kg		
CAS #	Analyte	Concentratio	n Qual	lifiers	DL	LOD	LOQ	RL
7440-70-2 Cal	cium	129000			2.4	69	14	14
7439-95-4 Ma	gnesium	65100			14	39	79	79

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		1 INORGANIC ANALYSIS	DATA SHE	ET		SRWH-00	7-0204-10271	16-D
Lab Name.	CT Laboratories		Contract	TETRA TE	ECH-SRWH	SITE		-
Matrix (soil/water) [.]	SOIL		SDG No		123270			
% Solids	92 2		Lab Samp	le ID	<u>796</u> 377			
Analytical Method	EPA 7471B		Date Rece	eived	10/28/2	016		
Dilution Factor:	1.00		TCLP/SPI	P Extraction	on Date/tir	ne _		
Analytical Run #	132103		Analysis E)ate/Time	11/0	3/2016	11 31	
Analytical Prep Batch #	59865		Prep Date	e/Time.	10/3	1/2016	11 00	
ICAL Calibration #	11032016		Concentra	ition Units:	mg/l	kg		<u></u>
CAS#	Analyte	Concentrat	ion Qu	alifiers	DL	LOD	LOQ	RL
7439-97-6 Merc	ury	0 020			0 0023	0 0046	0.0092	0 009;

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1 INORGANIC ANALYSIS DATA SHEET

SRWH-007-0204-102716-D

		RUANIC ANALISIS						
Lab Name	CT Laboratories		Contract	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No		123270			
% Solids	92 2	···	Lab Sample	e ID.	796377			
Analytical Method	EPA 6010C		Date Recei	ved	10/28/20	016		
Dilution Factor	1.00		TCLP/SPLI	P Extraction	on Date/tin	ne _	<u> </u>	
Analytical Run # [.]	132150		Analysis Da	ate/Time	11/0	2/2016	15:02	
Analytical Prep Batch #	59873	<u>.</u>	Prep. Date	/Time		1/2016	12:00	
ICAL Calibration #			Concentrat	ion Units.	mg/ł	q		
		<u></u>				-		
CAS #	Analyte	Concentratio	on Qua	lifiers	DL	LOD	LOQ	RL
7429-90-5 Alumin	um	1820		В	0 044	0 13	0 27	0 27
7440-36-0 Antimo	ny	0 23	J	-	0.14	0.44	0 89	0.89
7440-38-2 Arsenie	<u>.</u>	2 9			0.14	0.44	0 89	0.89
7440-39-3 Barium	1	13 9		В	0 010	0 028	0 056	0 056
7440-41-7 Beryllu	ım	0 027	J		0 0044	0 013	0 044	0 044
7440-43-9 Cadmi	um	0 27			0 0067	0.022	0.044	0 044
7440-47-3 Chrom	ium	3 6			0 026	0 078	0 16	0 16
7440-48-4 Cobalt		2 9			0 044	0 13	0 27	0 27
7440-50-8 Coppe	r	7 2			0 078	0 22	0 44	0 44
7439-89-6 Iron		6480			0 33	10	20	2 0
7439-92-1 Lead		78			0 044	0 14	0 28	0.28
7439-96-5 Manga	nese	162			0.028	0 083	0 17	0.17
7440-02-0 Nickel		4 8			0 023	0.067	0 13	0.13
7782-49-2 Selenu	Jm	0 22	U		0 067	0.22	0 44	0 44
7440-22-4 Silver		0 056	U		0 019	0 056	0 11	0 11
7440-28-0 Thalliu	m	0 27	U		0 089	0 27	0 53	0 53
7440-62-2 Vanad	um	6 5			0 013	0 044	0 089	0 089
7440-66-6 Zinc		23 7			0 056	0.17	0 33	0 33
7440-31-5 Tin		11		В	0 10	0 28	0 56	0 56
7440-32-6 Titaniu	m	68 4			0 044	0 13	0 27	0 27

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woring more than	data from	your onvironmental a	nalyses			Sa	mple Descrip	tion
			1 INORGANIC ANALYSIS	DATA SHEET		SRWH-00	07-0204-10271	6-D
Lab Name		CT Laboratories		Contract TETRA TE	CH-SRWH	SITE		
Matrix (soil/water))	SOIL		SDG No	123270)		
% Solids.		92 2		Lab Sample ID	796377	7		
Analytical Method	I	EPA 6010C		Date Received	10/28/2	2016		
Dilution Factor		1,00		TCLP/SPLP Extractio	n Date/ti	me		
Analytical Run #		132151		Analysis Date/Time	11/0	03/2016	15:40	
Analytical Prep E	Batch # [.]	59873		Prep Date/Time	11/0	01/2016	12 00	
ICAL Calibration	#			Concentration Units:	mg/	/kg		
CAS #		Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Potas	sium	320		12	37	73	73
7440-23-5	Sodiu	m	114		44	13	27	27

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vering more than data	from your onvironmontal analys	1 00 1				Sa	mple Descrip	tion
	11	NORGANIC ANALYSIS D	OATA SHE	ET		SRWH-00	07-0204-10271	6-D
Lab Name	CT Laboratories	(Contract	TETRA TEC	CH-SRWH	I SITE		
Matrix (soil/water)	SOIL		SDG No		123270)		
% Solids	92 2	l	Lab Sampl	le ID.	796377	7		
Analytical Method	EPA 6010C	[Date Rece	ived	10/28/2	2016		
Dilution Factor	10.00		TCLP/SPL	P Extraction	n Date/tı	me [.] _		
Analytical Run #	132150	,	Analysis D	ate/Time	11/0	03/2016	19:13	
Analytical Prep Batch	\$59873		Prep Date	e/Time	11/0	01/2016	12.00	
ICAL Calibration #			Concentra	tion Units	mg/	/kg		
CAS #	Analyte	Concentration	n Qua	lifiers	DL	LOD	LOQ	RL
7440-70-2 C	alcium	106000		•	27	7.8	16	16
7439-95-4 N	agnesium	56200			16	4.4	89	8.9

vering more man quia nor	n your environmental analy	506				Sar	mple Descrip	tion
	I	1 NORGANIC ANALYSIS I	DATA SHE	ET		SRWH-0	08-0002-1027	716
Lab Name.	CT Laboratories		Contract [.]	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No		123270			
% Solids.	83 8		Lab Samp	le ID	796379			
Analytical Method	EPA 7471B		Date Rece	lved	10/28/2	016		
Dilution Factor	1 00		TCLP/SPL	.P Extraction	on Date/tir	ne:		
Analytical Run #	132103		Analysis D	ate/Time	11/0	3/2016	11.33	
Analytical Prep Batch #	59865		Prep Date	e/Time	10/3	31/2016	11:00	
ICAL Calibration #	11032016		Concentra	tion Units	mg/	kg		
CAS#	Analyte	Concentratio	on Qua	lifiers	DL	LOD	LOQ	RL

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-008-0002-102716

						l			
Lab Name:		CT Laboratories		Contr	act <u>TETRA TI</u>	ECH-SRWH	SITE		
Matrix (soil/water	.)	SOIL		SDG	No	123270			
% Solids		83 8		Lab S	ample ID	796379			
Analytical Methor	d	EPA 6010C		Date	Received	10/28/20	016		
Dilution Factor:		1.00			SPLP Extracti	on Date/tim	ne _		
Analytical Run #	<i>t</i> .	132150		Analy	sis Date/Time	11/0	2/2016	15 28	
Analytical Prep		59873		- Prep	Date/Time	11/0	1/2016	12:00	·
ICAL Calibration				- Conc	entration Units	 mg/k			
			0	- •	0				
CAS #		Analyte	Concentrat		Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Alumi	num	3340		B	0 047	0 14	0 28	0 28
7440-36-0	Antim	ony	35		<u> </u>	0.15	0.47	0 95	0 95
7440-38-2	Arsen	IC	52 3			0 15	0 47	0 95	0 95
7440-39-3	Bariur	n	43 7			0 011	0.030	0 059	0 059
7440-41-7	Beryllı	lum	0 29			0 0047	0.014	0 047	0 047
7440-43-9	Cadm	ium	4 1			0 0071	0.024	0 047	0 047
7440-47-3	Chron	nium	7 6	_		0 027	0.083	0 17	0 17
7440-48-4	Cobal	t	5 4			0 047	0 14	0 28	0 28
7440-50-8	Сорре	er	60 8			0 083	0 24	0 47	0.47
7439-89-6	Iron		20300			0 35	11	21	2.1
7439-92-1	Lead		238			0 047	0 15	0 30	0 30
7439-95-4	Magn	esium	17400			0 17	0 47	0 95	0 95
7439-96-5	Mang	anese	396			0 030	0 089	0 18	0.18
7440-02-0	Nickel		13 7			0 025	0 071	0 14	0.14
7782-49-2	Selen	ium	0 24		U	0 071	0 24	0.47	0 47
7440-22-4	Silver		0 065		J	0 020	0 059	0 12	0.12
7440-28-0	Thallu	um	0 28		U	0 095	0 28	0 57	0 57
7440-62-2	Vanad	1ium	12 1		<u></u>	0 014	0 047	0 095	0 095
7440-66-6	Zinc		579			0.059	0 18	0 35	0 35
7440-31-5	Tin		15 5			0 11	0 30	0 59	0.59
7440-32-6	Titanii	um	159			0 047	0 14	0 28	0 28

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-008-0002-102716

						L			
Lab Name		CT Laboratories		Contract [.]	TETRA TE	CH-SRWH	ISITE		
Matrix (soil/wate	r)	SOIL		SDG No		123270)		
% Solids		83 8		Lab Samp	le ID	796379)		
Analytical Metho	d	EPA 6010C		Date Rece	eived.	10/28/2	016		
Dilution Factor.				TCLP/SPI	P Extractio	n Date/tır	ne: _		
Analytical Run	4	132151		Analysis E)ate/Time	11/0	03/2016	15:43	
Analytical Prep	Batch #	59873	Prep. Date	e/Time	11/0	01/2016	12 00		
ICAL Calibration	ı #			Concentra	ition Units	mg/	kg		
CAS #		Analyte	Concentratio	in Qua	alifiers	DL	LOD	LOQ	RL
7440-09-7	Potas	sium	428			13	39	78	78
7440-23-5	Sodiu	m	135			47	14	28	28

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doll	voring	1 000	e lha	m de	ata fi	י ווואס	NOM.	onv	tronr	nank	al c	nah	/500		
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Sample Description

		1 INORGANIC ANALYSIS	DATA SHEET		SRWH-0	08-0002-1027	16
Lab Name.	CT Laboratories		Contract TETRA TEC	CH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270)		
% Solids	83 8		Lab Sample ID	796379)		
Analytical Method	EPA 6010C		Date Received	10/28/2	016		
Dilution Factor	10.00		TCLP/SPLP Extraction	n Date/tır	ne:		
Analytical Run #.	132150		Analysis Date/Time	11/(03/2016	19 20	
Analytical Prep Batch #	59873		Prep Date/Time	11/(01/2016	12 00	
ICAL Calibration #:			Concentration Units	mg/	kg		
CAS #	Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL
7440-70-2 Calciu	m	39300		28	8.3	17	17 、

n your environmental analy	1		Sample Description SRWH-008-0204-102716					
CT Laboratories			ECH-SRWF	I SITE				
SOIL		SDG No	123270)				
82 1	l	ab Sample ID:	796380)				
EPA 7471B	[Date Received [.]	<u>10/28/2</u>	2016				
1.00		TCLP/SPLP Extract	ion Date/tir	me _				
132103	,	Analysis Date/Time	11/0	03/2016	11 [.] 35			
59865		Prep Date/Time.	10/3	31/2016	11:00			
11032016	(Concentration Units	mg/	'kg				
Analyte	Concentration	n Qualifiers	DL	LOD	LOQ	RL		
	CT Laboratones SOIL 82 1 EPA 7471B 1.00 132103 59865 11032016	CT Laboratones 0 SOIL S 82 1 I EPA 7471B I 1.00 I 132103 I 59865 I 11032016 I	SOIL SDG No 82 1 Lab Sample ID: EPA 7471B Date Received: 1.00 TCLP/SPLP Extract 132103 Analysis Date/Time 59865 Prep Date/Time. 11032016 Concentration Units	CT LaboratonesContractTETRA TECH-SRWHSOILSDG No12327082 1Lab Sample ID:796380EPA 7471BDate Received:10/28/21.00TCLP/SPLP Extraction Date/time132103Analysis Date/Time11/059865Prep Date/Time.10/211032016Concentration Unitsmg/	1 INORGANIC ANALYSIS DATA SHEETSRWH-00CT LaboratonesContractTETRA TECH-SRWH SITESOILSDG No12327082 1Lab Sample ID:796380EPA 7471BDate Received:10/28/20161.00TCLP/SPLP Extraction Date/time1132103Analysis Date/Time11/03/201659865Prep Date/Time.10/31/201611032016Concentration Unitsmg/kg	1 INORGANIC ANALYSIS DATA SHEETSRWH-008-0204-1027CT LaboratoriesContractTETRA TECH-SRWH SITESOILSDG No12327082 1Lab Sample ID:796380EPA 7471BDate Received:10/28/20161.00TCLP/SPLP Extraction Date/time132103Analysis Date/Time11/03/201659865Prep Date/Time.10/31/201611032016Concentration Unitsmg/kg		

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-008-0204-102716

				DAIA O					
Lab Name [.]		CT Laboratories		Contrac	t <u>TETRA</u>	TECH-SRWH	SITE		
Matrix (soil/water)		SOIL		SDG N	0	123270			
% Solids		82 1		Lab Sa	mple ID	796380			
Analytical Method		EPA 6010C		Date Re	eceived	10/28/2	016		
Dilution Factor		1.00		_ TCLP/S	PLP Extra	ction Date/tin	ne [.]		
Analytical Run #		132150		Analysi	s Date/Tım	e <u>11/0</u>	2/2016	15 35	
Analytical Prep Ba	tch #	59873		Prep D	ate/Time	11/0	1/2016	12 00	
ICAL Calibration #				Concer	tration Uni	ts/	kg		
CAS #		Analyte	Concentrat	tion (Qualifiers	DL.	LOD	LOQ	RL
7429-90-5	Alumin	um	4560		В	0 046	0.14	0 28	0 28
7440-41-7	Berylliu	ım	0 36	-		0 0046	0 014	0 046	0 046
7440-43-9	Cadmu	um	0 023	I	J	0 0069	0 023	0 046	0 046
7440-47-3	Chrom	ium	98			0 027	0 081	0 16	0 16
7439-89-6	Iron		19600			0.35	10	2 1	21
7439-95-4	Magne	sium	16900			0 16	0.46	0 92	0 92
7440-22-4	Silver		0 033		J	0 020	0.058	0 12	0 12
7440-32-6	Titaniu	m	171			0 046	0 14	0 28	0 28

C	T	L	A	B	0	R	A	T	0	R	1	E	5	the second second
dali	vovina	man	e the	m de	ada fi	000 1	now	onsu	noon	noni	al a	nah	1000	

1 SRWH-008-0204-102716 INORGANIC ANALYSIS DATA SHEET Contract TETRA TECH-SRWH SITE CT Laboratories Lab Name. SDG No. Matrix (soil/water) SOIL 123270 % Solids. 82 1 Lab Sample ID 796380 Analytical Method Date Received. EPA 6010C 10/28/2016 **Dilution Factor** 1.00 TCLP/SPLP Extraction Date/time Analytical Run # Analysis Date/Time 132151 11/03/2016 15:46 Analytical Prep Batch # 59873 Prep Date/Time 11/01/2016 12 00 ICAL Calibration # Concentration Units: mg/kg CAS# Analyte Concentration Qualifiers DL LOD LOQ RL 7440-09-7 Potassium 554 13 38 76 76 7440-23-5 112 Sodium 4.6 14 28 28

Sample Description

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-008-0204-102716

Matrix (soil/water) SOIL SDG No 123270 % Solids 82 1 Lab Sample ID 796380 Analytical Method EPA 6010C Date Received: 10/28/2016 Dilution Factor. 10.00 TCLP/SPLP Extraction Date/time			,	NONGANIC ANAL 1313	DATA SH					
% Solids 82 1 Lab Sample ID 796380 Analytical Method EPA 6010C Date Received: 10/28/2016 Dilution Factor. 10.00 TCLP/SPLP Extraction Date/time 11/03/2016 Analytical Run #' 132150 Analysis Date/Time: 11/03/2016 19 27 Analytical Prep Batch # 59873 Prep Date/Time: 11/01/2016 12 00 ICAL Calibration # 59873 Prep Date/Time: 11/01/2016 12 00 ICAL Calibration # 59873 Prep Date/Time: 11/01/2016 12 00 ICAL Calibration # Concentration Units mg/kg 7440-36-0 Antimony 4.6 U V 1.5 4.6 9.2 9.2 7440-38-2 Arsenic 3.7 J V 1.5 4.6 9.2 9.2 7440-39-3 Banum 36.7 0.10 0.29 0.58 0.58 7440-39-3 Banum 36.7 0.10 0.29 0.58 0.58 7440-39-3 Banum 36.7 0.10 0.29 0.58 0.58 7440-70-2<	Lab Name		CT Laboratories		Contract.	TETRA T	ECH-SRWH			
Analytical Method EPA 6010C Date Date Received: 10/28/2016 Dilution Factor. 10.00 TCLP/SPLP Extraction Date/lume	Matrix (soil/water)		SOIL		SDG No		123270)		
Image: Dilution Factor. 10.00 TCLP/SPLP Extraction Date/time Analytical Run # 132150 Analysis Date/Time 11/03/2016 19.27 Analytical Prep Batch # 59873 Prep Date/Time: 11/01/2016 12.00 ICAL Calibration # Concentration Units mg/kg mg/kg 11/01/2016 12.00 CAS # Analyte Concentration Units mg/kg 11/01/2016 12.00 RL 7440-36-0 Antimony 4.6 U V 1.5 4.6 9.2 9.2 7440-38-2 Arsenic 3.7 J V 1.5 4.6 9.2 9.2 7440-39-3 Barium 36.7 0.10 0.29 0.58 0.58 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-60-8 Copper 27.3 0.81 2.3 4.6 4.6 7430-92-1 Lead 54.0 0.46 1.4 2.9 2.9 7430-92-0 Nickel <td>% Solids</td> <td></td> <td>82 1</td> <td></td> <td>Lab Sam</td> <td>ple ID</td> <td>796380</td> <td>)</td> <td></td> <td></td>	% Solids		82 1		Lab Sam	ple ID	796380)		
Analytical Run # 132150 Analysis Date/Time 11/03/2016 19 27 Analytical Prep Batch # 59873 Prep Date/Time: 11/01/2016 12 00 ICAL Calibration # Concentration Units mg/kg 7440-36-0 Antimony 4 6 U V 15 4.6 9 2 9 2 7440-38-2 Arsenic 3 7 J V 1,5 4.6 9 2 9 2 7440-39-3 Barum 36 7 0 10 0 29 0 58 0 58 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-50-8 Copper 27 3 0 81 2 3 4 6 4 6 7440-50-8 Copper 27 3 0 81 2 3 4 6 4 6 7439-92-1 Lead 54 0 0.46 1.4 2.9 2 9 7440-60-8 Copper 27 3 0 81 2 3 4 6 4 6 7440-62-0 Nickel 20 9 0 24 0 69 1 4 1.4 7782-49-2 Selenium 19	Analytical Method		EPA 6010C	EPA 6010C D			10/28/2	2016		
Analytical Prep Batch # 59873 Prep Date/Time: 11/01/2016 12 00 ICAL Calibration # Concentration Units mg/kg CAS # Analyte Concentration Qualifiers DL LOD LOQ RL 7440-36-0 Antimony 4.6 U V 1.5 4.6 9.2 9.2 7440-38-2 Arsenic 3.7 J V 1.5 4.6 9.2 9.2 7440-39-3 Banum 36.7 0.10 0.29 0.58 0.58 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-60-8 Copper 27.3 0.81 2.3 4.6 4.6 7440-50-8 Copper 27.3 0.81 2.3 4.6 4.6 7439-92.1 Lead 54.0 0.46 1.4 2.9 2.9 7430-92.0 Nickel 20.9 0.87 1.7 1.7 7440-62-0 Nickel 20.9 0.24 0.69 1.4 1.4 7430-92.0 Nickel	Dilution Factor.	-	10.00 TO			LP Extract	ion Date/tir	me _		
Analytical Prep Batch # 59873 Prep Date/Time: 11/01/2016 12 00 ICAL Calibration # Concentration Units mg/kg CAS # Analyte Concentration Qualifiers DL LOD LOQ RL 7440-36-0 Antimony 4.6 U V 1.5 4.6 9.2 9.2 7440-38-2 Arsenic 3.7 J V 1.5 4.6 9.2 9.2 7440-38-2 Arsenic 3.7 J V 1.5 4.6 9.2 9.2 7440-39-3 Barium 36.7 0.10 0.29 0.58 0.58 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-63-8 Copper 27.3 0.81 2.3 4.6 4.6 7439-92.1 Lead 54.0 0.46 1.4 2.9 2.9 7439-92.5 Manganese 3.78 0.29 0.87 1.7 1.7 7440-62-0 Nickel 20.9 0.24 0.69 1.4 1.4	Analytical Run # [.]		132150 A			Date/Time	11/(03/2016	19 27	
CAS # Analyte Concentration Qualifiers DL LOD LOQ RL 7440-36-0 Antimony 4.6 U V 1.5 4.6 9.2 9.2 7440-38-2 Arsenic 3.7 J V 1.5 4.6 9.2 9.2 7440-39-3 Banum 36.7 J V 1.5 4.6 9.2 9.2 7440-70-2 Calcium 36.7 J V 1.5 4.6 9.2 9.2 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-63-8 Copper 27.3 0.81 2.3 4.6 4.6 7439-92-1 Lead 54.0 0.46 1.4 2.9 2.9 7439-96-5 Manganese 378 0.29 0.87 1.7 1.7 7440-02-0 Nickel 20.9 0	Analytical Prep Bate	ch #	59873 P			ie/Time:	11/(01/2016		
7440-36-0 Antimony 4 6 U V 1 5 4.6 9 2 9 2 7440-38-2 Arsenic 37 J V 1.5 4.6 9 2 9 2 7440-39-3 Barium 36 7 0 10 0 29 0 58 0 58 7440-39-3 Barium 36 7 0 10 0 29 0 58 0 58 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-48-4 Cobalt 6 6 0.46 1.4 2.8 2.8 7440-50-8 Copper 27 3 0 81 2.3 4 6 4 6 7439-92-1 Lead 54 0 0.46 1.4 2.9 2 9 7439-92-1 Lead 54 0 0.46 1.4 2.9 2 9 7439-92-5 Manganese 378 0 29 0.87 1.7 1.7 7440-02-0 Nickel 20 9 0 24 0 69 1.4 1.4 782-49-2 Selenium 1 9 J V 0 92 2.8 5.5	ICAL Calibration #		c			ation Units	mg/	kg		
7440-38-2 Arsenic 3 7 J V 1.5 4.6 9 2 9 2 7440-39-3 Barium 36 7 0 10 0 29 0 58 0 58 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-48-4 Cobalt 6 6 0.46 1.4 2.8 2.8 7440-50-8 Copper 27 3 0 81 2.3 4.6 4.6 7439-92-1 Lead 54 0 0.46 1.4 2.9 2.9 7439-96-5 Manganese 378 0 29 0.87 1.7 1.7 7440-02-0 Nickel 20 9 0 24 0 69 1.4 1.4 7782-49-2 Selenium 1 9 J V 0 92 2.8 5.5 5.5 7440-62-2 Vanadium 197 0.14 0.46 0.92 0.92 7440-62-2 Vanadium 197 0.14 0.46 0.92 0.92 7440-66-6 Zinc 90.3 0 58 1.7 3.5 3.5	CAS #		Analyte	Concentrati	ion Qu	alifiers	DL	LOD	LOQ	RL
7440-39-3 Barium 36 7 0 10 0 29 0 58 0 58 7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-48-4 Cobalt 6 6 0.46 1.4 2.8 2.8 7440-50-8 Copper 27 3 0.81 2.3 4.6 4.6 7439-92-1 Lead 54 0 0.46 1.4 2.9 2.9 7439-96-5 Manganese 378 0.29 0.87 1.7 1.7 7440-02-0 Nickel 20.9 0.24 0.69 1.4 1.4 7782-49-2 Selenium 1.9 J V 0.92 2.8 5.5 7440-62-0 Thallium 2.8 U V 0.92 2.8 5.5 7440-62-2 Vanadium 1.9.7 0.14 0.46 0.92 0.92 7440-62-2 Vanadium 1.9.7 0.14 0.46 0.92 0.92 7440-66-6 Zinc 90.3 0.58 1.7 3.5 3.5 <td>7440-36-0</td> <td>Antimon</td> <td>y.</td> <td>4 6</td> <td>U</td> <td>V</td> <td>15</td> <td>4.6</td> <td>92</td> <td>92</td>	7440-36-0	Antimon	y.	4 6	U	V	15	4.6	92	92
7440-70-2 Calcium 48800 2.8 8.1 16 16 7440-70-2 Calcium 66 0.46 1.4 2.8 2.8 7440-48-4 Cobalt 66 0.46 1.4 2.8 2.8 7440-50-8 Copper 27.3 0.81 2.3 4.6 4.6 7439-92-1 Lead 54.0 0.46 1.4 2.9 2.9 7439-96-5 Manganese 378 0.29 0.87 1.7 1.7 7440-02-0 Nickel 20.9 0.24 0.69 1.4 1.4 7782-49-2 Selenium 1.9 J V 0.92 2.8 5.5 7440-28-0 Thallium 2.8 U V 0.92 2.8 5.5 5.5 7440-62-2 Vanadium 1.9.7 0.14 0.46 0.92 0.92 7440-62-2 Vanadium 1.9.7 0.14 0.46 0.92 0.92 7440-66-6 Zinc 90.3 0.58 1.7 3.5 3.5	7440-38-2	Arsenic		37	J	V	1.5	4.6	92	92
7440-48-4 Cobalt 66 0.46 1.4 28 28 7440-50-8 Copper 27 3 081 23 46 46 7439-92-1 Lead 54 0 0.46 14 2.9 29 7439-96-5 Manganese 378 029 0.87 1.7 1.7 7440-02-0 Nickel 20.9 0.24 0.69 1.4 1.4 7782-49-2 Selenium 1.9 J V 0.69 2.3 4.6 4.6 7440-28-0 Thallium 2.8 U V 0.92 2.8 5.5 5.5 7440-62-2 Vanadium 19.7 0.14 0.46 0.92 0.92 7440-62-2 Vanadium 19.7 0.14 0.46 0.92 0.92 7440-66-6 Zinc 90.3 0.58 1.7 3.5 3.5	7440-39-3	Barium		36 7			0 10	0 29	0 58	0 58
7440-50-8 Copper 27 3 0 81 2 3 4 6 4 6 7439-92-1 Lead 54 0 0.46 1 4 2.9 2 9 7439-92-1 Lead 54 0 0.46 1 4 2.9 2 9 7439-92-5 Manganese 378 0 29 0 87 1 7 1 7 7440-02-0 Nickel 20 9 0 24 0 69 1 4 1.4 7782-49-2 Selenium 1 9 J V 0 69 2 3 4 6 4 6 7440-28-0 Thallium 2 8 U V 0 92 2 8 5 5 5.5 7440-62-2 Vanadium 19 7 0.14 0 46 0 92 0.92 7440-62-2 Vanadium 19 7 0.14 0 46 0 92 0.92 7440-66-6 Zinc 90 3 0 58 1.7 3 5 3.5	7440-70-2	Calcium		48800			2.8	8.1	16	16
Transmission France France<	7440-48-4	Cobalt		6 6			0.46	1.4	28	28
7439-96-5 Manganese 378 0 29 0 87 1 7 1 7 7440-02-0 Nickel 20 9 0 24 0 69 1 4 1.4 7782-49-2 Selenium 1 9 J V 0 69 2 3 4 6 4 6 7440-02-0 Nickel 20 9 0 24 0 69 1 4 1.4 7782-49-2 Selenium 1 9 J V 0 69 2 3 4 6 4 6 7440-28-0 Thallium 2 8 U V 0 92 2 8 5 5 5.5 7440-62-2 Vanadium 19 7 0.14 0 46 0 92 0.92 7440-66-6 Zinc 90 3 0 58 1.7 3 5 3.5	7440-50-8	Copper		27 3		··	0 81	23	4 6	4 6
7440-02-0 Nickel 20 9 0 24 0 69 1 4 1.4 7782-49-2 Selenium 1 9 J V 0 69 2 3 4 6 4 6 7440-28-0 Thallium 2 8 U V 0 92 2 8 5 5 5.5 7440-62-2 Vanadium 19 7 0.14 0 46 0 92 0.92 7440-66-6 Zinc 90 3 0 58 1.7 3 5 3.5	7439-92-1 ·	Lead		54 0			0.46	14	2.9	29
T782-49-2 Selenium 1 9 J V 0 69 2 3 4 6 4 6 7440-28-0 Thallium 2 8 U V 0 92 2 8 5 5 5.5 7440-62-2 Vanadium 19 7 0.14 0 46 0 92 0.92 7440-66-6 Zinc 90 3 0 58 1.7 3 5 3.5	7439-96-5	Mangan	ese	378			0 29	0 87	17	17
7440-28-0 Thallium 2.8 U V 0.92 2.8 5.5 7440-62-2 Vanadium 19.7 0.14 0.46 0.92 0.92 7440-66-6 Zinc 90.3 0.58 1.7 3.5 3.5	7440-02-0	Nickel		20 9			0 24	0 69	14	1.4
7440-62-2 Vanadium 19 7 0.14 0 46 0 92 0.92 7440-66-6 Zinc 90 3 0 58 1.7 3 5 3.5	7782-49-2	Seleniur	n	1 9	J	V	0 69	23	46	4 6
7440-66-6 Zinc 90 3 0 58 1.7 3 5 3.5	7440-28-0	Thallium	1	2 8	U	V	0 92	28	55	5.5
	7440-62-2	Vanadıu	ım	19 7	<u> </u>		0.14	0 46	0 92	0.92
7440-31-5 Tin 29 UV 10 29 58 58	7440-66-6	Zinc		90 3			0 58	1.7	3 5	3.5
	7440-31-5	Tın		29	U	V	10	2 9	58	58

ivering more than data from	n your onvironmental analyses				Sar	nple Descrip	tion			
	INO	1 RGANIC ANALYSIS DAT	A SHEET		SRWH-009-0002-102716					
Lab Name:	CT Laboratories	Cor	ntract TETRA T	ECH-SRWH	SITE					
Matrix (soil/water) [.]	SOIL	SD0	G No	123270						
% Solids:	81.0	Lab	Sample ID	<u>796381</u>						
Analytical Method	EPA 7471B	Dat	e Received	10/28/2	016					
Dilution Factor	1.00	TCI	_P/SPLP Extract	ion Date/tin	ne:					
Analytical Run #	132103	Ana	alysis Date/Time	11/0	3/2016	11 37				
Analytical Prep Batch #	59865	Pre	p Date/Time	10/3	1/2016	11 00 (
ICAL Calibration #	11032016	Cor	centration Units	mg/l	kg					
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL			
7439-97-6 Merc	urv	0.18		0 0028	0 0056	0.011	0.0			

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-009-0002-102716

Lab Name		CT Laboratories		Contract: TETRA T	ECH-SRWH	SITE		
Matrix (soil/water	·)·	SOIL		SDG No	123270		****	
% Solids	,	81 0		Lab Sample ID	796381		·	
Analytical Method	Ч	EPA 6010C		Date Received	10/28/2			
Dilution Factor		1.00		TCLP/SPLP Extract				<u> </u>
						_		
Analytical Run #		132150		Analysis Date/Time		2/2016	15 42	
Analytical Prep I	Batch #.	59873	<u> </u>	Prep Date/Time	11/0	1/2016	12.00	
ICAL Calibration	#			Concentration Units	mg/ł	kg		
CAS #		Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Alumini	um	4000	В	0 050	0 15	0 30	0.30
7440-36-0	Antimo	ny	5 7		0 16	0 50	0 99	0 99
7440-38-2	Arsenic	;	64 2		0.16	0.50	0 99	0 99
7440-39-3	Barium		67 9		0 011	0 031	0 062	0.062
7440-41-7	Beryllıu	m	0.47		0 0050	0 015	0 050	0 050
7440-43-9	Cadmiu	ım	30	· · · · · · · · · · · · · · · · · · ·	0 0074	0.025	0 050	0 050
7440-70-2	Calciun	n	8750		0 30	0 87	17	17
7440-47-3	Chrom	um	77	<u> </u>	0 029	0 087	0 17	0 17
7440-48-4	Cobalt		5 5		0 050	0 15	0 30	0 30
7440-50-8	Copper	<u></u>	43 1		0 087	0 25	0 50	0 50
7439-89-6	Iron		20700		0 37	11	2 2	22
7439-92-1	Lead		276		0 050	0 16	0 31	0 31
7439-95-4	Magnes	sium	1590		0 17	0 50	0 99	0 99
7439-96-5	Mangai	nese	274		0 031	0 093	0 19	0 19
7440-02-0	Nickel	· <u> </u>	17 2		0 026	0 074	0 15	0 15
7782-49-2	Seleniu	ım	0 21	J	0 074	0 25	0 50	0 50
7440-22-4	Silver		0 062	U	0 021	0 062	0 12	0 12
7440-28-0	Thalliur	n	0 27	J	0 099	0 30	0 60	0.60
7440-62-2	Vanadı	um	14 0	· · · · · ·	0 015	0 050	0 099	0 099
7440-66-6	Zinc		878		0 062	0 19	0 37	0 37
7440-31-5	Tın		14 3		0 11	0 31	0 62	0 62
7440-32-6	Titaniui	m	231	_	0 050	0 15	0 30	0.30

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		1 INORGANIC ANALYSIS DA	ATA SHEET		SRWH-0	09-0002-1027	'16
Lab Name:	CT Laboratories	c	ontract: TETRA TE	CH-SRWF	ISITE		
Matrıx (soil/water)	SOIL	S	DG No	123270)		
% Solids	81 0	L:	ab Sample ID	<u>796381</u>			
Analytical Method	EPA 6010C	D	ate Received	10/28/2	2016		
Dilution Factor	1.00	т	CLP/SPLP Extraction	on Date/ti	me _		
Analytical Run #	132151	A	nalysis Date/Time	11/(03/2016	15 49	
Analytical Prep Batch	#. 59873	P	rep Date/Time	11/0	01/2016	12 00	
ICAL Calibration #		c	oncentration Units	mg/	'kg		A
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Potassium	639		14	41	82	82
7440-23-5	Sodium	416		5.0	15	30	30

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Sample Description

		1 INORGANIC ANALYSIS D/	ATA SHEET		SRWH-009-0204-102716				
Lab Name	CT Laboratories	c	ontract TETRA T	ECH-SRWH	ISITE				
Matrix (soil/water)	SOIL	S	DG No	123270)				
% Solids	82 0	L	ab Sample ID	796382					
Analytical Method	EPA 7471B	D	ate Received	10/28/2	2016				
Dilution Factor	1.00	Т	CLP/SPLP Extract	on Date/tır	me _				
Analytical Run #	132103	Α	nalysis Date/Time	11/0	03/2016	11 [.] 40			
Analytical Prep Batch #	59865	P	rep Date/Time	10/3	31/2016	11.00			
ICAL Calibration #:	11032016	c	concentration Units	mg/	kg				
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL		
7439-97-6 Merc	ury	0.037	· · · · · · · · · · · · · · · · · · ·	0 0026	0 0053	0 010	0 010		

Sample Description

	IN	IORGANIC ANALYSIS	SRWH-009-0204-102716				
Lab Name	CT Laboratories		Contract. TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270			
% Solids	82 0		Lab Sample ID [.]	796382			
Analytical Method	EPA 6010C		Date Received	10/28/2	016	·	
Dilution Factor:	20.00		TCLP/SPLP Extraction	on Date/tir	ne _		
Analytical Run #	132150		Analysis Date/Time	11/0)7/2016	14 52	
Analytical Prep Batch #.	59873		Prep Date/Time:	11/0)1/2016	12 00	
ICAL Calibration #			Concentration Units	mg/	kg		
CAS#	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL
7439-92-1 Lead		5500		0 98	3.1	61	6.1

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Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-009-0204-102716

		//vC	DRGANIC ANALYSIS	DATA SHE					
Lab Name	СТ	Laboratories		Contract	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)) <u>so</u>	L		SDG No		123270			
% Solids.	82.0)	<u> </u>	Lab Samp	le ID	796382			
Analytical Method	1 <u>EP</u> /	A 6010C		Date Rece	eived	10/28/20	016	<u> </u>	
Dilution Factor:		1.00	_	TCLP/SPL	.P Extraction	on Date/tin	ne _		
Analytical Run #	· 132	2150		Analysis D	ate/Time	11/0	2/2016	15.49	•
Analytical Prep E	Batch # 598	373	· · · · ·	Prep Date	e/Time [.]	11/0	1/2016	12 00	
ICAL Calibration	#:		Concentration Units				kg		
CAS #		Analyte	Concentrati	on Qua	alifiers	DL	LOD	LOQ	RL
7429-90-5	Aluminum		5760		В	0 049	0 15	0 29	0 29
7440-36-0	Antimony		0 49	U		0 16	0.49	0 98	0 98
7440-38-2	Arsenic		10.9			0 16	0 49	0 98	0 98
7440-39-3	Barium		72.0			0 011	0.031	0 061	0 061
7440-41-7	Beryllium		2 4			0.0049	0 015	0 049	0 049
7440-43-9	Cadmium		0 90			0 0074	0 025	0.049	0 049
7440-70-2	Calcium		27900		<u></u>	0 29	0 86	17	17
7440-47-3	Chromium		6 5			0 028	0 086	0 17	0 17
7440-48-4	Cobalt		4 7			0 049	0 15	0.29	0 29
7440-50-8	Copper		98 1			0 086	0 25	0 49	0.49
7439-89-6	Iron	····	12400			0 37	11	22	2 2
7439-95-4	Magnesium		10800			0 17	0 49	0 98	0 98
7439-96-5	Manganese		267			0 031	0 092	0 18	0 18
7440-02-0	Nickel		12 7			0 026	0 074	0 15	0 15
7782-49-2	Selenium		0 25	U		0 074	0 25	0 49	0 49
7440-22-4	Silver		0 085	J		0 021	0.061	0 12	0.12
7440-28-0	Thallium		0 29	U		0 098	0.29	0 59	0 59
7440-62-2	Vanadium -		18 3			0.015	0 049	0 098	0 098
7440-66-6	Zinc		256			0 061	0 18	0 37	0 37
7440-31-5	Tin		12 3			0 11	0 31	0 61	0 61
7440-32-6	Titanium		216			0 049	0 15	0 29	0.29

Sample Description

		1 INORGANIC ANALYSIS DATA SHEET				SRWH-009-0204-102716			
Lab Name		CT Laboratories	c	Contract TETRA TECH-SRWH SITE					
Matrix (soil/water)		SOIL		DG No	123270	123270			
% Solids		82 0		ab Sample ID:	796382				
Analytical Method		EPA 6010C		ate Received:	10/28/2016				
Dilution Factor		1.00	т	TCLP/SPLP Extraction Date/time.					
Analytical Run #		132151		nalysis Date/Time	11/	03/2016	15.52		
Analytical Prep Batch #.		59873		rep Date/Time	11/	01/2016	12.00		
ICAL Calibration #			c	oncentration Units	mg	/kg			
CAS #		Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL	
7440-09-7 Potassium		sium	1060		13	40	81	81	
7440-23-5	Sodium		432		49	15	29	29	

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		1 INORGANIC ANALYSIS DATA SHEET				SRWH-010-0002-102716								
Lab Name	CT Laboratories		Contract TETRA TEC		CH-SRWH SITE									
Matrix (soil/water)	SOIL		SDG No		123270	I								
% Solids	88 1	i	Lab Sample		796383	796383								
Analytical Method	EPA 7471B		Date Received.		10/28/2016									
Dilution Factor					on Date/tır	n Date/time								
Analytical Run #	132103		Analysis Date/Time		11/03/2016		11:42							
Analytical Prep Batch #	59865 11032016		Prep Date/Time. Concentration Units		10/31/2016 mg/kg		11.00							
ICAL Calibration #														
CAS #	Analyte	Concentratio	n Qua	lifiers	DL	LOD	LOQ	RL						
7439-97-6 Merc	ury	0.12		Y,M	0 0026	0 0051	0 010	0 01						
C	T	L	A	B	0	R	A	Т	0	R	1	£	5	A second se
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Sample Description

SRWH-010-0002-102716

		IN	ORGANIC ANALYSIS L	DATA SHEET	SRWH-010-0002-102		10-0002-1027	16
Lab Name:		CT Laboratories		Contract TETRA TE	CH-SRWF	I SITE		-
Matrix (soil/water	-)	SOIL	:	SDG No:	123270)		
% Solids		88 1		Lab Sample ID:	796383	3		
Analytical Method	d	EPA 6010C		Date Received:	10/28/2	2016		
Dilution Factor:		1.00		TCLP/SPLP Extraction	n Date/tu	me: _		
Analytical Run #	ŧ	132151		Analysis Date/Time	11/0	11/03/2016 15 54		
Analytical Prep	Batch #.	59873		Prep Date/Time	11/0	01/2016	12 00	-
ICAL Calibration	#			Concentration Units	mg/	′kg		
CAS #		Analyte	Concentratio	n Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Potas	sium	626		12	37	37 73	
7440-23-5	Sodiu	m	174	Y	44	13	27	27

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Sample Description

			1 INORGANIC ANALYSIS	S DATA SH	IEET			10-0002-1027	
Lab Name:		CT Laboratories		Contract	: <u>TETRA T</u>	ECH-SRWH	SITE		<u>.</u>
Matrix (soil/water	.)	SOIL		SDG No)	<u>123270</u>			
% Solids:		<u>88 1</u>		Lab Sam	nple ID	796383			
Analytical Metho	d	EPA 6010C		Date Re	ceived	10/28/20	016		
Dilution Factor		1.00		_ TCLP/SI	PLP Extracti	on Date/tin	ne _		
Analytical Run #	ŧ	132150		Analysis	Date/Time	11/02/2016		15.56	
Analytical Prep	Batch #	59873		- Prep Date/Time.		11/01/2016		12 00	
ICAL Calibration	#			- Concentration Units		mg/l	mg/kg		
CAS #		Analyte	Concentrat	- tion Q	ualifiers	DL	LOD	LOQ	RL
7429-90-5	Alumi	num	3180		M,B,Y	0 044	0 13	0 27	0 27
7440-36-0	Antim	ony	50		Y	0.14	0 44	0 89	0 89
7440-38-2	Arsen	IC	104		M,Y	0.14	0 44	0 89	0 89
7440-39-3	Bariur	n	47 3			0 010	0 028	0 055	0 055
7440-41-7	Beryllı	um	0 34	·····	M,Y	0 0044	0 013	0 044	0 044
7440-43-9	Cadm	ium	1 5			0 0066	0 022	0 044	0 044
7440-47-3	Chron	าเนฑ	7 4			0 025	0 078	0 16	0 16
7440-48-4	Cobal	t	7 0		M,Y	0 044	0.13	0 27	0 27
7440-50-8	Сорре	er	42 6		М	0 078	0.22	0.44	0 44
7439-89-6	Iron		17500		М	0 33	10	20	20
7439-92-1	Lead				Y,M	0 044	0.14	0 28	0 28
7439-95-4	Magn	esium	23900		M,Y	0.16	0.44	0 89	0 89
7439-96-5	Manga	anese	368		M,Y	0 028	0 083	0 17	0 17
7440-02-0	Nickel		15 6	···		0 023	0 066	0 13	0 13
7782-49-2	Selen	ium	0 22	U		0 066	0 22	0 4 4	0 44
7440-22-4	Silver		0 094	J		0 019	0.055	0 11	0 11
7440-28-0	Thallu		0.27	U		0 089	0 27	0 53	0 53
7440-62-2	Vanad	lium	11 8		М	0 013	0 044	0 089	0 089
7440-66-6	Zinc		176		М	0 055	0 17	0 33	0 33
7440-31-5	Tin		19 5			0 10	0 28	0 55	0 55
7440-32-6	Titanii	um	142		М	0 044	0 13	0 27	0 27

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.ab Name:	CT Laboratories	c	ontract TETRA TE	CH-SRWH	ISITE		
Matrix (soil/water)	SOIL	S	DG No	123270)	·	
% Solids:	88 1	L:	ab Sample ID	796383	3		
Analytical Method	EPA 6010C	D	ate Received	10/28/2	2016		
Dilution Factor	10.00	т	CLP/SPLP Extractio	n Date/tı	me _		
Analytical Run #	132150	· A	nalysis Date/Time	11/0	03/2016	19 34	
Analytical Prep Batch #	59873	P	rep. Date/Time	11/0	01/2016	12.00	
ICAL Calibration #		c	oncentration Units	mg/	/kg		
CAS #	Analyte	Concentration	Qualifiers	DL.	LOD	LOQ	RL
7440-70-2 Calcu			 M,Y	27	78	16	16

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vering more than data from	your environmental analyse	56				Sar	nple Descrip	tion
	IN	1 IORGANIC ANALYSIS L	DATA SHE	ET		SRWH-0	10-0204-1027	′16 _.
Lab Name	CT Laboratories		Contract	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No		123270			- · .
% Solids	92.1		Lab Samp	le ID	796384			
Analytical Method	EPA 7471B		Date Rece	eived	10/28/2	016		
Dilution Factor	1.00		TCLP/SPL	P Extraction	on Date/tin	ne _		
Analytical Run #	132103	·	Analysis D	ate/Time	11/0	3/2016	11 55	
Analytical Prep Batch #.	59865		Prep Date	e/Time	10/3	1/2016	11 00	
ICAL Calibration #	11032016		Concentra	tion Units	mg/l	(g	·	
CAS #	Analyte	Concentratio	n Qua	alifiers	DL	LOD	LOQ	RL
7439-97-6 Merc		0.0093	J		0 0024	0.0049	0 0097	0 009

ivering more than data from	n your environmental analys				Sa	mple Descript	lion
	11	1 NORGANIC ANALYSIS DA	TA SHEET	SRWH-010-0204-102716			
Lab Name	CT Laboratories	Co	ontract TETRA TEC	CH-SRWH SITE			
Matrix (soil/water)	SOIL	SI	DG No	123270)		
% Solids	92 1	La	ab Sample ID	796384	L .		
Analytical Method	EPA 6010C 1.00		ate Received	10/28/2016			
Dilution Factor			TCLP/SPLP Extraction		on Date/time		
Analytical Run #	132151	Ar	nalysis Date/Time	11/0	03/2016	16 18	
Analytical Prep Batch #	59873	Pr	rep Date/Time	11/0	01/2016	12 00	
ICAL Calibration #.		Co	oncentration Units:	mg/	/kg		
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	R
7440-09-7 Pota	ssium	413		11	33	66	6
7440-23-5 Sodi	um	92 4		40	12	24	24

7440-66-6

7440-31-5

7440-32-6

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Titanium

Sample Description

						mple Descrip	
		1 INORGANIC ANALYSIS	DATA SHEET		SRWH-0	10-0204-1027	/16
Lab Name:	CT Laboratories		Contract TETF	RA TECH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270	i		
% Solids	92 1	<u></u>	Lab Sample ID:	796384			
Analytical Method	EPA 6010C		Date Received	10/28/2	016		
Dilution Factor	1.00		TCLP/SPLP Ext	raction Date/tir		<u> </u>	
Anaiytical Run #	132150		Analysis Date/Ti	me11/0	2/2016	16 56	
Analytical Prep Batch	# 59873		Prep. Date/Time	11/0)1/2016	12 00	
ICAL Calibration #			Concentration U	nits. mg/	kg		
CAS #	Analyte	Concentrat	ion Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Aluminum	3360	В	0 040	0.12	0 24	0 24
7440-36-0	Antimony	0 40	U	0 13	0 40	0.80	0 80
7440-38-2	Arsenic	4 1		0 13	0 40	0 80	0.80
7440-39-3	Banum	30 6	<u> </u>	0 0090	0 025	0 050	0 050
7440-41-7	Beryllium	0 068		0 0040	0.012	0 040	0 040
7440-43-9	Cadmium	0 34		0 0060	0 020	0.040	0 040
7440-47-3	Chromium	5 2		0 023	0 070	0 14	0 14
7440-48-4	Cobalt	37		0 040	0 12	0 24	0 24
7440-50-8	Copper	8 1		0 070	0 20	0 40	0.40
7439-89-6	Iron	7820		0 30	0 90	18	18
7439-92-1	Lead	123		0 040	0 12	0 25	0 25
7439-96-5	Manganese	336		0 025	0 075	0 15	0 15
7440-02-0	Nickel	6 6		0 021	0.060	0 12	0 12
7782-49-2	Selenium	0 20	<u> </u>	0 060	0 20	0 40	0 40
7440-22-4	Silver	0 050	U	0 017	0 050	0 10	0 10
7440-28-0	Thallium	0 24	U	0 080	0 24	0 48	0 48
7440-62-2	Vanadium	99		0 012	0 040	0.080	0 080

23.7

0 59

91 6

0.050

0 090

0.040

в

0 15

0 25

0.12

0 30

0 50

0 24

0 30

0 50

0 24

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	INORGANIC ANA	1 LYSIS DATA SHEET		SRWH-0	10-0204-1027	'16
Lab Name	CT Laboratories	Contract TETRA TE	CH-SRW	SITE		
Matrix (soil/water)	SOIL	SDG No	123270)		
% Solids	92 1	Lab Sample ID	796384	1		
Analytical Method	EPA 6010C	Date Received.	10/28/2	2016		
Dilution Factor	10.00	TCLP/SPLP Extraction	n Date/time			
Analytical Run #	132150	Analysis Date/Time	11/03/2016 11/01/2016 mg/kg		19 4 1 12 [.] 00	
Analytical Prep Batch #	59873	Prep. Date/Time				
ICAL Calibration #		Concentration Units:				
CAS #	Analyte Conce	entration Qualifiers	DL	LOD	LOQ	RL
7440-70-2 Calci	um 104	000	2.4	7 0	14	14
7439-95-4 Magr	esium 550	000	14	4.0	80	80

vering more than data from	r your onvironmental analyse	Crof				Sa	mple Descrip	tion
	IN	1 IORGANIC ANALYSIS D	ATA SHE	ΈT	SRWH-011-0002-102716			
Lab Name	CT Laboratories	c	ontract	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	SOIL	s	DG No		123270			
% Solids [.]	89 8	L	ab Samp	ie ID	796385			
Analytical Method	EPA 7471B	D	ate Rece	eived	10/28/2	016		
Dilution Factor:	10.00	т	CLP/SPL	.P Extractio	n Date/tin	ne		
Analytical Run #	132103	Α	nalysis E)ate/Time	11/0	3/2016	14:47	
Analytical Prep Batch #	59865	Ρ	rep Date	e/Time	10/3	1/2016	11 00	
ICAL Calibration #	11032016	c	Concentra	tion Units.	mg/l	kg		
CAS #	Analyte	Concentration	Qua	alifiers	DL	LOD	LOQ	RL
7439-97-6 Merc	ury	0 78			0 024	0 048	0 096	0 096

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wering more tha	n data from	your environmental ar	101/1508			Sample Description			
			1 INORGANIC ANALYSIS	DATA SHEET	SRWH-011-0002-102716				
Lab Name		CT Laboratories		Contract TETRA TE	CH-SRWF	I SITE			
Matrix (soil/wate	er)	SOIL	·	SDG No	123270				
% Solids.		<u>89.8</u>		Lab Sample ID	796385	5			
Analytical Metho	bd	EPA 6010C		Date Received	10/28/2016				
Dilution Factor:				TCLP/SPLP Extraction	on Date/time:				
Analytical Run	#	132151		Analysis Date/Time	11/(03/2016	16:21		
Analytical Prep	Batch #:	59873		Prep Date/Time	11/0	01/2016	12:00		
ICAL Calibration	ו #:			Concentration Units:	mg/	/kg			
CAS #		Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL	
7440-09-7	Potas	sium	326		12	37	74	74	
7440-23-5	Sodiu	m	197		4.5	13	27	27	

CT LABORATORIES

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Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-011-0002-102716

Lab Name	CT Laboratories		Contract TETRA T	ECH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270			
% Solids	89 8		Lab Sample ID	796385			
Analytical Method	EPA 6010C		Date Received	10/28/2	016		
Dilution Factor	1,00		TCLP/SPLP Extract	on Date/tin	ne: _		
Analytical Run #	132150		Analysis Date/Time	11/0	2/2016	17 04	
Analytical Prep Batch #	59873		Prep Date/Time.	11/0	1/2016	12 00	
ICAL Calibration #			Concentration Units	mg/kg			
CAS #	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL
7429-90-5 Alui	ฑเทนฑ	2570	В	0 045	0 13	0 27	0 27
7440-36-0 Anti	imony	17 7		0 15	0 45	0 90	0 90
7440-38-2 Arse	enic	263		0 15	0 45	0 90	0 90
7440-39-3 Bar	ium	61 3		0 010	0 028	0 056	0 056
7440-41-7 Ber	yllium	0 38		0 0045	0 013	0 045	0 045
7440-43-9 Cac	İmium	3 5		0 0067	0 022	0 045	0 045
7440-47-3 Chr	omium	13 0		0 026	0 079	0 16	0 16
7440-48-4 Cot	palt	36		0 045	0 13	0 27	0 27
7440-50-8 Cor	oper	1260		0 079	0 22	0 45	0 45
7439-89-6 Iron	1	22900		0 34	10	20	2 0
7439-92-1 Lea	d	1200		0 045	0 14	0 28	0 28
7439-95-4 Mag	gnesium	16100		0 16	0 45	0 90	0 90
7439-96-5 Mar	nganese	275		0.028	0 084	0 17	0 17
7440-02-0 Nicl	kel	12 9		0 024	0.067	0 13	0 13
7782-49-2 Sele	enium	0 22	U	0 067	0 22	0 45	0 45
7440-22-4 Silv	ег	1 2		0 019	0.056	0 11	0.11
7440-28-0 Tha	ilium	0 19	J	0 090	0 27	0 54	0 54
	nadium	10 2		0 013	0 045	0 090	0 090
7440-66-6 Zind	2	928		0 056	0 17	0 34	0 34
7440-31-5 Tin		131		0 10	0 28	0 56	0 56
7440-32-6 Tita	nium	113		0 045	0 13	0 27	0 27

vering more than data from	your onvironmontal analyses	1 NIC ANALYSIS D	ATA SHEET	Sample Description SRWH-011-0002-102716			
.ab Name	CT Laboratories		Contract TETRA TECH-SRWH SITE				
Matrıx (soil/water)	SOIL		DG No	123270)		
% Solids	89 8	L	ab Sample ID [.]	796385	<u> </u>		
Analytical Method	EPA 6010C		ate Received	10/28/2	2016		
Dilution Factor.	10.00	ן ז	CLP/SPLP Extraction	n Date/tir	me:		
Analytical Run #	132150	<i>I</i>	nalysis Date/Time	11/0	03/2016	19 48	
Analytical Prep Batch #	59873	F	Prep Date/Time	11/0	01/2016	12 00	
ICAL Calibration #			Concentration Units:	mg/	'kg		
CAS#	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL

	your onvhonmontal analysos INO	1 RGANIC ANALYSIS D	ATA SHEET			nple Descrip 	
_ab Name.	CT Laboratories			CH-SRWH	SITE		
Matrix (soil/water)	SOIL	s	DG No	123270			
% Solids	93 4	L	ab Sample ID	796386			
Analytical Method	EPA 7471B	C	ate Received	10/28/2	016		
Dilution Factor	1.00	т	CLP/SPLP Extraction	on Date/tin	ne _		
Analytical Run #	132103	A	nalysis Date/Time	11/0	3/2016	11.59	
Analytical Prep Batch #	59865	F	rep Date/Time	10/3	1/2016	11.00	
ICAL Calibration #	11032016	C	Concentration Units:	mg/l	kg		
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL

Sample Description

		1 INORGANIC ANALYSIS DATA	SHEET		SRWH-0	11-0204-1027	'16
Lab Name [.]	CT Laboratories	Cont	ract TETRA TE	CH-SRWH	ISITE		
Matrix (soil/water)	SOIL	SDG	No	123270)	<u> </u>	
% Solids:	93 4	Lab	Sample ID	796386	3		
Analytical Method	EPA 6010C	Date	Received	10/28/2	2016		
Dilution Factor	1.00		P/SPLP Extraction	n Date/tu	me _		
Analytical Run #	132151	Anal	ysis Date/Time	11/0	03/2016	16 24	
Analytical Prep Batch #	59873	Prep	Date/Time.	11/0	01/2016	12 00	
ICAL Calibration #		Cond	centration Units	mg/	/kg		
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
7440-09-7 Potas	sium	324		11	34	68	68
7440-23-5 Sodiu	m	106	-	4 1	12	25	25

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-011-0204-102716

`		114	ORGANIC ANALYSIS	DATA SHE	<i>E</i> 1				
Lab Name		CT Laboratones		Contract	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)		SOIL		SDG No		123270			
% Solids		93 4		Lab Samp	le ID:	796386			
Analytical Method		EPA 6010C		Date Rece	vived:	10/28/20	016		
Dilution Factor		1.00		TCLP/SPL	.P Extraction	on Date/tin	ne _		
Analytical Run #		132150		Analysis D	ate/Time	11/0	2/2016	17:10	
Analytical Prep Bate	ch #	59873		Prep. Date	e/Time	11/0	1/2016	12 00	
ICAL Calibration #:				Concentra	tion Units:	mg/ł	a	· · ·	
			_						
CAS #		Analyte	Concentrati	ion Qua	alifiers	DL	LOD	LOQ	RL
7429-90-5	Alumin	um	1880		В	0 041	0 12	0 25	0 25
7440-36-0	Antimo	ny	0 28	J		0.13	0.41	0 82	0 82
7440-38-2	Arsenic	<u>}</u>	4.1			0 13	0 41	0 82	0 82
7440-39-3	Barium		16 3			0.0093	0.026	0 051	0 051
7440-41-7	Berylliu	Im	0 0093	J		0 0041	0.012	0 041	0 041
7440-43-9	Cadmiu	Im	0 31			0 0062	0 021	0 041	0 041
7440-47-3	Chrom	um	3 9			0.024	0 072	0.14	0.14
7440-48-4	Cobalt		27	-		0 041	0 12	0 25	0 25
7440-50-8	Copper	-	6 4		<u></u>	0 072	0 21	0 41	0 41
7439-89-6	Iron		5890			0 31	0 93	19	19
7439-92-1	Lead		19 2			0.041	0 13	0 26	0 26
7439-96-5	Manga	nese	184			0 026	0 077	0 15	0 15
7440-02-0	Nickel		4 8		-	0 022	0 062	0 12	0 12
7782-49-2	Seleniu	ım	0 17	J		0 062	0 21	0 41	0.41
7440-22-4	Silver		0 051	U		0 018	0 051	0 10	0 10
7440-28-0	Thalliur	m	0 25	U		0 082	0 25	0 49	0 49
7440-62-2	Vanadı	um	7 2			0 012	0 041	0 082	0 082
7440-66-6	Zinc		20 7			0 051	0 15	0 31	0.31
7440-31-5	Tin	<u></u>	0 56		B	0 093	0 26	0 51	0 51
7440-32-6	Tıtaniu	m	76 2			0 041	0 12	0 25	0 25

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-011-0204-102716

						L			
Lab Name		CT Laboratories		Contract	TETRA TE	CH-SRWH	I SITE		
Matrix (soil/water))	SOIL	·····-	SDG No		<u>12</u> 3270)		
% Solids		93 4		Lab Samp	ole ID	796386	3		
Analytical Method		EPA 6010C		Date Rec	eived	10/28/2	2016		
Dilution Factor		10.00		TCLP/SP	LP Extractio	n Date/tır	me _		
Analytical Run #		132150		Analysis I	Date/Time	11/0	03/2016	19 55	
Analytical Prep E	Batch #	59873		Prep. Dat	e/Time	11/0	01/2016	12 00	
ICAL Calibration	#			Concentra	ation Units:	mg/	/kg		
CAS #		Analyte	Concentratio	n Qu	alifiers	DL	LOD	LOQ	RL
7440-70-2	Calciu	m	161000			2 5	7 2	14	14
7439-95-4	Magne	esium	63600			1.4	4 1	82	8 2

Sample Description 1 SRWH-012-0002-102716 INORGANIC ANALYSIS DATA SHEET TETRA TECH-SRWH SITE Lab Name: **CT** Laboratories Contract Matrix (soil/water) SOIL SDG No 123270 % Solids: Lab Sample ID. 87 9 796387 Analytical Method Date Received. EPA 7471B 10/28/2016 **Dilution Factor** 10,00 TCLP/SPLP Extraction Date/time. Analytical Run # 132104 Analysis Date/Time 11/03/2016 14 50 Analytical Prep Batch # 59866 Prep Date/Time 11.00 10/31/2016 ICAL Calibration # 11032016 **Concentration Units** mg/kg CAS# Analyte Concentration Qualifiers DL LOD LOQ RL 7439-97-6 Mercury 0 39 Μ 0 026 0 051 0 10 0.10

livering more than data from	n your environmental analys	108			Sa	mple Descrip	tion
	11	1 NORGANIC ANALYSIS I	DATA SHEET		SRWH-0	12-0002-1027	16
Lab Name.	CT Laboratories		Contract: TETRA TE	CH-SRWH	ISITE		
Matrix (soil/water)	SOIL		SDG No	123270)		
% Solids	87 9		Lab Sample ID	796387	,	<u></u>	
Analytical Method	EPA 6010C	<u></u>	Date Received	10/28/2	2016		
Dilution Factor:	1.00		TCLP/SPLP Extractio	n Date/tır	me _		
Analytical Run # [.]	132154		Analysis Date/Time	11/(03/2016	16·33	
Analytical Prep Batch #	59874		Prep. Date/Time	11/0	01/2016	12.00	
ICAL Calibration #			Concentration Units:	mg/	/kg		
CAS #	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL
7440-09-7 Pota	ssium	531		11	34	67	67
7440-23-5 Sodu	um	170		4 1	12		24

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Sample Description

1
INORGANIC ANALYSIS DATA SHEET

SRWH-012-0002-102716

			INORGANIC ANALYSIS	DATA	SHE	21	L			
Lab Name		CT Laboratories		Conti	ract	TETRA T	ECH-SRWH	SITE		
Matrix (soil/water)		SOIL	····	SDG	No		123270			
% Solids		87 9		Lab S	Sampl	e ID	796387			
Analytical Method		EPA 6010C		Date	Rece	ived	10/28/20	016	<u> </u>	
Dilution Factor		1.00		TCLF	P/SPL	P Extract	ion Date/tin	ne		
Analytical Run #		132152		Analy	ysis D	ate/Time	11/0	2/2016	17 31	
Analytical Prep Batch	n #	59874		Prep	Date	/Time	11/0	1/2016	12.00	
ICAL Calibration #:		<u> </u>		Conc	entra	tion Units				
		<u></u>	· <u> </u>					<u> </u>		
CAS #		Analyte	Concentrati	on	Qua	lifiers	DL	LOD	LOQ	RL
7429-90-5	Alumin	um	5410			Y,B,M	0 041	0 12	0 24	0 24
7440-36-0	Antimo	ny	27				0 13	0 41	0 81	0.81
7440-38-2	Arsenic	:	84.8			Y,M	0 13	0.41	0 81	0 81
7440-39-3	Barium		65 8				0 0091	0 025	0 051	0 051
7440-41-7	Beryllıu	m	0 31				0 0041	0 012	0 041	0 041
7440-43-9	Cadmiu	um	12			Y	0.0061	0 020	0 041	0 041
7440-47-3	Chrom	um	9 5				0 023	0.071	0 14	0.14
7440-48-4	Cobalt		4 6			М	0 041	0 12	0 24	0 24
7440-50-8	Copper		40 4			Y,M	0 071	0 20	0 41	0.41
7439-89-6	Iron		10500			М	0 30	0 91	18	18
7439-92-1	Lead		452			Y,M	0 041	0 13	0 25	0 25
7439-96-5	Manga	nese	310			М	0 025	0 076	0 15	0 15
7440-02-0	Nickel		10 9			M	0 021	0 061	0 12	0 12
7782-49-2	Seleniu	m	0 20		U		0 061	0 20	0 41	0 41
7440-22-4	Silver		0 085		J		0 017	0 051	0 10	0.10
7440-28-0	Thalliur	n	0 24		U	М	0 081	0.24	0.49	0.49
7440-62-2	Vanadı	um	14 0			М	0 012	0 041	0 081	0 081
7440-66-6	Zinc		214	<u> </u>		M	0 051	0.15	0 30	0 30
7440-31-5	Tın		14 2			Y	0 091	0 25	0 51	0 51
7440-32-6	Titaniui	n	107			M	0 041	0 12	0 24	0 24

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-012-0002-102716

Lab Name		CT Laboratories	<u></u>	Contract	TETRA TE	CH-SRWH	I SITE		
Matrix (soil/wate	r)	SOIL		SDG No		123270)		
% Solids		87 9		Lab Sam	ple ID	796387			
Analytical Metho	od	EPA 6010C		Date Rec	eived	10/28/2	2016		
Dilution Factor.		10.00		TCLP/SP	LP Extractio	n Date/ti	me _		
Analytical Run	#	132152		Analysis I	Date/Time	11/0	03/2016	20 02	
Analytical Prep	Batch #.	59874		Prep Date/Time Concentration Units		11/01/2016 mg/kg		12 00	
ICAL Calibration	n #:								
CAS #		Analyte	Concentratio	on Qu	alifiers	DL	LOD	LOQ	RL
7440-70-2	Calcu	ım	60700	-	М	2.4	7.1	14	14
7439-95-4	Magn	esium	29500		Μ	1 4	4.1	81	8 1

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Sample Description

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		1 INORGANIC ANALYSIS	DATA SHEET		SRWH-0	12-0204-1027	716
Lab Name:	CT Laboratones		Contract. TETRA T	ECH-SRWH	ISITE		
Matrix (soil/water)	SOIL		SDG No.	123270			
% Solids	92 6	·····	Lab Sample ID	796388	i		
Analytical Method	EPA 7471B		Date Received	10/28/2	016		
Dilution Factor:	1.00		TCLP/SPLP Extract	ion Date/tin	ne: _		
Analytical Run #	132104		Analysis Date/Time	11/0)3/2016	12 15	
Analytical Prep Batch #	59866		Prep Date/Time	10/3	31/2016	11.00	
ICAL Calibration #:	11032016		Concentration Units	:mg/l	kg		
CAS #	Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL
7439-97-6 Mercu	iry	0.0045	U	0 0023	0 0045	0 0090	0 0090

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.ab Name:	CT Laboratories		Contract	TETRA TEC	CH-SRWH	SITE		
Matrıx (soil/water)	SOIL		SDG No:		123270)		
% Solids	92.6		Lab Samp	le ID.	796388	3		
Analytical Method	EPA 6010C		Date Rece	eived	10/28/2	2016		
Dilution Factor	1.00		TCLP/SPI	P Extraction	n Date/tı	me _		
Analytical Run #:	132154		Analysis D)ate/Time	11/0	03/2016	16.57	
Analytical Prep Batch #	59874		Prep Date	e/Time	11/0	01/2016	12.00	
ICAL Calibration #:			Concentra	ition Units:	mg/	′kg		
CAS #	Analyte	Concentratio	on Qua	alifiers	DL	LOD	LOQ	RL
7440-09-7 Pota	ssium	400			12	37	74	74
7440-23-5 Sodu	um	165			4 5	13	27	27

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CT LABORATORIES

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-012-0204-102716

		SANIC ANAL 1313		L			
Lab Name	CT Laboratories		Contract TETRA	TECH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270			
% Solids	92 6		Lab Sample ID	796388			
Analytical Method	EPA 6010C		Date Received	10/28/20	016		
Dilution Factor	1.00		TCLP/SPLP Extra	ction Date/tin	ne:	. <u></u>	
Analytical Run #	132152		Analysis Date/Tim	e 11/0	2/2016	18.33	
Analytical Prep Batch #.	59874	.,	Prep Date/Time	11/0	1/2016	12.00	
ICAL Calibration #:			Concentration Uni	ts mg/ł	ka		
					-		
CAS #	Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL
7429-90-5 Alumin	um	2240	В	0 045	0 13	0 27	0 27
7440-36-0 Antimo	ny	0 63	JJ	0 15	0 45	0 90	0 90
7440-38-2 Arsenic	;;	3 4		0 15	0.45	0 90	0 90
7440-39-3 Banum		21 5		0 010	0 028	0 056	0 056
7440-41-7 Berylliu	Im	0.069		0 0045	0 013	0 045	0 045
7440-43-9 Cadmi	um	0 30		0 0067	0 022	0 045	0 045
7440-47-3 Chrom	ium	4 4		0 026	0 078	0 16	0 16
7440-48-4 Cobalt		3 5		0 045	0.13	0 27	0 27
7440-50-8 Copper	r	84		0 078	0.22	0 45	0 45
7439-89-6 Iron		6990		0 34	10	2 0	2.0
7439-92-1 Lead		88		0 045	0 14	0 28	0 28
7439-96-5 Manga	nese	269		0 028	0 084	0 17	0 17
7440-02-0 Nickel		66	· · · · · ·	0 024	0 067	0 13	0 13
7782-49-2 Selenıı	um	0 18	JB	0 067	0.22	0 45	0 45
7440-22-4 Silver		0 056	U	0 019	0.056	0 11	0 11
7440-28-0 Thailiu	m	0 27	U	0 090	0 27	0 54	0 54
7440-62-2 Vanadi	um	8 4		0 013	0 045	0 090	0 090
7440-66-6 Zinc		35 5		0 056	0 17	0 34	0.34
7440-31-5 Tın		0 80	В	0 10	0 28	0 56	0 56
7440-32-6 Titaniu	m	96 8		0 045	0 13	0 27	0 27

vering more than data from	r your anvironmental ar	nal ysos			Sa	mple Descript	tion
		1 INORGANIC ANALYSIS	DATA SHEET		SRWH-0	12-0204-1027	16
Lab Name [.]	CT Laboratories		Contract: TETRA TEC	CH-SRWH	ISITE		
Matrix (soil/water)	SOIL		SDG No	123270)		
% Solids	92.6	,	Lab Sample ID	796388	}		
Analytical Method	EPA 6010C		Date Received:	10/28/2	2016		
Dilution Factor	10.00		TCLP/SPLP Extractio	n Date/tu	ne _		
Analytical Run #.	132152		Analysis Date/Time	11/0	03/2016	20 08	
Analytical Prep Batch #.	59874		Prep. Date/Time	11/0	01/2016	12 00	
ICAL Calibration #			Concentration Units.	mg/	′kg		
CAS #	Analyte	Concentrati	on Qualifiers	DL	LOD	LOQ	RL
7440-70-2 Calci	um	104000		27	7.8	16	16
7439-95-4 Magr	nesium	52000		16	4.5	90	90

ivering more than data from	your oartionmontal analyse	™ 1 ORGANIC ANALYSIS D	ATA SHE	ET			mple Descrip 13-0002-1027	
Lab Name	CT Laboratories		Contract		ECH-SRWH	SITE		
Matrix (soil/water)	TCLP	s	SDG No		123270			
% Solids:		L	ab Samp	le ID	796970			
Analytical Method	EPA 7470A	C	Date Rece	eived:	10/28/2	016		
Dilution Factor	1.00	т	TCLP/SPL	P Extracti	on Date/tın	ne <u>1</u>	1/03/2016	08 0
Analytical Run #	132334	Α	Analysis D	ate/Time	11/0	7/2016	12.26	
Analytical Prep Batch #	59983	P	Prep Date	e/Time	11/0	4/2016	12:30	
ICAL Calibration #:	11072016	C	Concentra	ition Units [.]	mg/l			
CAS #	Analyte	Concentration	n Qua	alifiers	DL	LOD	LOQ	RL
7439-97-6 Merci	ury	0 000060	U		0 00003	0 00006	0 00012	0 0001

	n yaur anvtionmontal analysi IN	1 IORGANIC ANALYSIS I	DATA SHEET	Sample Description SRWH-013-0002-102716			
_ab Name	CT Laboratories		Contract TETRA TE	CH-SRWH	SITE	-	
Matrix (soil/water)	SOIL		SDG No	<u>123270</u>			
% Solids [.]	86 5		Lab Sample ID	796389			
Analytical Method	EPA 7471B		Date Received	10/28/2	016		
Dilution Factor	10.00		TCLP/SPLP Extraction	on Date/tin	ne: _	<u>.</u>	
Analytical Run #.	132104		Analysis Date/Time	11/0	3/2016	14.58	
Analytical Prep Batch #	59866		Prep Date/Time	10/3	1/2016	11 00	
CAL Calibration #	11032016		Concentration Units:	mg/l	٨g		
CAS #	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL
7439-97-6 Merc	ury	0 71		0 026	0 051	0 10	0 10

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		i	NORGANIC ANALYSIS	DATA SHEET		SRWH-0	13-0002-1027	16	
Lab Name		CT Laboratories		Contract. TETRA TE	ECH-SRWI	I SITE			
Matrix (soil/wate	er)	SOIL		SDG No	123270)			
% Solids		86 5		Lab Sample ID	796389)			
Analytical Metho	bd	EPA 6010C		Date Received	<u>10/28/2</u>	2016			
Dilution Factor		1.00		TCLP/SPLP Extraction	ction Date/time:				
Analytical Run	#	132154		Analysis Date/Time	11/	03/2016	17 00		
Analytical Prep	Batch #	59874		Prep Date/Time.	11/	01/2016	12 00		
CAL Calibration	า #:			Concentration Units	mg/	′kg			
CAS #		Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL	
7440-09-7	Potas	sium	403		13	38	76	76	
7440-23-5	Sodiu	m	119		46	14	28	28	

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-013-0002-102716

Lab Name		CT Laboratories			A TECH-SRWH			
Matrix (soil/water)		SOIL		SDG No	123270			
% Solids		86 5		Lab Sample ID	796389			
Analytical Method		EPA 6010C		Date Received	10/28/2	016		
Dilution Factor		1.00		TCLP/SPLP Extra	action Date/tin	ne		· ·
Analytical Run #		132152		Analysis Date/Tin	ne <u>11/0</u>	2/2016	18.40	
Analytical Prep Ba	atch #	59874		Prep Date/Time.	11/0	1/2016	12 00	
ICAL Calibration #	ł			Concentration Un	utsmg/l	mg/kg		
CAS #		Analyte	Concentrati	ion Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Alumin	um	3190	В	0.046	0 14	0 28	0 28
7440-36-0	Antimo	ny	77		0 15	0 46	0 92	0 92
7440-38-2	Arseni	c	269		0 15	0 46	0 92	0 92
7440-39-3	Barium	1	56 7		0 010	0 029	0 058	0 058
7440-41-7	Beryllu	Jm	0 41		0 0046	0 014	0 046	0 046
7440-43-9	Cadmi	um	5 6	_	0 0069	0.023	0.046	0 046
7440-70-2	Calciu	n	16400		0.28	0 81	16	16
7440-47-3	Chrom	ium	12 6		0 026	0 081	0 16	0 16
7440-48-4	Cobalt		56		0 046	0 14	0 28	0 28
7440-50-8	Coppe	r	305	Х	0 081	0 23	0 46	0 46
7439-89-6	Iron		18000		0 35	10	2 1	21
7439-92-1	Lead		707		0 046	0 14	0 29	0 29
7439-95-4	Magne	sium	7590		0 16	0 46	0 92	0 92
7439-96-5	Manga	nese	336		0 029	0 086	0 17	0 17
7440-02-0	Nickel		16 4		0 024	0 069	0 14	0.14
7782-49-2	Seleni	m	0 23	U	0 069	0 23	0 46	0 46
7440-22-4	Silver		0 15		0 020	0 058	0 12	0 12
7440-28-0	Thalliu	m	0 54	J	0 092	0 28	0 55	0 55
7440-62-2	Vanad	ium	12 5		0 014	0 046	0 092	0 092
7440-66-6	Zinc		828		0 058	0.17	0 35	0 35
7440-31-5	Tin		40 0		0 10	0 29	0 58	0 58
7440-32-6	Titaniu	m	78 5		0 046	0.14	0 28	0 28

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-013-0002-102716

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Lab Name:		CT Laboratories		Contr	act	TETRA	TECH-SRWH	SITE		
Matrix (soil/water)		TCLP		SDG	No		<u>123270</u>			
% Solids:				Lab S	ampl	e ID	796970	1		
Analytical Method		EPA 6010C		Date	Recei	ved	10/28/2	016		
Dilution Factor:		1.00			SPL	P Extra	ction Date/tir	ne .	11/03/2016	08 00
Analytical Run #:		132294		Analy	sis Da	ate/Tim	e 11/0)4/2016	23 18	
Analytical Prep Ba	atch #	59969		Prep	Date	/Time	11/0)3/2016	12 00	
ICAL Calibration #	:	······		Conc	entrat	ion Unit	s	L		
CAS #		Analyte	Concentrat	lion	Qua	lifiers	DL	LOD	LOQ	RL
7440-38-2	Arsen	ic	0 074				0 0040	0 012	0.024	0 024
7440-39-3	Bariur	n	0 28				0 00029	0 00090	0.0018	0 0018
7440-43-9	Cadm	ium	0 014				0 00030	0 0010	0 0020	0 0020
7440-47-3	Chron	nium	0 0048				0 00060	0 0020	0 0040	0.0040
7439-92-1	Lead		0.16				0 0014	0 0020	0 0040	0 0040
7782-49-2	Selen	um	0 0033		J	в	0 0022	0 0065	0 013	0 013
7440-22-4	Silver		0 0020		U		0 00070	0 0020	0.0040	0 0040

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	II	1 NORGANIC ANALYSIS L	DATA SHE	ET		SRWH-0	13-0204-1027	'16
Lab Name	CT Laboratories		Contract	TETRA TE	ECH-SRWH	SITE		
Matrıx (soil/water)	SOIL		SDG No [.]		123270			
% Solids	92 8		Lab Samp	le ID	796390	l		
Analytical Method	EPA 74718		Date Rece	eived	10/28/2	016		
Dilution Factor	1.00		TCLP/SPL	P Extraction	on Date/tir	ne		
Analytical Run #	132104		Analysis D)ate/Time	11/0	3/2016	12 [.] 24	
Analytical Prep Batch #	59866		Prep Date	e/Time	10/3	31/2016	11 00	
ICAL Calibration #	11032016		Concentra	ition Units	mg/	kg		
CAS #	Analyte	Concentratio	on Qua	alifiers	DL	LOD	LOQ	RL
7439-97-6 Merc	urv	0 28			0 0024	0 0048	0 0094	0 0094

			Sample Description
		1 INORGANIC ANALYSIS DATA SHEET	SRWH-013-0204-102716
Lab Name:	CT Laboratories	Contract TETR	A TECH-SRWH SITE

Lab Name:	CT Laboratories		Contract TETRA	TECH-SRWH	I SITE		
Matrix (soil/water)	TCLP	·······	SDG No	123270) 		
% Solids			Lab Sample ID	<u>796972</u>			
Analytical Method	EPA 7470A		Date Received.	10/28/2	016		
Dilution Factor.	1.00		TCLP/SPLP Extra	ction Date/tir	ne	11/03/2016	08 00
Analytical Run #	132334		Analysis Date/Tim	e11/0)7/2016	12 28	
Analytical Prep Batch #	59983		Prep Date/Time	11/0	04/2016	12 30	
ICAL Calibration #	11072016		Concentration Uni	ts: mg/	L		
CAS #	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL
7439-97-6 Mercu	Jry	0 000060	υ	0 00003	0 0000	6 0 00012	0 00012

CT LABORATORIES

Sample Description 1 SRWH-013-0204-102716 INORGANIC ANALYSIS DATA SHEET TETRA TECH-SRWH SITE Lab Name **CT** Laboratories Contract[.] Matrix (soil/water) SDG No SOIL 123270 Lab Sample ID % Solids 92 8 796390 Analytical Method Date Received EPA 6010C 10/28/2016 **Dilution Factor** 1.00 TCLP/SPLP Extraction Date/time Analytical Run # Analysis Date/Time 132154 11/03/2016 17 02 Analytical Prep Batch #: Prep Date/Time 59874 11/01/2016 12 00 ICAL Calibration # Concentration Units: mg/kg CAS# Analyte Concentration Qualifiers DL LOD LOQ RL 7440-09-7 Potassium 390 12 36 73 73 7440-23-5 Sodium 157 4.4 13 27 27

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Sample Description

			1 INORGANIC ANALYSIS	S DATA SHEET		SRWH-0	13-0204-1027	/16
Lab Name		CT Laboratories		Contract. TETRA TI	ECH-SRWH	SITE		
Matrix (soil/wate	er)	SOIL		SDG No	123270			
% Solids		92 8		Lab Sample ID.	796390			
Analytical Metho	bd	EPA 6010C		Date Received	10/28/2	016		
Dilution Factor				TCLP/SPLP Extracti	on Date/tır	ne:		
Analytical Run	#	132152		Analysis Date/Time	11/0	2/2016	18 46	
Analytical Prep	Batch #	59874		- Prep Date/Time	11/0	1/2016	12.00	
ICAL Calibration	n #			- Concentration Units	mg/l	kg		
CAS #		Analyte	Concentrat	ion Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Alumi	num	3070	В	0 044	0 13	0 27	0 27
7440-36-0	Antim	ony	24		0 14	0 44	0 88	0 88
7440-38-2	Arsen	IC	62 7		0 14	0 44	0 88	0 88
7440-39-3	Bariur	n	39 8		0 0099	0 028	0 055	0 055
7440-41-7	Beryll	ium	0 40		0 0044	0 013	0 044	0 044
7440-43-9	Cadm		17		0 0066	0.022	0 044	0 044
7440-47-3	Chron	nium	7 5		0 025	0.077	0 15	0 15
7440-48-4	Cobal	t	5.1		0 044	0.13	0 27	0 27
7440-50-8	Сорре	er	33 2	·····	0.077	0 22	0 44	0 44
7439-89-6	Iron		12100		0 33	0 99	20	2.0
7439-92-1	Lead		170	-	0 044	0.14	0 28	0 28
7439-95-4	Magn	esium	23900		0 15	0 44	0 88	0 88
7439-96-5	Mang	anese	285		0 028	0 083	0 17	0.17
7440-02-0	Nickel	l	12 0		0 023	0 066	0 13	0.13
7782-49-2	Selen		0 22	U	0 066	0 22	0 44	0 44
7440-22-4	Silver		0 055	U	0 0 1 9	0 055	0 11	0 11
7440-28-0	Thallu		0 27	U	0 088	0 27	0 53	0.53
7440-62-2	Vanad	dium	12 8		0 013	0 044	0 088	0 088
7440-66-6	Zinc		234		0 055	0 17	0 33	0 33
7440-31-5	Tin		7 0		0 099	0 28	0 55	0 55
7440-32-6	Titani	um	125		0 044	0 13	0 27	0 27

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	IN	ז INORGANIC ANALYSIS DATA SHEET			SRWH-013-0204-102716			
Lab Name	CT Laboratories	Contrac	t TETRA TEC	CH-SRWI	SITE			
Matrix (soil/water)	SOIL	SDG N	o	12327)			
% Solids	92 8	Lab Sa	mple ID:	<u>796390</u>)			
Analytical Method	EPA 6010C	Date Re	eceived	10/28/2				
Dilution Factor	10.00	TCLP/S	PLP Extraction	n Date/ti	me [.] –			
Analytical Run #:	132152	Analysi	s Date/Time	11/0	03/2016	20 35		
Analytical Prep Batch #	59874	Prep D	ate/Time	11/0	01/2016	12 00		
ICAL Calibration #:		Concer	tration Units:	mg/	′kg			
CAS #	Analyte	Concentration (Qualifiers	DL	LOD	LOQ	RL	

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CT LABORATORIES

Sample Description

1
INORGANIC ANALYSIS DATA SHEET

SRWH-013-0204-102716

	-							
Lab Name.	CT Laboratories		Contract.	TETRA	TECH-SRWH	ISITE		
Matrix (soil/water)	TCLP		SDG No		123270	1		
% Solids			Lab Samp	le ID.	796972			
Analytical Method	EPA 6010C		Date Rece	eived	10/28/2	016		
Dilution Factor.	1.00		TCLP/SP	_P Extra	ction Date/tir	ne.	11/03/2016	08 00
Analytical Run #	132294		Analysis [Date/Tim	e 11/0	04/2016	23 25	
Analytical Prep Batch #.	59969		Prep Date	e/Time.	11/0)3/2016	12 00	
ICAL Calibration #:			Concentra	ation Uni	ts mg/	L		. <u>.</u>
CAS #	Analyte	Concentrat	ion Qu	alifiers	DL	LOD	LOQ	RL
7440-38-2 Arser		0.0076	J		0 0040	0.012	0 024	0 024
7440-39-3 Bariu	m	0 26	·		0 00029	0 00090	0.0018	0 0018
7440-43-9 Cadm	num	0 0052		м	0 00030	0 0010	0.0020	0 0020
7440-47-3 Chror	mum	0 0020	U		0 00060	0 0020	0.0040	0 0040
7439-92-1 Lead		0 14			0 0014	0 0020	0.0040	0 0040
7782-49-2 Seler	num	0 0063	J	В	0 0022	0 0065	0.013	0 013
7440-22-4 Silver	-	0 0020	U		0 00070	0 0020	0 0040	0 0040

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Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-014-0002-102716

Lab Name Matrix (soil/water) % Solids. Analytical Method		CT Laboratories TCLP EPA 6010C		Contract	TETRA	TECH-SRWH	CH-SRWH SITE				
				SDG No Lab Sample ID: Date Received:		123270	123270 796973 10/28/2016				
						796973					
						10/28/2					
Dilution Factor.		1 00		TCLP/S	PLP Extra	ction Date/til	on Date/time <u>1</u>		08 00		
Analytical Run #		132294		Analysis	Date/Tim	ie 11/0	05/2016	00.08			
Analytical Prep Batch #		59969		- Prep Date/Time		11/0	03/2016	12 00			
ICAL Calibration #	ŧ			Concent	ration Uni	its:mg/	Ľ				
CAS #		Analyte	Concentral	ion Q	ualifiers	DL	LOD	LOQ	RL		
7440-38-2	Arseni	c	0 024	· · ·		0 0040	0 012	0 024	0 024		
7440-39-3	Bariun	n	0 51			0 00029	0 00090	0 0018	0.0018		
7440-43-9	Cadm	um	0.012			0 00030	0.0010	0 0020	0 0020		
7440-47-3	Chrom	num	0.0024	J		0 00060	0.0020	0 0040	0 0040		
7439-92-1	Lead		0 26			0 0014	0.0020	0 0040	0 0040		
7782-49-2	Seleni	um	0 0033	J	В	0 0022	0 0065	0 013	0 013		
7440-22-4	Silver		0 0020	U		0.00070	0 0020	0 0040	0 0040		

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		1 INORGANIC ANALYSIS DATA SHEET			SRWH-014-0002-102716				
Lab Name	CT Laboratories	Contract TETRA TECH-SRWH SITE							
Matrix (soil/water)	SOIL		SDG No		123270				
% Solids	88 3 EPA 7471B 1.00		Lab Sample ID Date Received		796416 10/28/2016				
Analytical Method									
Dilution Factor			TCLP/SPL	P Extractio	on Date/tin	ne _			
Analytical Run #	132104		Analysis Date/Time		11/03/2016 12		12 26	2 26	
Analytical Prep Batch #.	59866		Prep. Date/Time		10/31/2016		11.00		
ICAL Calibration #.	11032016		Concentration Units		mg/kg				
CAS #	Analyte	Concentratio	on Qua	lifiers	DL	LOD	LOQ	RL	
7439-97-6 Mercury		0 35			0 0025	0 0050	0 0099	0 009	
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	INORGANIC	ANALYSIS DATA SHI	ET	SRWH-014-0002-102716					
Lab Name.	CT Laboratones	Contract:	TETRA TEC	H-SRWH SITI	E				
Matrıx (soil/water) [.]	TCLP	SDG No		123270					
% Solids.		Lab Sam	ole ID [.]	796973					
Analytical Method	EPA 7470A	Date Rec	eived:	10/28/2016					
Dilution Factor	1,00	TCLP/SP	LP Extraction	Date/time	1	11/03/2016	08 00		
Analytical Run #	132334	Analysis	Date/Time	11/07/20	016	12.31			
Analytical Prep Batch #	59983	Prep Dat	e/Time	11/04/20	016	12 30			
ICAL Calibration #	11072016	Concentr	ation Units:	mg/L					
CAS#	Analyte	Concentration Qu	alifiers	DL I	LOD	LOQ	RL		

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0 00003

0 00006

0 00012

7439-97-6

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			INORGANIC ANALYSIS	DATA S	HEET		SRWH-0	14-0002-1027	16
_ab Name		CT Laboratories		Contra	t TETRA TE	CH-SRWH			
Matrix (soil/water)		SOIL	,	SDG N	lo	123270)		-
% Solids:		88 3		Lab Sa	mple ID	796416	6		
Analytical Method		EPA 6010C			eceived	10/28/2	2016		
Dilution Factor		1.00		TCLP/S	SPLP Extractio	n Date/ti	me _		
Analytical Run #		132154		Analys	s Date/Time	11/0	03/2016	17 06	
Analytical Prep Ba	atch #	59874		Prep [ate/Time	11/0	01/2016	12 00	
ICAL Calibration #				Concer	ntration Units:	mg/	/kg		
CAS #		Analyte	Concentrat	ion (Qualifiers	DL	LOD	LOQ	RL
7440-09-7	Potass	lum	305			13	39	77	
7440-23-5	Sodiun	n	252			47	14	28	28

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-014-0002-102716

Lab Name		CT Laboratories		Contrac	t. <u>TETRA TE</u>	CH-SRWH	SITE		"
Matrix (soil/water)	SOIL		SDG N	io	123270			
% Solids		88 3		Lab Sa	mple ID.	796416			
Analytical Method	ł	EPA 6010C		Date Re	eceived	10/28/20	016		
Dilution Factor:		1.00		TCLP/S	SPLP Extraction	on Date/tin	ne _		
Analytical Run #		132152		Analys	s Date/Time	11/0	2/2016	18 [.] 53	
Analytical Prep E	Batch #:	59874		Prep D	ate/Time	11/0	1/2016	12 00	
ICAL Calibration	#:			Concer	tration Units	mg/k	 (g		
CAS #		Analyte	Concentrati	ion (Qualifiers	DL	LOD	LOQ	RL
7429-90-5	Alumi		2410		В	0 047	0 14	0 28	0 28
7440-36-0	Antim	ony	20 7			0 15	0 47	0 94	0 94
7440-38-2	Arsen	ic	236			0.15	0 47	0 94	0 94
7440-39-3	Bariur	n	54 3			0 011	0.029	0 059	0 059
7440-41-7	Berylli	lum	0 43			0 0047	0 014	0.047	0 047
7440-43-9	Cadm	ium	38			0 0070	0 023	0 047	0 047
7440-47-3	Chron	nium	19.5			0 027	0 082	0 16	0.16
7440-48-4	Cobal	t	5 1			0 047	0.14	0 28	0 28
7440-50-8	Сорре	er	246			0 082	0 23	0 47	0 47
7439-89-6	Iron		16000		· <u> </u>	0 35	11	21	2 1
7439-92-1	Lead		1130			0 047	0 15	0 29	0 29
7439-95-4	Magn	esium	22100			0 16	0.47	0 94	0 94
7439-96-5	Mang	anese	332			0 029	0 088	0 18	0 18
7440-02-0	Nicke	l	16 1			0 025	0 070	0 14	0 14
7782-49-2	Selen	lum	0.23	I	U	0 070	0 23	0 47	0 47
7440-22-4	Silver		0 30			0 020	0 059	0 12	0.12
7440-28-0	Thallu	um	0 39		J	0 094	0 28	0 56	0 56
7440-62-2	Vanad	dium	10 7			0 014	0 047	0 094	0 094
7440-66-6	Zinc		1210			0.059	0.18	0 35	0.35
7440-31-5	Tin		109			0 11	0 29	0 59	0 59
7440-32-6	Titani	um	123			0 047	0.14	0 28	0 28

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		1 INORGANIC ANALYSIS	DATA SHE	ΈT	SRWH-014-0002-102716				
Lab Name	CT Laboratories		Contract.	TETRA TEC	CH-SRWH	SITE			
Matrix (soil/water)	SOIL		SDG No.		123270)			
% Solids	88 3	Lab Sample ID				796416			
Analytical Method	EPA 6010C		Date Rece	eived	10/28/2016				
Dilution Factor	10.00		TCLP/SPL	.P Extractio	n Date/tu	me: _			
Analytical Run #	132152		Analysis D)ate/Time	11/0	03/2016	20 42	_	
Analytical Prep Batch #	59874		Prep Date	e/Time	11/0	01/2016	12 00		
ICAL Calibration #			Concentra	ition Units.	mg/	/kg			
CAS #	Analyte	Concentrati	on Qua	alifiers	ÐL	LOD	LOQ	RL	
7440-70-2 Calcu	um	64500			2.8	8 2	16		

CT LABORATORIES

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Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-014-0204-102716

					L			
Lab Name	CT Laboratories		Contract [.]	TETRA	TECH-SRWH	SITE		
Matrix (soil/water)	TCLP		SDG No		<u>123270</u>	·		
% Solids			Lab Samp	le ID:	796974	· · · · · · · · · · · · · · · · · · ·		
Analytical Method	EPA 6010C		Date Rece	eived:	10/28/2	016		
Dilution Factor	1 00		TCLP/SPI	.P Extra	ction Date/tir	ne .	11/03/2016	08 00
Analytical Run #	132294		Analysis [)ate/Tim	e 11/0	5/2016	00:15	
Analytical Prep Batch #	59969		Prep Date	e/Time	11/0)3/2016	12.00	
ICAL Calibration #			Concentra	ition Uni	tsmg/	L		
CAS #	Analyte	Concentrati	ion Qu	alifiers	DL	LOD	LOQ	RL
7440-38-2 Arser	טור.	0 0080	J		0 0040	0 012	0 024	0 024
7440-39-3 Bariu	m	0 39			0 00029	0 00090	0 0018	0 0018
7440-43-9 Cadn	าเนฑ	0 0033			0 00030	0 0010	0 0020	0 0020
7440-47-3 Chro	mium	0 0020	υ		0 00060	0 0020	0.0040	0 0040
7439-92-1 Lead	· · · · · · · · · · · · · · · · · · ·	14			0 0014	0 0020	0.0040	0 0040
7782-49-2 Seler	nium	0 0042	J	В	0 0022	0 0065	0 013	0 013
7440-22-4 Silver	·	0 0020	U		0 00070	0 0020	0 0040	0 0040

	w environmental analyses	8				Sar	mple Descrip	tion
	INC	1 DRGANIC ANALYSIS L	DATA SHE	ET		SRWH-0 ⁻	14-0204-1027	'16
	CT Laboratories		Contract	TETRA TE	CH-SRWH	SITE		
/water)	SOIL	<u> </u>	SDG No		123270			
	19		Lab Samp	le ID:	796417			
Method	EPA 7471B	Date Rece	eived:	10/28/2	016			
ctor _	1.00		TCLP/SPL	P Extraction	on Date/tin	ne		
Run #:	132104		Analysis D)ate/Time	11/0	3/2016	12 [.] 28	
Prep Batch #	59866		Prep Date	e/Time	10/3	1/2016	11 00	
ration #.	1032016		Concentra	ition Units	mg/I	kg		
6#	Analyte	Concentratio	on Qua	alifiers	ÐL	LOD	LOQ	RL
S # Mercury	Analyte	Concentratio	on Qua	alifiers	DL 0.0024	LOD 0.0048	LOQ 0 0095	

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1 SRWH-014-0204-102716 INORGANIC ANALYSIS DATA SHEET Lab Name **CT** Laboratories TETRA TECH-SRWH SITE Contract Matrix (soil/water) TCLP SDG No 123270 % Solids Lab Sample ID 796974 Analytical Method Date Received EPA 7470A 10/28/2016 Dilution Factor. 1.00 TCLP/SPLP Extraction Date/time 11/03/2016 08 00 Analytical Run #. 132334 Analysis Date/Time 11/07/2016 12.33 Analytical Prep Batch # 59983 Prep Date/Time 11/04/2016 12.30 ICAL Calibration #: 11072016 Concentration Units: mg/L CAS# Analyte Concentration Qualifiers DL LOD LOQ RL 7439-97-6 Mercury 0 000060 U 0 00003 0 00006 0 00012 0 00012

Sample Description

ielivering more than data fra	m your anviranmanial ani	ањеое 1			Sa	mple Descript	tion
		INORGANIC ANALYSIS	DATA SHEET		SRWH-0	14-0204-1027	16
Lab Name	CT Laboratories		Contract TETRA T	ECH-SRWI	H SITE		
Matrix (soil/water)	SOIL		SDG No	12327)		
% Solids [.]	91 9		Lab Sample ID.	79641	7	 	
Analytical Method	EPA 6010C		Date Received.	10/28/2	2016		
Dilution Factor	1.00		TCLP/SPLP Extracti	on Date/ti	^{me} –		
Analytical Run #	132154	······································	Analysis Date/Time	11/	03/2016	17.09	
Analytical Prep Batch #	59874		Prep Date/Time	11/	01/2016	12 00	
ICAL Calibration #:			Concentration Units:	mg	/kg		
CAS #	Analyte	Concentratio	on Qualifiers	DL	LOD	LOQ	RL
7440-09-7 Pota	issium	719		11	34	67	67
7440-23-5 Sod	lum	285		4.1	12	24	24

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-014-0204-102716

							
Lab Name	CT Laboratories		Contract: TETRA T	ECH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270			
% Solids	91 9		Lab Sample ID	796417			
Analytical Method	EPA 6010C		Date Received	10/28/20	016		
Dilution Factor	1.00		TCLP/SPLP Extract	ion Date/tin	ne: _	, 	
Analytical Run #	132152		Analysis Date/Time	11/0	2/2016	19 00	
Analytical Prep Batch #	59874		Prep Date/Time	11/0	1/2016	12 00	
ICAL Calibration #.			Concentration Units	:mg/l	<g< td=""><td></td><td></td></g<>		
CAS #	Analyte	Concentrat	ion Qualifiers	DL	LOD	LOQ	RL
7429-90-5 Alumir	num	3690	В	0 041	0.12	0 24	0 24
7440-36-0 Antimo	ony	0 60	J	0 13	0.41	0 81	0.81
7440-38-2 Arseni	c	5 5	_	0 13	0.41	0 81	0.81
7440-39-3 Bariun	n	44 0		0 0092	0 025	0 051	0 051
7440-41-7 Berylli	um	11		0.0041	0 012	0 041	0 041
7440-43-9 Cadm	um	0.50		0 0061	0 020	0.041	0 041
7440-47-3 Chrom	11um	47		0 023	0 071	0 14	0 14
7440-48-4 Cobali	t	4 3		0 041	0.12	0 24	0 24
7440-50-8 Coppe	er	36 1		0 071	0 20	0 41	0.41
7439-96-5 Manga	anese	208		0 025	0 076	0 15	0 15
7440-02-0 Nickel		80		0 021	0 061	0 12	0 12
7782-49-2 Seleni	um	0 20	U	0 061	0 20	0 41	0 41
7440-22-4 Silver		0 19		0 017	0 051	0 10	0 10
7440-28-0 Thalliu	ım	0 24	U	0 081	0.24	0 49	0 49
7440-62-2 Vanad	lium	10.4		0 012	0 041	0 081	0 081
7440-66-6 Zinc		36 4		0 051	0 15	0 31	0 31
7440-31-5 Tin		2 0		0 092	0 25	0 51	0 51
7440-32-6 Titaniu	JM	152		0 041	0.12	0 24	0 24

CT LABORATORIES

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-014-0204-102716

				L			
Lab Name [.]	CT Laboratories		Contract TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	SOIL		SDG No	123270			
% Solids	91 9		Lab Sample ID:	<u>796417</u>			
Analytical Method	EPA 6010C		Date Received	10/28/2	016		
Dilution Factor	10.00		TCLP/SPLP Extractio	n Date/tır	ne:		
Analytical Run #	132152		Analysis Date/Time	11/0	3/2016	20 48	
Analytical Prep Batch #	59874		Prep Date/Time	11/0)1/2016	12 00	
ICAL Calibration #			Concentration Units:	mg/	kg		
CAS #	Analyte	Concentrati	ion Qualifiers	DL	LOD	LOQ	RL
7440-70-2 Ca	lcium	72200		24	7 1	14	14
7439-89-6 lro	n	13700		3 1	92	18	18
7439-92-1 Lea	ad	18800		0 41	13	25	25
7439-95-4 Ma	gnesium	34300		14	4 1	81	8 1

Sample Description

1	
INORGANIC ANALYSIS DATA S	HEET

SRWH-015-0002-102716

Lab Name	CT Laboratories		Contract [.]	TETRA	TECH-SRWH	SITE		
Matrix (soil/water) [.]	TCLP		SDG No		123270)		
% Solids			Lab Sam	ple ID	796975			
Analytical Method	EPA 6010C		Date Rec	eived	10/28/2	016		
Dilution Factor	1.00		TCLP/SP	LP Extra	ction Date/tir	ne .	11/03/2016	08 00
Analytical Run #	132294		Analysis	Date/Tim	e 11/()5/2016	00 42	
Analytical Prep Batch #	59969		- Prep. Da	te/Time	11/()3/2016	12:00	
ICAL Calibration #:			Concentr	ation Uni	ts	L		
CAS #	Analyte	Concentrat	ion Qu	alifiers	DL	LOD	LOQ	RL
7440-38-2 Ars	senic	0 018	J		0.0040	0 012	0 024	0 024
7440-39-3 Ba	rium	0 14			0.00029	0 00090	0 0018	0 0018
7440-43-9 Ca	idmium	0 0057			0 00030	0 0010	0 0020	0 0020
7440-47-3 Ch	iromium	0 0020	U		0 00060	0 0020	0 0040	0 0040
7439-92-1 Le	ad	0.19			0 0014	0 0020	0 0040	0 0040
7782-49-2 Se	lenium	0 0056	. J	В	0 0022	0 0065	0 013	0 013
7440-22-4 Sil	ver	0 00074	J		0 00070	0 0020	0 0040	0 0040

Sample Description

	IN	IORGANIC ANALYSIS DATA SHE	ET	SRWH-01	15-0002-1027	716			
Lab Name:	CT Laboratories	Contract	Contract: TETRA TECH-SRWH SITE						
Matrix (soil/water)	SOIL	SDG No	123270	123270					
% Solids	85 5	Lab Samp	ble ID <u>796418</u>	796418					
Analytical Method	EPA 7471B	Date Rece	eived. <u>10/28/2</u>	016					
Dilution Factor	1.00	TCLP/SPI	TCLP/SPLP Extraction Date/time						
Analytical Run #	132104	Analysis [Date/Time 11/0	03/2016	12:31				
Analytical Prep Batch #:	59866	Prep Date	e/Time10/3	31/2016	11 00				
ICAL Calibration #.	11032016	Concentra	ation Units mg/	kg					
CAS #	Analyte	Concentration Qu	alifiers DL	LOD	LOQ	RL			
7439-97-6 Mercu	iry	0 11	0.0025	0 0099	0 0099				

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	INORGAN	1 NIC ANALYSIS D	LYSIS DATA SHEET					'16 -
_ab Name	CT Laboratories	c	Contract	TETRA TE	ECH-SRWH	SITE		
Matrix (soil/water)	TCLP	s	SDG No.		123270			
% Solids [.]		L	.ab Sampl	le ID	796975			
Analytical Method	EPA 7470A	C	Date Rece	lived	10/28/2016			
Dilution Factor	1.00	т	TCLP/SPL	P Extraction	on Date/tın	ne: <u>1</u>	1/03/2016	08:00
Analytical Run #	132334	A	Analysis D	ate/Time	11/0	7/2016	12: 41	
Analytical Prep Batch #	59983	F	Prep Date	ate/Time. 11/04/2016 12·30			12 [.] 30	
CAL Calibration #:	11072016	C	Concentra	tion Units	mg/l			
CAS #	Analyte	Concentration	n Qua	alifiers	DL	LOD	LOQ	RL
7439-97-6 Merc	ury	0 000060	U		0 00003	0 00006	0 00012	0 00012

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	IN	1 IORGANIC ANALYSIS I	DATA SHEET		SRWH-	015-0002-1027	/16		
Lab Name	CT Laboratories		Contract TE	TRA TECH-S	RWH SITE				
Matrix (soil/water)	SOIL	·	SDG No	<u>12</u> :	123270				
% Solids	85 5		Lab Sample ID	<u>79</u>	6418				
Analytical Method	EPA 6010C		Date Received	. <u>10</u> /	/28/2016				
Dilution Factor	1.00		TCLP/SPLP E	xtraction Da	ction Date/time				
Analytical Run #	132154		Analysis Date/	Time	11/03/2016	17 12			
Analytical Prep Batch #.	59874		Prep Date/Tim	ne	11/01/2016	12 00			
ICAL Calibration #:			Concentration	Units.	. mg/kg				
CAS #	Analyte	Concentratio	on Qualifie	rs DL	. LOD	LOQ	RL		
7440-09-7 Potas	ssium	1210		12	36	72	72		
7440-23-5 Sodiu		4 4	13	26	26				

Sample Description

1
INORGANIC ANALYSIS DATA SHEET

SRWH-015-0002-102716

						L				
Lab Name:		CT Laboratories		Contract	TETRA T	ECH-SRWH	SITE			
Matrix (soil/water)		SOIL		SDG No		<u>123270</u>				
% Solids:		85 5		Lab Samp	le ID:	<u>796418</u>				
Analytical Method		EPA 6010C		Date Rece	eived:	10/28/2	016			
Dilution Factor:		1.00		TCLP/SPLP Extraction Date/time.						
Analytical Run #		132152		Analysis D	ate/Time	11/0	2/2016	19.07		
Analytical Prep Batc	h #	59874		Prep Date	e/Time	11/0	1/2016	12 00		
ICAL Calibration #.			Concentration Units: mg/kg				g			
CAS #		Analyte	Concentrati	on Qua	alifiers	DL	LOD	LOQ	RL	
7429-90-5	Alumin	Jm	6420		В	0 044	0 13	0 26	0 26	
7440-36-0	Antimo	ny	27			0.14	0 44	0.88	0 88	
7440-38-2	Arsenic	:	45 9			0.14	0 44	0 88	0 88	
7440-39-3	Barium		66 2			0 0099	0.027	0 055	0 055	
7440-41-7	Berylliu	m	0 97			0 0044	0 013	0 044	0 044	
7440-43- 9	Cadmi	ım	3 1			0.0066	0 022	0.044	0 044	
7440-70-2	Calciun	n	15200			0.26	0 77	1.5	15	
7440-47-3	Chrom	um	13.7			0 025	0 077	0 15	0 15	
7440-48-4	Cobalt		93			0 044	0 13	0.26	0 26	
7440-50-8	Copper		86 8			0 077	0 22	0 44	0.44	
7439-89-6	Iron		17200			0.33	0 99	2 0	20	
7439-92-1	Lead		1210			0 044	0 14	0 27	0 27	
7439-95-4	Magne	sium	3350			0.15	0 44	0 88	0 88	
7439-96-5	Manga	nese	706			0 027	0 082	0 16	0 16	
7440-02-0	Nickel		31 3			0 023	0 066	0 13	0 13	
7782-49-2	Seleniu	m	0 22	U		0 066	0 22	0.44	0 44	
7440-22-4	Silver		0.075	J		0 019	0 055	0 11	0.11	
7440-28-0	Thalliur	n	0 26	U		0 088	0 26	0 53	0 53	
7440-62-2	Vanadı	adium 20.5				0 013	0.044	0 088	0 088	
7440-66-6	Zinc	c 513				0 055	0 16	0 33	0 33	
7440-31-5	Tin		16.7			0 099	0.27	0 55	0.55	
7440-32-6	Titaniur	n	338		х	0 044	0.13	0 26	0 26	

CT LABORATORIES

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-015-0204-102716

							L			
Lab Name		CT Laboratories		Cont	ract	TETRA	TECH-SRWH	SITE		
Matrix (soil/water	r)	TCLP		SDG	No.		123270			
% Solids				Lab S	Sampl	e ID	<u>796976</u>			
Analytical Metho	d	EPA 6010C		Date	Rece	ived	<u>10/28/2</u>	016		
Dilution Factor		1.00			P/SPL	P Extrac	ction Date/tir	ne:	11/03/2016	08 00
Analytical Run #	ŧ	132294		Analy	ysis Da	ate/Time	e 11/0)5/2016	00:50	
Analytical Prep	Batch #:	59969		- Prep	Date	/Time	11/0)3/2016	12.00	
ICAL Calibration	#.			- Conc	entrat	tion Unit	s:mg/	L		
CAS #		Analyte	Concentrat	tion	Qua	lifiers	DL	LOD	LOQ	RL
7440-38-2	Arsen	IC	0 0057		J		0 0040	0 012	0 024	0 024
7440-39-3	Bariur	n	0 64				0 00029	0 0009	0 0 0018	0 0018
7440-43-9	Cadm	ium 0 016					0 00030	0 0010	0 0020	0 0020
7440-47-3	Chron	nium 0.0012			J		0 00060	0.0020	0 0040	0 0040
7782-49-2	Selen	num 0 0044			J	в	0 0022	0 0065	0 013	0 013
7440-22-4	Silver	r 0 0020			U		0.00070	0 0020	0 0040	0 0040

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	INORGAN	1 IIC ANALYSIS D	ATA SHE	ET		SRWH	015-0204-1027	16	
Lab Name	CT Laboratories	(Contract	TETRA TEC	H-SRWH	SITE			
Matrix (soil/water) [.]	TCLP		SDG No.		123270				
% Solids [.]	<u></u>	Lab Sample ID							
Analytical Method	EPA 6010C	Date Rece	ved.	10/28/2	016				
Dilution Factor	20.00		TCLP/SPL	n Date/tin	ne	11/03/2016	08 00		
Analytical Run #	132294	/	Analysis D	ate/Time	11/0	9/2016	04.02		
Analytical Prep Batch #	59969	F	Prep Date	/Time.	11/0	3/2016	12 00		
ICAL Calibration #	•••••		Concentral	ion Units	mg/L				
CAS #	Analyte	Concentration	n Qua	lifiers	DL	LOD	LOQ	RL	
7439-92-1 Lead		320			0.028	0 040	0.080	0 080	

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	IN	ORGANIC ANALYSIS DA	TA SHEET	SRWH-015-0204-102716					
Lab Name	CT Laboratories	Co	ntract: TETRA TI	ECH-SRWH	SITE				
Matrix (soil/water)	SOIL	SD	G No.	123270					
% Solids	84 9	La	b Sample ID	796419	}				
Analytical Method	EPA 7471B	Da	te Received	10/28/2	016				
Dilution Factor	1 00	тс	CLP/SPLP Extraction Date/time						
Analytical Run #	132104	An	alysis Date/Time	11/0	03/2016	12 [.] 33			
Analytical Prep Batch #	59866	Pre	ep Date/Time	10/3	31/2016	11 00			
ICAL Calibration #:	11032016	Co	incentration Units	mg/	kg		-		
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL		

vering more than data from	n your anvironmantal analyses					Sa	mple Descrip	tion	
	INO	1 DRGANIC ANALYSIS E	DATA SHE	ET		SRWH-015-0204-102716			
Lab Name	CT Laboratories		Contract	TETRA TI	ECH-SRWH	SITE			
Matrix (soil/water)	TCLP		SDG No <u>123270</u>						
% Solids		<u> </u>	Lab Samp	le ID	796976				
Analytical Method	EPA 7470A	1	Date Received 10/28/2016						
Dilution Factor	1.00		TCLP/SPL	P Extracti	on Date/tin	ne: <u>1</u>	1/03/2016	08 00	
Analytical Run #	132334		Analysis D	ate/Time	11/0	7/2016	12:48		
Analytical Prep Batch #	59983		Prep. Date/Time ⁻ 11/04/2016 12:30				12:30		
ICAL Calibration #	11072016		Concentra	tion Units	mg/l				
CAS #	Analyte	Concentratio	n Qua	lifiers	DL	LOD	LOQ	RL	
7439-97-6 Merc	ury	0 000060	U		0 00003	0 00006	0 00012	0 00012	

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Sample Description

SRWH-015-0204-102716

		IN	NORGANIC ANALYSIS I	DATA SHEET		SRWH-0	15-0204-1027	16		
Lab Name:		CT Laboratories		Contract TETRA TE	CH-SRWF	I SITE				
Matrix (soil/water	r) [.]	SOIL		SDG No	123270					
% Solids		84 9		Lab Sample ID	796419					
Analytical Metho	d	EPA 6010C		Date Received	10/28/2	2016				
Dilution Factor		1.00		TCLP/SPLP Extraction Date/time						
Analytical Run #	ŧ	132154	154 Analysis Date/Time				17 14			
Analytical Prep	Batch #.	59874		Prep Date/Time	11/(01/2016	12.00			
ICAL Calibration	#			Concentration Units	mg/	/kg				
CAS #	CAS # Analyte Conc		Concentratio	n Qualifiers	DL	LOD	LOQ	RL		
7440-09-7	Potas	sium	1740		12	37	74	74		
7440-23-5	Sodiu	m	788		4 5	13	27	27		

CT LABORATORIES

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7440-31-5

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			1 INORGANIC ANALYSIS	S DATA SH	EET		SRWH-0	15-0204-1027	716		
Lab Name		CT Laboratories		Contract	TETRA T	ECH-SRWH	SITE				
Matrix (soil/water	.) .	SOIL		SDG No		123270					
% Solids:		84 9		Lab Sam	ole ID	796419					
Analytical Method	ď	EPA 6010C		Date Rec	eived	10/28/2016					
Dilution Factor:		1.00		_ TCLP/SP	LP Extract	action Date/time					
Analytical Run #	ŧ	132152		Analysis	Date/Time	me 11/02/2016 19:14					
Analytical Prep I	Batch #	59874		- Prep Dat	e/Time						
ICAL Calibration	#.			- Concentr	ation Units	mg/l	kg				
CAS #		Analyte	Concentrat	tion Qu	alifiers	DL	LOD	LOQ	RL		
7429-90-5	Alumı	num	8920		В	0 045	0 13	0 27	0 27		
7440-36-0	Antim	ony	0 45	U		0 15	0 45	0 90	0 90		
7440-38-2	Arsen	IC	10 6			0 15	0 45	0 90	0.90		
7440-39-3	Bariur	n	96 2			0 010	0 028	0.056	0 056		
7440-41-7	Berylli	lum	18			0 0045	0 013	0 045	0 045		
7440-43-9	Cadm	ium	0 85			0 0067	0 022	0 045	0 045		
7440-70-2	Calciu	Im	21200			0 27	0.79	16	16		
7440-47-3	Chron	nium	13 3			0 026	0.079	0 16	0 16		
7440-48-4	Cobal	t	5 4			0 045	0.13	0 27	0 27		
7440-50-8	Сорре	er	79 6			0 079	0 22	0 45	0 45		
7439-89-6	Iron		12700			0 34	10	20	2 0		
7439-95-4	Magn	esium	6140			0 16	0 45	0 90	0 90		
7439-96-5	Mang	anese	1330			0 028	0 084	0 17	0 17		
7440-02-0	Nicke	l	12 2			0 024	0 067	0 13	0 13		
7782-49-2	Selen	ıum	0 54		В	0 067	0 22	0 45	0 45		
7440-22-4	Silver	Silver 0 22				0 019	0 056	0 11	0 11		
7440-28-0	Thallu	Thallium 0 27				0 090	0.27	0 54	0 54		
7440-62-2	Vanad	dium	21 2		· · · ·	0 013	0 045	0 090	0 090		
7440-66-6	Zinc		110			0 056	0.17	0 34	0 34		

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0 10

0 28

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Sample Description

			1 INORGANIC ANALYSIS D	SIS DATA SHEET SRWH-015-0204-102716							
Lab Name:		CT Laboratories	(Contract TETRA TECH-SRWH SITE							
Matrix (soil/wate	r)	SOIL	SDG No	<u>123270</u>							
% Solids		84 9	I	_ab Sample ID:	796419						
Analytical Metho	d	EPA 6010C		10/28/2016							
Dilution Factor		10 00	TCLP/SPLP Extraction Date/time								
Analytical Run #	4	132152	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Analysis Date/Time	11/03/2016		20 [.] 55				
Analytical Prep	Batch #	59874	1	Prep Date/Time	ime 11/01/2016 12.00						
ICAL Calibration	ı #			Concentration Units	mg/	kg		-			
CAS #		Analyte	Concentration	n Qualifiers	DL	LOD	LOQ	RL			
7439-92-1	Lead		6340	· · · ·	0 45	14	28	28			
7440-32-6	Titaniur	n .	457		0 45	13	27	2.7			

CT LABORATORIES

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-015-0204-102716-D

							L					
Lab Name		CT Laboratories		Contra	ict:	TETRA	TECH-SRWH	SITE				
Matrix (soil/water)		TCLP		SDG I	No		123270					
% Solids			Lab Sa	ample	e ID	<u>796977</u>						
Analytical Method		EPA 6010C			Recei	ved	10/28/2	016	_			
Dilution Factor		1.00	_ TCLP/	SPL	Extrac	tion Date/tir	ne	11/03/2016	08 00			
Analytical Run #		132294			sis Da	ate/Tim	e 11/0	5/2016	00:57			
Analytical Prep Ba	alytical Prep Batch # 59969				Prep Date/Time 11/03/2016 12 00							
ICAL Calibration #				- Conce	ntrat	ion Unit	s mg/	L				
CAS #		Analyte	Concentrat	ion	Qual	lifiers	DL	LOD	LOQ	RL		
7440-38-2	Arseni	c	0.012		U		0 0040	0 012	0.024	0 024		
7440-39-3	Banum	1	0 41	_			0.00029	0.00090	0 0018	0 0018		
7440-43-9	Cadmi	um	0 0078				0 00030	0 0010	0.0020	0 0020		
7440-47-3	Chrom	ıum	0 0010		J		0.00060	0 0020	0 0040	0 0040		
7439-92-1	Lead		67				0 0014	0 0020	0 0040	0 0040		
7782-49-2	Selenı	um	0 0043		J	В	0 0022	0 0065	0.013	0 013		
7440-22-4	Silver	<u>-</u>	0 0020		U		0 00070	0 0020	0 0040	0 0040		

your environmental analyses			<i></i>	Sar	mple Descrip	tion
INORG	1 GANIC ANALYSIS DATA	SHEET		SRWH-01	5-0204-10271	16-D
CT Laboratories	Contra	act: <u>TETRA TE</u>	CH-SRWH	SITE		
SOIL	SDG	No :	<u>123270</u>			
87 9	Lab S	ample ID	<u>796420</u>	·		
EPA 7471B	Date I	Received	10/28/2	016		
1.00	TCLP	SPLP Extraction	on Date/tir	ne		
132104	Analy	sis Date/Time	11/0	3/2016	12 35	
59866	Prep	Date/Time	10/3	31/2016	11:00	
11032016	Conce	entration Units:	mg/	kg		
Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL
	INORG CT Laboratories SOIL 87 9 EPA 7471B 1.00 132104 59866 11032016	1 INORGANIC ANALYSIS DATA CT Laboratories Contra SOIL SDG 87 9 Lab S EPA 7471B Date F 1.00 TCLP 132104 Analys 59866 Prep 11032016 Concert	1 INORGANIC ANALYSIS DATA SHEET CT Laboratories Contract: TETRA TE SOIL SDG No : 87 9 Lab Sample ID EPA 7471B Date Received 1.00 TCLP/SPLP Extraction 132104 Analysis Date/Time 59866 Prep Date/Time 11032016 Concentration Units:	1 INORGANIC ANALYSIS DATA SHEET CT Laboratories Contract: TETRA TECH-SRWH SOIL SDG No : 123270 87 9 Lab Sample ID 796420 EPA 7471B Date Received 10/28/2 1.00 TCLP/SPLP Extraction Date/ture 132104 Analysis Date/Time 11/0 59866 Prep Date/Time 10/3 11032016 Concentration Units: mg/ mg/	1 SRWH-018 INORGANIC ANALYSIS DATA SHEET SRWH-018 CT Laboratories Contract: TETRA TECH-SRWH SITE SOIL SDG No : 123270 87 9 Lab Sample ID 796420 EPA 7471B Date Received 10/28/2016 1.00 TCLP/SPLP Extraction Date/time. 132104 Analysis Date/Time 11/03/2016 59866 Prep Date/Time 10/31/2016 11032016 Concentration Units: mg/kg	1 SRWH-015-0204-10271 CT Laboratories Contract: TETRA TECH-SRWH SITE SOIL SDG No : 123270 87 9 Lab Sample ID 796420 EPA 7471B Date Received 10/28/2016 1.00 TCLP/SPLP Extraction Date/time. 11/03/2016 12 35 59866 Prep Date/Time 10/31/2016 11:00 11032016 Concentration Units: mg/kg

woring more than data from	your environmental analyses					Sa	ample Descript	tion
	INOR		SRWH-0	15-0204-10271	6-D			
Lab Name	CT Laboratories	0	Contract	TETRA TE	CH-SRWH	SITE		
Matrix (soil/water)	TCLP	s	SDG No.		123270			
% Solids:		L	ab Sampl	e ID	796977			
Analytical Method	EPA 7470A	C	Date Rece	ived.	10/28/2	016		
Dilution Factor	1.00	т	ICLP/SPL	P Extraction	on Date/tin	ne _	11/03/2016	08 0
Analytical Run # [.]	132334	A	Analysis D	ate/Time	11/0	7/2016	12 50	
Analytical Prep Batch #	59983	F	Prep Date	/Time	11/0	4/2016	12.30	
ICAL Calibration #.	11072016	(Concentra	tion Units:	mg/l			
CAS #	Analyte	Concentration	n Qua	lifiers	DL	LOD	LOQ	RL
7439-97-6 Merci	γıγ	0 000060	U		0 00003	0 00006	6 0 00012	0 0001;

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Sample Description

		1 INORGANIC ANALYSIS DAT	A SHEET	SRWH-015-0204-102716-D				
Lab Name	CT Laboratories	Con	tract TETRA TE	CH-SRWI	H SITE			
Matrix (soil/water)	SOIL	SDC	6 No	12327(<u> </u>			
% Solids	87 9	Lab	Sample ID	796420	5			
Analytical Method	EPA 6010C	Date	Date Received 10			10/28/2016		
Dilution Factor	1.00	тсі	P/SPLP Extractio	n Date/ti	me _			
Analytical Run #	132154	Ana	lysis Date/Time	11/	03/2016	17.23		
Analytical Prep Batch	# [.] 59874	Pre	Date/Time	11/01/2016		12 00		
ICAL Calibration #		Cor	centration Units:	mg	/kg			
CAS #	Analyte	Concentration	Qualifiers	DL	LOD	LOQ	RL	
7440-09-7	Potassium	2250	2250		38	76	76	
7440-23-5	Sodium	1080		46	14	28	28	

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-015-0204-102716-D

		114	ORGANIC ANALYSIS	DATA SHEET				
Lab Name		CT Laboratories		Contract TE	TRA TECH-SRV	VH SITE		
Matrix (soil/water))	SOIL		SDG No	1232	70		
% Solids		87 9		Lab Sample ID)· <u>7964</u>	20		
Analytical Method	I	EPA 6010C		Date Received	l. <u>10/28</u>	3/2016		
Dilution Factor		1 00		TCLP/SPLP E	xtraction Date	/time:		
Analytical Run #		132152		Analysis Date/	Time 1 [.]	1/02/2016	19 2 1	
Analytical Prep 8	Batch #	59874		- Prep Date/Tin	ne: 1'	1/01/2016	12 00	
ICAL Calibration	#:			- Concentration	Units m	g/kg		
				-				
CAS #		Analyte	Concentrat	ion Qualifie	ers DL	LOD	LOQ	RL
7429-90-5	Alumin	um	9080	E	3 0 0 4 6	0 14	0 28	0 28
7440-36-0	Antimo	ony	0 46	U	0 15	0 46	0 92	0 92
7440-38-2	Arseni	c	9 9		0 15	0.46	0 92	0 92
7440-39-3	Barium	ז 	126		0 010	0 029	0 057	0 057
7440-41-7	Beryllu	um	2.2		0 0046	0 014	0 046	0 046
7440-43-9	Cadmi	um	0 73		0 0069	0 023	0.046	0 046
7440-70-2	Calciu	m	21800		0 28	0 80	16	16
7440-47-3	Chrom	lium	12 9		0 026	0 080	0 16	0 16
7440-48-4	Cobalt		4 9		0 046	0 14	0 28	0 28
7440-50-8	Сорре	r	78 4		0 080	0 23	0 46	0 46
7439-89-6	Iron		16300		0 34	10	2 1	2 1
7439-95-4	Magne	esium	7640		0 16	0.46	0 92	0 92
7439-96-5	Manga	inese	1360		0 029	0 086	0 17	0 17
7440-02-0	Nickel		10		0 024	0.069	0 14	0.14
7782-49-2	Seleni	um	. 0 59		3 0 069	0 23	0 46	0.46
7440-22-4	Silver		0 21		0 020	0 057	0 11	0 11
7440-28-0	Thalliu	m	0 28	U	0 092	0 28	0 55	0 55
7440-62-2	Vanad	ium	25 1		0.014	0.046	0 092	0 092
7440-66-6	Zinc		107		0 057	0 17	0 34	0 34
7440-31-5	Tin		7 0		0 10	0 29	0 57	0 57

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dolt	worlng	mor	o tho	m de	nta fin	ovm 1	iow.	WW	nonn	n consta	al a	nah	404	

Sample Description

1 INORGANIC ANALYSIS DATA SHEET

SRWH-015-0204-102716-D

Lab Name		CT Laboratories		Contract: TETRA TECH-SRWH SITE						
Matrix (soil/water)	SOIL		SDG No		123270				
% Solids		87 9			e ID.	796420				
Analytical Metho	ł	EPA 6010C	Date Rece	ved:	10/28/2016					
Dilution Factor:		10.00		TCLP/SPL	P Extractio	n Date/tın	ne _			
Analytical Run #		132152		Analysis Date/Time		11/03/2016		21 02		
Analytical Prep Batch # ICAL Calibration #		59874		Prep Date/Time Concentration Units:		11/01/2016 mg/kg		12 00		
CAS #		Analyte	Concentratio	on Qua	lifiers	ÐL	LOD	LOQ	RL	
7439-92-1	Lead		9050			0 46	14	29	29	
7440-32-6	Titaniu	JM	675			0 46	14	28	28	

Appendix B 2017 Work Plan

Removal Action Work Plan

BNSF RIGHT-OF-WAY 16TH TO 18TH STREETS CHICAGO, COOK COUNTY, ILLINOIS

OCTOBER 2017

Prepared for:



BNSF Railway Company Minneapolis, Minnesota Prepared by: CTRC Chicago, Illinois

Removal Action Work Plan

BNSF RIGHT-OF-WAY 16TH TO 18TH STREETS CHICAGO, COOK COUNTY, ILLINOIS

Prepared for:



BNSF Railway Company Minneapolis, Minnesota

Prepared by:



TRC Environmental Corporation 230 West Monroe Street, Suite 2300 Chicago, Illinois 60606

TRC Project No. 282917

October 2017

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LIST OF ATTACHMENTS

Attachment A.	Site-Specific Health and Safety Plan
Attachment B.	Transportation Management Plan
Attachment C.	Fugitive Dust Control Plan
Attachment D.	Air Monitoring Plan
Attachment E.	Sampling and Analysis / Quality Assurance Project Plan



October 2017

LIST OF ACRONYMS

bgs	below ground surface
BMPs	best management practices
BNSF	BNSF Railway Company
CFR	Code of Federal Regulations
cw	construction worker
HASP	health and safety plan
JULIE	Joint Utility Locating Information for Excavators
Loewenthal	former Loewenthal Metals facility
mg/kg	milligrams per kilogram
μg/m ³	microgram per cubic meter
mg/L	milligram per liter
NPDES	National Pollution Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	polychlorinated biphenyls
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RAWP	Removal Action Work Plan
RCRA	Resource Conservation and Recovery Act
ROW	right-of-way
SROs	Soil Remediation Objectives
SVOCs	semi-volatile organic compounds
TACO	Tiered Approach to Corrective Action Objectives
TCLP	toxic characteristic leaching procedure
TRC	TRC Environmental Corporation
TSP	triple superphosphate
US EPA	United States Environmental Protection Agency
VOCs	volatile organic compounds



1.0 INTRODUCTION

On behalf of BNSF Railway Company (BNSF), TRC Environmental Corporation (TRC) prepared this Removal Action Work Plan (RAWP) for the property along the railroad right-of-way (ROW) located between West 16th Street to the north and West 18th Street to the south in Chicago, Illinois (the Site). The removal action will be conducted to address lead–impacted surface soils at the Site pursuant to a United States Environmental Protection Agency (US EPA) Order of Consent.

Prior soil investigations identified areas with lead concentrations above the most stringent Tier I soil remediation objectives (SROs) established in 35 Illinois Administrative Code Part 742 – Tiered Approach to Corrective Action Objectives (TACO) for industrial/commercial and residential properties, and above the characteristic hazardous waste criteria (5 milligrams per liter [mg/L] for toxic characteristic leaching procedure [TCLP] analysis). This RAWP outlines the scope of work to address the isolated soil areas with characteristically hazardous lead concentrations and the areas with lead concentrations in soil above Tier 1 TACO SROs.

1.1 Site Description

The Site is located in Section 20, Township 39N, Range 14E in Chicago, Cook County, Illinois. The Site is located in a predominantly industrial area (north, west and east) with outlying residential properties to the south of the Site (**Figure 1**). Note, a former National Lead facility was located to the east of the Site.

Removal activities will take place between West 16th Street to the north and West 18th Street to the south within the BNSF surveyed property boundary (**Figure 2**). The characteristically hazardous lead removal areas are shown in red on **Figure 3**. Removal activities will not take place outside of BNSF property boundaries.

Initial activities will include installing traffic controls and temporary fencing, and removing existing trees/shrubs, railroad track and ties as well as other limited structures, if applicable. Mixing and treatment of characteristically hazardous lead-impacted soil will be conducted, followed by the excavation of the remaining ROW soil material including the treated areas to approximately 2 feet below ground surface (bgs) or 4 feet bgs in an area near sample location P-23. All soil materials will be directly loaded into trucks and disposed offsite at an approved BNSF licensed facility. While excavation activities are taking place, TRC will conduct air monitoring, evaluating the need for fugitive dust management, and coordinating dust control as necessary. Following excavation activities, a demarcation geotextile will be installed followed by a clean soil cap. The clean soil cap will be seeded.

1.2 Background and Previous Sampling Results

The US EPA conducted subsurface investigations and remediation at the former Loewenthal Metals facility located at 947 West Cullerton Street in Chicago, Illinois. As part of the investigation phase of the US EPA remediation project, US EPA approached BNSF to sample soil on BNSF ROW property, east of the former Loewenthal Metals facility. Based on the results of initial sampling, BNSF completed additional soil sampling on November 12, 2013 and again on October 7-8, 2014, to further evaluate lead impacts along the BNSF ROW, including the Site.

The table below provides a summary of the sampling and laboratory analysis completed along the BNSF ROW between West 16th and West 18th Streets.

Summary of Sampling and Laboratory Analysis				
Date	Sample Identification / Depth	Laboratory Analysis		
November 12, 2013	P-22 to P-36	Total Lead and TCLP Lead, % Moisture		
October 7-8, 2014	A-29 to A-50			

Notes: TCLP

'LP Toxic Characteristic Leaching Procedure Percent

%

1.2.1 Characteristic Hazardous Waste TCLP Lead Soil Results

The following soil samples have TCLP lead results above the characteristic hazardous waste criteria (5 mg/L):

Sample ID	Depth (Feet below grade surface [bgs])	TCLP Lead Result (mg/L)	Total Lead Result (mg/kg)
P-23	0-2	6	1,520
P-26	0-2	53.5	4,950
P-31	0-2	7.6	3,130
A-32	2-4	24.4	10,600
A-32 Dup	2-4	18.7	34,500
A-33	0-2	5.1	1,230
A-33	2-4	23.0	1,460
A-34	2-4	39.6	364
A-35	0-2	13.2	7,560
A-38	0-2	5.1	1,300

Based on the analytical results, there are three areas centered on three sampling locations (P-23, P-26 and P-31) that have TCLP lead concentrations above 5 mg/L. The elevated concentrations are limited to the upper 2 feet in two of the three areas P-26 and P-31 and the upper 4 feet in the area centered on P-23 (**Figure 3**).

1.2.2 Total Lead Soil Results

Based on the results of the soil samples collected and analyzed for total lead, several soil boring locations on the BNSF ROW have total lead concentrations above 800 mg/kg,
the Tier 1 industrial/commercial ingestion SRO for lead. The sample results above 800 mg/kg are shaded in green on **Figure 3**. Sample results above the Tier 1 construction worker ingestion SRO (700 mg/kg) are depicted with a "cw" designation. Samples results identified above 400 mg/kg, the Tier 1 residential ingestion SRO for lead, are shaded in yellow (**Figure 3**).

2.0 SITE PREPARATION FOR FIELD WORK

2.1 Health and Safety

A site-specific *Health and Safety Plan* (HASP) has been prepared to establish general site operating procedures, safety guidelines and contingency plans for all proposed work to be performed on the Site. A copy of the HASP is included as **Attachment A** of this RAWP. The HASP is dynamic in nature, and may be revised as Site conditions change. The HASP and any subsequent addenda will apply to all personnel who are involved with removal activities at the Site. All work will be conducted in compliance with applicable Occupational Safety and Health Administration (OSHA) regulations, including 29 Code of Federal Regulations (CFR) 1910 (General Industry Standards), and 29 CFR 1926 (Construction Industry Standards).

All personnel who will be directly involved in the removal activities will have received the appropriate hazardous waste site worker and e-RAILSAFE training. In addition, TRC and their subcontractors will have completed the BNSF Railway Company Contractor Orientation course prior to coming onto the Site. All personnel will be trained in general and Site-specific health and safety procedures, as well as quality assurance (QA) and quality control (QC) procedures.

All personnel must wear proper personal protective equipment (PPE) including a high visibility hard hat, high visibility safety vest, leather safety boots with steel shank and steel toes; and safety glasses with permanent side-shields. In addition, boot covers will be worn at all times while personnel are walking or working in the excavation areas or on exposed soil. The boot covers will be removed when not in the excavations areas or on exposed soil.

The ROW is not active; as such, track protection is not required.

2.2 Property Survey

Prior to mobilization and excavation activities a property survey will be conducted by a licensed surveyor and the BNSF ROW property lines and hazardous excavation areas will be delineated with stakes.

2.3 Utility Clearance

The excavation contractor will contact the Joint Utility Location Information for Excavators (JULIE) hotline and a request for the location and markings for all utilities for which JULIE is responsible. TRC will contact BNSF's personal utility locate and on Site personnel to locate and mark all utilities located in the BNSF ROW. In addition, TRC will contract a private utility locator to ensure removal areas are clear of underground utilities.



2.4 Hazardous Waste Treatability Study Sampling

Prior to removal activities, TRC will collect soil samples at the three hazardous soil areas to conduct a treatability study to evaluate the ratio and mixture of triple superphosphate (TSP) required to stabilize the lead. The samples will be submitted to the Applied Chemistry Laboratory at TRC's Madison, Wisconsin office for the study.

2.5 Special Waste Profile Sampling

A previous disposal profile was completed for special waste along the BNSF ROW, south of West 18th Street at Waste Management Laraway Landfill. This profile has been renewed. According to Waste Management, additional sampling for profiling is not required.

2.6 Site Preparation

The Site will be prepped prior to beginning the soil excavation activities. A survey will be conducted to identify the BNSF ROW property boundaries and the anticipated limits of the excavations will be measured and marked with stakes by the licensed surveyor. In addition, temporary fencing will be placed around the hazardous waste soil excavation limits. Work zones will be identified and delineated as well as staging areas for vehicles and equipment. Vehicles and other equipment will remain staged on the BNSF ROW. A decontamination for equipment will be established outside the work zone but adjacent to each excavation and on BNSF ROW property. Street sweeping will be made available if there is any dirt tracking on the access roads.

Appropriate traffic patterns for field personal and equipment will also be identified and marked in the field prior to beginning removal efforts as appropriate. Prior to mobilization to the Site, any field equipment to be used during soil removal will be cleaned.

A Transportation Management Plan is included as Attachment B of this RAWP.

2.7 Soil Erosion and Sediment Control

Erosion and sediment controls will be installed prior to any soil removal activities. The contractor must follow best management practices (BMPs) in accordance with typical conditions of a National Pollution Discharge Elimination System (NPDES) construction site erosion and storm water discharge regulations. If needed, filter fabric fences will be placed around excavations. No storm water conveyances, surface water bodies, or surface water drainages are present in the immediate vicinity of the soil excavation areas. As such a NPDES permit is not anticipated to be required.

2.8 Air Monitoring

Air monitoring will be performed and documented throughout the entire soil removal activities. Specifics are provided in the *Air Monitoring Plan* included as **Attachment D** of

this RAWP. Air quality will be continuously monitored with a minimum of 2 particulate meters within the work zone (1 downwind and 1 upwind) to evaluate potential worker exposure to airborne particulate concentrations. The meter will be placed in the immediate vicinity of the active excavation area. Air quality will be monitored with measurements of total particulate concentration, date, time, and wind direction recorded on air monitoring logs or in the field log book. The frequency of the monitoring will depend on the activities being conducted and the predominant wind direction, but no less than every 15 minutes. The action level for nuisance dust will be 2.5 milligrams per meter cubed (mg/m³) and/or visible dust. This action level is consistent with the action level utilized during the US EPA Loewenthal Metals clean up action. The results of the air monitoring will be recorded in a log book and/or electronically recorded and kept as part of the Site documentation.

Personal Data Rams (pDRs) will be employed on a daily basis to monitor nuisance dust. The pDRs will be placed in the heavy equipment cabs and one on any personnel going into the removal action area.

2.9 Dust Suppression

If the action level 2.5 mg/m³ is exceeded during field activities, a stop to excavation activities will be initiated so dust control measures can be implemented. These measures may include, but are not limited to, spraying the excavations lightly with water to minimize dust emissions. Details are provided in the *Fugitive Dust Control Plan* included as **Attachment D** of this RAWP.

2.10 Rail and Tie Removal

Prior to soil excavating, any existing rail and associated railroad ties will be removed and placed above ground on the BNSF ROW for disposal or recycling. Refer to the *Transportation Management Plan* for the staging location of the rail and ties if these materials are not directly loaded onto trucks.

2.11 Hazardous Soil Treatment, Mixing and Confirmation Sampling

Three separate areas have TCLP lead concentrations above the characteristically hazardous criteria of 5 mg/L. These three areas are depicted on **Figure 3**. The areas surround sampling locations (from south to north) P-23, P-26 and P-31.

The elevated lead concentrations are limited to the upper 2 feet at sampling locations P-26 and P-31 and the elevated concentrations are limited to the upper 4 feet at sample location P-23. The soil from each area will be excavated to the nearest delineation borings in each direction with concentrations below the characteristically hazardous criteria. As such, the two treatment/mixing areas encompassing sample locations P-26 and P-31 will measure approximately 20- by 20-feet and the area encompassing sample location P-23

measures approximately 30-by 30 feet as shown on **Figure 3**. No excavations will be conducted beyond BNSF ROW property boundaries. Excavation will be limited to an approximate 5 feet set back zone from off-site buildings, large vegetation or active underground utilities (manholes, electric, sewers, etc.). The estimated in-place volume per excavation of characteristically hazardous soil to be treated and mixed for P-26 and P-31 is approximately 30 in-place cubic yards, or approximately 41 tons. The estimated in-place volume to be treated and mixed for P-23 is approximately 133 in-place cubic yards, or approximately 133 in-place cubic yards, or approximately 187 tons. The total volume for the three excavations will be approximately 193 cubic yards, or 269 tons.

The three areas will be mixed with a pre-determined ratio and mixture of TSP (Free Flow FF-100) required to stabilize the lead. TRC personnel will then collect a representative sample of the treated soil from each excavation to confirm the material is below 5 mg/L for TCLP lead. The bottom and side walls of each excavation area will be field screened with x-ray fluorescence (XRF) equipment to screen for total lead levels. Confirmation soil samples will be collected for TCLP lead at the boundaries of the anticipated final excavation(s) limits (sidewalls and floor) for a total of five confirmation samples per excavation. Refer to Attachment E for a copy of the Sampling and Analysis Plan / Quality Assurance Project Plan (SAP/QAPP).

Once the confirmation sample concentrations are established to be below 5 mg/L, the soil will be excavated and disposed as non-hazardous soil as summarized in Section 3.1 below.



3.0 REMOVAL PLAN

The following sections outline the removal and restoration activities, decontamination procedures, and confirmation sampling. The contractor's (City of Chicago) certification and training certificates (40 hour, 8-hour refresher) will be provided once the contractor has been selected.

3.1 Non-Hazardous Soil Excavation and Disposal

Soil lead concentrations were identified above TACO Tier 1 SROs in the BNSF ROW north of West 18th Street. US EPA Removal Management Levels are consistent with the TACO Tier 1 SROs. This area is depicted on **Figure 3**. Based on estimates, this area contains approximately 28,066 square feet. Two feet of soil be removed in the BNSF ROW. In addition, in the excavation area surrounding sample location P-23, 4-feet of soil will be removed. Excavation will be limited to an approximate 5 feet set back zone from off-site buildings, large vegetation or active underground utilities (manholes, electric, sewers, etc.).

A demarcation fabric will be anchored down at the bottom of the excavation area to prevent dust and to provide a warning for potential future excavation beyond this barrier. The barrier will be marked with a Caution Excavation beyond this depth may encounter lead contaminated soil (or similar warning).

The soil material will be removed from the BNSF ROW as noted above, loaded directly onto semi-trucks and disposed as a special waste material at the Waste Management Laraway Landfill located in Joliet, Illinois. If appropriate, the soil may be stockpiled prior to loading. Any stockpile will be tarped, as necessary to limit dust. The estimated in-place volume of non-hazardous special waste soil to be excavated and disposed is approximately 2,126 in-place cubic yards or approximately 2,551 tons.

3.2 Decontamination

Heavy equipment (i.e. excavator and/or backhoe) utilized for excavation activities will be visually inspected prior to, and at the completion of each excavation area (hazardous and non-hazardous areas). If the tracks on the heavy equipment become soiled, the driver will physically clean the tracks of soil with a shovel and place the material within the last truck-load of soil going off for disposal prior to leaving the excavation area and the Site. The driver of heavy equipment will inspect his/her vehicle for loose soil hanging off the truck, truck tracks, and bucket prior to leaving an excavation area. Decontamination water, if generated, will be mixed with the impacted soil and placed within the last truck-load of soil for disposal.



Trucks and equipment will use the equipment access road to the excavation area. Trucks will be lined, tarped and inspected prior to leaving the excavation area. Street sweeping will be made available to keep streets and curbs clean.

A truck route has been prepared and will be adhered to for the drivers to minimize travel on the side roads near the community and will bypass the local grammar school two blocks to the east and south of the BNSF ROW. Main City of Chicago roads will be utilized with proper weight limits and overhead clearances to the main interstate roads. Refer to the *Transportation Management Plan* included as **Attachment B**.

3.3 Site Restoration

Prior to backfilling the soil excavations, a demarcation barrier indicating caution "Do Not Dig" or other demarcation will be placed at the final depth of excavation. The professional surveyor, subsequent to the backfilling activities, will survey in the final grades of the excavation areas to confirm that the required depth of excavations were completed.

The excavations will be backfilled to grade and compacted, if necessary. Backfill will consist of at least 6 inches of topsoil at the surface. Backfill below the topsoil may consist of crushed stone with a filter fabric to minimize the topsoil migration into the stone backfill and/or topsoil depending on the depth of the excavation. The area will then be seeded.

The backfill provider will provide analytical results to certify that the backfill is below Tier 1 TACO soil remediation objectives. These analyses will include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), priority pollutant metals, barium, cyanide, pesticides and pH. A minimum of one series of analyses per source site and backfill type will be required. The crushed stone will be obtained from a virgin source.



4.0 **REPORTING**

TRC will oversee the excavation contractor and document the removal and monitoring activities. A weekly summary of work completed and work planned will be prepared and presented and discussed with US EPA and BNSF. The documentation will include manifests, dimensions of the soil excavations, volumes of soil removed, and excavation procedures and air monitoring data. Site activities will be recorded in a field log book and on appropriate log forms, as needed. Photographic documentation of the excavation activities and air monitoring results will also be documented by TRC. Upon completion of the excavation activities, a *Removal Action Completion Report* will be prepared for BNSF and submitted to US EPA, as required under the Consent Order.

5.0 SCHEDULE

Work is anticipated to begin the week of November 27, 2016. The removal activities are also projected to take approximately 5 weeks to complete. A schedule for completion will be prepared with major milestones noted and projected time frames once the Order of Consent has been finalized. Weekly meetings will be held on-Site to go over the completed and projected tasks.

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6.0 **REFERENCES**

- TRC. 2014. Soil Sampling Results. TRC Environmental Corporation. December 1.
- TRC. 2016. *Removal Action Completion Report.* TRC Environmental Corporation. November 10.
- US EPA. 2015. Loewenthal Website; http://www.epa.gov/region5/cleanup/loewenthal/
- US EPA. 2017. Administrative Settlement Agreement and Order on Consent for Removal Action Docket No. ______.



FIGURES

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ATTACHMENT A

Site-Specific Health and Safety Plan

SITE-SPECIFIC HEALTH AND SAFETY PLAN

BNSF RIGHT-OF-WAY 16TH TO 18TH STREETS CHICAGO, COOK COUNTY, ILLINOIS

SEPTEMBER 2017

Prepared for:

Minneapolis, Minnesota

Prepared by:



Chicago, Illinois

Site-Specific Health and Safety Plan

BNSF RIGHT-OF-WAY 16TH TO 18TH STREETS CHICAGO, COOK COUNTY, ILLINOIS

Prepared for:



BNSF Railway Company Minneapolis, Minnesota

Prepared by:

CTRC

230 W. Monroe Street Suite 2300 Chicago, IL 60606

TRC Project No. 282917

September 2017

EMERGENCY PLAN AND RESCUE PROCEDURES

Emergency Call Instructions

- Call 911
- Describe the nature of the accident/emergency
- Give operator site address (below)
- Tell operator that someone will meet emergency personnel at Sangamon Street and West 18th Street.

Site Location

BNSF Railway Company 900 West 18th Street and BNSF Right-of-Way from West 18th Street to the south and West 16th Street to the north and immediately west of South Peoria Street Chicago, Illinois

Emergency Phone Numbers

Ambulance	
WorkCare	
BNSF Railway Company	
TRC Corporate Health and Safety Officer	
TRC Project Manager Lisa Meagher	Office (312) 800-5917, Mobile (312) 405-8794
TRC Task Manager Nicole DeRose	Office (312) 800-5906, Mobile (925) 998-8993
TRC On-Site Health and Safety Superviso	
Tyler Gomoll	Office (312) 800-5907, Mobile (847) 871-3000
Poison Control Center	
Hospital Rush University Medical Center 1653 W Congress Parkway Chicago, IL 60612	



Hospital Route Map

Directions to Rush University Medical Center:

- 1. From your location along the BNSF ROW, head west on West 18th Street
- 2. Turn right on South Racine Avenue.
- 3. Turn left on West Harrison Street.
- 4. Turn right on South Wood Street.
- 5. Turn right on West Congress Parkway. Medical center will be on the right.

Rush University Medical Center 1653 West Congress Parkway Chicago, IL 60612 (312) 942-5000

Accident/Incident Notification and Reporting

The following standard accident/incident notification/reporting procedures must be followed whenever any of the following occur:

- An injury to a worker or an illness
- A spill or release of a hazardous material
- Any other type of emergency

Take any and all appropriate emergency response actions necessary to alleviate the emergency as soon as possible. Appropriate response to emergency situations will be based on the type of emergency that has occurred.

Immediate Notification and Reporting Requirements

In the event of an accident or injury, BNSF Railway, TRC personnel, and WorkCare must be notified immediately or as soon as possible, <u>after appropriate emergency response has been</u> <u>conducted</u>. The primary contact at the site will be the TRC OHSS or TRC Project Manager. After notifying the TRC OHSS or TRC Project Manager and BNSF Railway, immediately contact WorkCare and Mike Glenn, TRC's Corporate Health and Safety Officer and provide him with details of the incident. If he is not available, leave the following information regarding the incident on his voice mail: your name, your office location, client and project name, date and time of the incident, location of incident, brief description of incident and what was done to address it (i.e., went to emergency room, etc.). In the event of an incident, the TRC Project Manager, the TRC OHSS, or WorkCare must be contacted within 24 hours.

First Aid Procedures for Overt Personnel Exposure

Skin contact:	Use copious amounts of soap and water. Wash/rinse affected area for at least 15
	minutes. Thoroughly decontaminate and transport if necessary to provide
	appropriate medical attention. Eyewash will be provided onsite.
Inhalation:	Move to fresh air and/or, if necessary decontaminate and transport for medical
	attention.
Ingestion:	Decontaminate and transport to hospital.
Inoculation:	Decontaminate and transport for professional medical attention at hospital.

First Aid Procedures for Personnel Injury

Emergency first aid should be applied onsite if possible. Decontaminate and transport individual by the fire department or ambulance to the hospital, if needed. WorkCare can provide advice on administering first aid.

Procedures for Environmental Incident (Release of Contamination)

Prevent spread of contamination if possible. Down range personnel shall notify the TRC OHSS. Other appropriate emergency response groups will be notified as necessary.

Procedures for Adverse Weather Conditions

In the event of adverse weather conditions, TRC's OHSS will determine if work can continue without adversely affecting the health and safety of field workers. Issues to be considered by the OHSS prior to determining if work should continue are:

- Potential for hypothermia and cold related injuries
- Treacherous weather-related working conditions
- Limited visibility
- Potential for severe/electrical storms

Accidents or Incidents (or Near Miss Accidents)

When other problem incidents occur, such as significant property damage or loss, the OHSS will notify the TRC Project Manager of the event. Actions will then be taken to correct the event, which caused the problem incident or near miss accident.

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1.0 INTRODUCTION

This *Site-Specific Health and Safety Plan* (HASP) addresses Site safety measures to be conducted as part of the removal activities at the BNSF right-of-way (ROW) located between West 16th Street to the north to West 18th Street to the south in Chicago, Cook County, Illinois (the Site). The HASP, dynamic in nature, establishes policies, procedures and guidelines to protect personnel against potential exposure to hazardous substances during Site activities. As a dynamic document, the HASP may be revised as Site conditions change. This HASP is included as Attachment A to the Removal Action Work Plan (RAWP).

Initial activities will include installing traffic controls and temporary fencing. and removing existing trees/shrubs, railroad track and ties as well as other limited structures, if applicable. Mixing and treatment of characteristically hazardous lead-impacted soil will be conducted, followed by the excavation of the remaining ROW soil material including the treated areas to approximately 2 feet below ground surface (bgs) and 4 feet bgs in an area near sample location P-23. All soil materials will be directly loaded into trucks and disposed off-site at an approved BNSF licensed facility. While excavation activities are taking place, TRC will conduct air monitoring, evaluating the need for fugitive dust management, and coordinating dust control as necessary. Following excavation activities, a demarcation geotextile will be installed and backfilled with a clean soil cap. The clean soil cap will be seeded.

This HASP has been developed in conformance with the directives and requirements of the TRC *Health and Safety Management System*, 2015, and 29 CFR 1910.120(i)(2) and generally consistent with OSWER Integrated Health and Safety Program Operating Practices for OSWER Field Activities (Pub 9285.0-)1C (Nov 2002) and EPA's Emergency Responder Health and Safety Manual OSWER Directive 9285.3012 (July 2005 and updates). This HASP and any subsequent addenda will apply to all TRC personnel who are involved with activities at the Site. All work will be conducted in compliance with applicable Occupational Safety and Health Administration (OSHA) regulations, including 29 CFR 1910 (General Industry Standards), and 29 CFR 1926 (Construction Industry Standards).

TRC personnel, contractors, and subcontractors working on the Site must read the HASP and sign the Acknowledgement Form provided in **Appendix A**, which states that they fully understand and will conduct their work in compliance with all of the plan's provisions. Although TRC's contractors and subcontractors must understand and comply with this HASP, each contractor and subcontractor is required to develop their own site-specific HASP and is responsible for their employee's safety and health.

SITE-SPECIFIC HEALTH AND SAFETY PLAN

Administration Information

Date: <u>August 1, 2017</u> Prepared by: <u>Tyler Gomoll</u>

Project Name: BNSF ROW - 16th -to 18th Streets - Chicago, IL

Project Location: <u>BNSF ROW between West 16th Street and West 18th Street, Chicago,</u> Cook County, Illinois

Project Start Date: <u>TBD – Tentatively October 2017</u>

Duration of on-Site work: <u>5 weeks</u>

TRC Project Manager: Lisa Meagher

TRC Task Leader: Nicole DeRose

TRC Corporate Health and Safety Officer: Mike Glenn

TRC On-Site Health and Safety Supervisor: Tyler Gomoll

Project Objective: <u>Mix, treat, excavate and dispose of lead-impacted soil, manage the</u> <u>movement of heavy equipment and trucks, institute dust control</u> <u>measures, monitor fugitive emissions, and replace excavated material</u> <u>with clean fill.</u>

Type of Subcontract (underline correct): <u>TRC Prime</u> Client Prime TRC Sub.

Note: If TRC is the prime contractor and has hired subcontractors, the TRC OHSS has the authority to stop work if health and safety are believed to be compromised. If a subcontractor is hired by the client, TRC still has the responsibility for health and safety. In all cases of stopped work, contact the TRC PM.

Site-Specific Health and Safety Plan BNSF ROW - 16th to 18th Streets - Chicago, IL

<u>Subcontractors –</u> Surveyor: Terra Engineering, Ltd Tom Baumgartner (312) 467-0123 x: 266 Survey Department Manager 225 W. Ohio St, 4th Floor Chicago, IL 60654

Private Utility: Blood Hound Larry Oliver (888) 858-9830 Director of Vac and Cam Services 750 Patricks Place Brownsburg, IN 46112

Remediation Contractor: TBD

PROJECT BACKGROUND 2.0

2.1 Site Description

The Site is located in Section 20, Township 39N, Range 14E in Chicago, Cook County, Illinois. The Site is located in a predominantly industrial area (north, west and east) with outlying residential properties to the south of the Site (Figure 2.1). Railroad tracks, including rail and ties, remain in place.

2.2 **Background and Previous Sampling Results**

The United States Environmental Protection Agency (US EPA) conducted subsurface investigations and remediation at the former Loewenthal Metals facility located at 947 West Cullerton Street in Chicago, Illinois. As part of the investigation phase of the US EPA remediation project, US EPA approached BNSF to sample soil on BNSF ROW, east of the former Loewenthal Metals facility. Based on the results of the initial sampling, BNSF completed additional soil sampling on November 12, 2013 and again on October 7-8, 2014 to further evaluate lead impacts along the BNSF ROW. The table below provides a summary of the sampling and laboratory analysis completed along the Site between West 16th and West 18th Streets.

Summary of Sampling and Laboratory Analysis			
Date	Sample Identification / Depth	Laboratory Analysis	
November 12, 2013	P-22 to P-36	Total Lead and TCLP Lead, % Moisture	
October 7-8, 2014	A-29 to A-50		

Notes:

Toxic Characteristic Leaching Procedure TCLP Percent

%

The following soil samples have TCLP lead results above the characteristic hazardous waste criteria (5 mg/L):

Sample ID	Depth (Feet below grade surface [bgs])	TCLP Lead Result (mg/L)	Total Lead Result (mg/kg)
P-23	0-2	6	1,520
P-26	0-2	53.5	4,950
P-31	0-2	7.6	3,130
A-32	2-4	24.4	10,600
A-32 Dup	2-4	18.7	34,500
A-33	0-2	5.1	1,230
A-33	2-4	23.0	1,460
A-34	2-4	39.6	364
A-35	0-2	13.2	7,560
A-38	0-2	5.1	1,300





Based on the analytical results, there are three areas centered on three sampling locations (P-23, P-26 and P-31) that have TCLP lead concentrations above 5 mg/L. The elevated concentrations are limited to the upper 2 feet in two of the three areas P-26 and P-31 and the upper 4 feet in the area centered on P-23. Refer to **Figure 3** of the RAWP.

Based on the results of the soil samples collected and analyzed for total lead, several soil boring locations on the BNSF ROW have total lead concentrations above 800 mg/kg, the Tier 1 industrial/commercial ingestion SRO for lead. The sample results above 800 mg/kg are shaded in green on **Figure 3** of the RAWP. Sample results above the Tier 1 construction worker ingestion SRO (700 mg/kg) are depicted with a "cw" designation. Samples results identified above 400 mg/kg, the Tier 1 residential ingestion SRO for lead, are shaded in yellow (**Figure 3** of the RAWP).

2.3 Scope of Work

TRC has been tasked by BNSF to perform the following:

- Develop and implement this site-specific HASP, RAWP and other associated documents;
- Conduct a professional licensed survey and stake BNSF ROW property boundaries including anticipated hazardous waste treatment limits;
- Conduct underground utility locates (public, BNSF and private);
- Prepare the Site for soil removal activities;
- Implement site security measures, as required and necessary for the protection of human health and the environment;
- Remove trees, as needed, signal boxes, unused power poles, and other miscellaneous structures, as applicable.
- Remove existing rail and associated railroad ties and stage within the BNSF ROW for disposal or recycling;
- Mix, and treat approximately characteristically hazardous soil to render the soil non-hazardous;
- Conduct XRF screening, as required for the hazardous waste treatment areas and collect confirmation soil samples;
- Excavate, direct load into trucks, transport and dispose of non-hazardous lead-impacted soil;

- Conduct air monitoring in the work zones using designated equipment and routine perimeter air monitoring as appropriate;
- Emplace demarcation geosynthetic material at the bottom of the excavations; and
- Backfill all excavated areas with clean soil, grade, and seed to prevent soil erosion.

3.0 BNSF CONTRACTOR SAFETY REQUIREMENTS

While working at the BNSF sites, TRC will comply with BNSF Railway's contractor safety requirements. Included in Appendix C is a BNSF-specific environmental job briefly that will be utilized throughout this project. In addition, this section outlines these requirements including track safety standards.

As described in the emergency response plan, TRC will promptly advise BNSF Railway of all work-related injuries/illnesses and any damage to railroad property.

TRC will not operate BNSF Railway vehicles, equipment and tools without specific authorization from BNSF Railway.

Personal protective equipment (PPE), including hardhats, safety shoes, orange reflective vests, and eye protection will be worn at all times by TRC and its subcontractors except when in highway vehicles, and when in the enclosed cabs of equipment. PPE will meet ANSI standards and be inspected prior to each use. Safety shoes will be Class 75, above-the-ankle, lace-up boots with a well-defined heel.

Hearing and respiratory protection needs to be worn as designated by signage in BNSF Railway areas, and otherwise, in accordance with OSHA requirements.

Appropriate hand protection is required to be worn when actively engaged in work activities, except:

- when performing office activities
- when operating highway vehicles
- where manual dexterity is required, and there is no potential for exposure to energized electrical systems, sharp projections, hot surfaces, or corrosive chemicals; or
- when working in close proximity to machines, where there is the possibility of gloves becoming entangled in moving parts.

3.1 Track Safety

BNSF requires contractors to adhere to safety standards described in the online BNSF Contractor Safety Packet. These requirements comply with the Federal Railroad Administration (FRA) regulations under Title 49 Part 214 "Railroad Workplace Safety."

These requirements must be reviewed before contractor employees conduct any type of work activities at the site. In addition, all BNSF contractors must complete the BNSF Contractor Safety Training and carry the associated certification card to be presented to BNSF personnel when requested. Since this BNSF ROW is not active; on-Site railroad equipment or railcars/locomotives will not be encountered and track protection will not be necessary.

Should an emergency situation arise and your assessment indicates a need to stop work, immediately attempt to contact:

BNSF Railway 800 emergency number, 1-800-832-5452.

3.2 Hazards Communications

Safety Data Sheets (SDSs) are developed and provided by chemical manufacturers, distributors and importers. These documents provide important information about chemical products, including: hazardous ingredients, recommendations for storage/handling/use, health hazards, PPE recommendations and fire and spill information.

Prior to bringing any hazardous materials on the Site, BNSF Railway needs to be provided with a SDS for each hazardous material. Any questions regarding hazardous materials being used in BNSF Railway operations need to be directed to the responsible BNSF Railway Supervisor. No hazardous material will be brought onto the Site for this project.

In addition to maintaining on-site SDSs, TRC and its subcontractors need to verify that all chemical containers are labeled with the chemical name and appropriate hazard warning.

When performing work in occupied areas, take adequate precautions to keep BNSF Railway personnel and other contractors from being exposed to noise, air contaminants, and eye hazards.

3.3 Traffic and Road Control

Given that the Site is a ROW in a complex urban setting, TRC will implement a *Transportation Control Plan* (Attachment B of the RAWP) for the safe and efficient transit of equipment and trucks entering and leaving the Site. An exclusion zone composed of temporary snow fencing or road cones will be set up to keep vehicles and pedestrian traffic a safe distance from work zones.

3.4 Dust Control

Dust control measures may include, but are not limited to, spraying the excavations lightly with water to minimize dust emissions. Details are provided in the *Fugitive Dust Control Plan* included as Attachment C of the RAWP.

3.5 Fire Prevention/Suppression

Open fires are prohibited on BNSF Railway property, except in limited situations where specific permits have been obtained. Open fires are not to be left unattended.

TRC employees and subcontractors operating portable fire extinguishers or other fire suppression equipment need to receive appropriate, annual training. Portable fire extinguishers are to be visually inspected monthly, with an annual formal inspection.

Job planning activities and job safety briefings need to clearly define your fire prevention strategies and procedures (e.g.; spark shields, pre-wetting), availability and staging of on-site fire prevention and suppression equipment. Job briefings should address basic issues such as: no smoking in right-of-way areas in proximity to combustible vegetation; and no parking vehicles over dry vegetation.

Flammables and combustibles need to be stored, handled and used in accordance with local fire codes. Grounding and bonding procedures need to be followed when dispensing flammables. Metal safety cans are to be used for the storage of flammable liquids.

Compressed gas cylinders of fuel gas and oxygen, whether full or "empty," need to be separated in storage by a distance of 20 feet or by a barrier having a fire-resistance rating of at least one-half hour. Cylinders are to be secured in the upright position.

4.0 TRC HEALTH AND SAFETY RESPONSIBILITIES

4.1 Project Manager

Lisa Meagher will serve as the **Project Manager**. She will have the overall responsibility to ensure t the HASP is developed and implemented in accordance with regulations and that proper subcontractor health and safety procedures have been initiated.

4.2 Task Leader

Nicole DeRose will serve as the Task Leader. She will be responsible for ensuring this HASP is reviewed and understood by all field personnel prior to conducting field activities.

4.3 Field Sampling Personnel

All TRC field personnel are responsible for following the requirements of this plan. They are also responsible for bringing health and safety problems to the attention of the Task Leader and/or OHSS.

4.4 On-Site Health & Safety Supervisor

Tyler Gomoll will serve as the **TRC OHSS**. The OHSS will be responsible for evaluating conditions and assuring that proper PPE is used and available. The OHSS may provide technical support if modifications of the HASP are required/anticipated. This person also has the authority to stop work if health and safety are being compromised.

4.5 Subcontractors

Subcontractors shall place the highest priority on health and safety, and will maintain a safe working environment during performance of the work. Subcontractors will comply, and will secure compliance by its employees, agents, and lower-tier subcontractors, with all applicable health, safety, and security laws and regulations including, without limitation, federal, state and local laws and regulations, any health and safety plans issued by TRC, and TRC's rules and regulations. Compliance with such requirements will represent the minimum standard required of the Subcontractors.

4.6 On-Site Personnel

All personnel, whether TRC, contractors or subcontractors, that enter onto the Site must have successfully completed the 40-hour OSHA Hazardous Waste Site Worker Training. Each worker must have proof of current 8-hour OSHA Hazardous Waste Site Worker Refresher Training. All personnel will also have completed the BNSF Railway on-line safety course or equivalent prior to beginning field activities.

All personnel must wear proper PPE including a high visibility hard hat, high visibility safety vest, leather safety boots with steel shank and steel toes; and safety glasses with permanent side-shields. In addition, boot covers will be worn at all times while personnel are walking or working in the excavation areas or on exposed soil.
5.0 JOB HAZARD ANALYSIS

The Site activities will be completed to remediate lead-impacted soil at the Site. The following is a list of the chemical, physical and biological hazards, which may be encountered on Site.

5.1 Chemical Hazards

Investigation results indicate that lead is the primary contaminant of concern at the Site; however, soil sampling results also indicate concentrations of several (PAHs above their respective TACO Tier 1 SROs, including: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3)cd)pyrene. In addition, concentrations of arsenic were identified above its TACO Tier 1 SRO during limited sampling events. As such, precautionary measures will be taken to prevent inhalation, ingestion, and dermal exposure to these chemical hazards. Although the above list of compounds was identified during soil sampling activities at the BNSF ROW, the above list of chemicals should not be taken as a complete assessment of potential chemical hazards posed by the adjacent and off-site sources (Loewenthal Metals, National Lead). Personnel must be alert for symptoms of possible exposure such as unusual smells, stinging, burning eyes, nose, throat and/or skin irritations, as well as feeling extremely depressed, sleepy or tired. Symptoms must be immediately reported to the Task Leader, TRC OHSS and Project Manager. Employees should not inhale or ingest dust or soil particles. As applicable, employees should always remove PPE and decontaminate before eating or placing their hands in or near their mouth. Appendix B summarizes the various constituents of concern suspected at the site, their threshold limit values (TLVs) and the major potential health effects of each.

All TRC personnel and subcontractors must wear appropriate PPE while working to reduce exposure to chemical hazards, as applicable. PPE is covered in Section 6.0.

5.2 Physical Hazards

This section addresses general physical hazards that may occur during remediation activities.

5.2.1 Fatigue

Long work hours can lead to fatigue, and fatigue can lead to the physical inability to perform the work in a safe manner, or travel to, or from, a work Site in a safe manner. If long work hours are scheduled, of if the scheduled work takes longer than planned, field staff should determine if fatigue is, or will be, an issue. Field staff should evaluation whether they are able to complete the work in a safe manner, or whether they are able to travel in a safe manner. If fatigue is an issue, appropriate breaks, including Site-Specific Health and Safety Plan BNSF ROW - 16th to 18th Streets - Chicago, IL

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drinking water and eating, should be planned or taken, including overnight stays when necessary.

Chronic tiredness or sleepiness	Headache	Dizziness
Sore or aching muscles	Muscle weakness	Slowed reflexes and responses
Impaired decision making and judgment	Moodiness or irritability	Impaired hand-to-eye coordination
Appetite loss	Reduced immune system function	Blurry vision
Short-term memory problems	Poor concentration	Hallucinations
Reduced ability to pay attention	Low motivation	

Symptoms of Fatigue

5.2.2 Heat Stress

Heat stress results when the body is unable to get rid of excess heat. Stages of heat stress are heat cramps, heat exhaustion, and heat stroke. The latter can be fatal. Heat stress is of particular concern when workers must wear chemical protective clothing and ambient air temperatures are high, because protective clothing reduces evaporative body cooling. If ambient air temperatures at the site reach 70°F, heat stress symptoms should be watched for and control measures applied, if they appear.

These symptoms include:

- Heat rash, which may result from continuous exposure to heat or humid air.
- Heat cramps, which are caused by heavy sweating and inadequate electrolyte replacement. Signs and symptoms include:
 - -- Muscle spasms; and
 - -- Pain in the hands, feet, and abdomen.
- Heat exhaustion, which may occur from increased stress on various body organs, including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include:
 - -- Pale, cool, moist skin;
 - -- Heavy sweating;

- -- Dizziness;
- -- Nausea; and
- -- Fainting.
- Heat stroke is the most serious form of heat stress in which temperature regulation fails and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury or death occurs. Competent medical help must be obtained. Signs and symptoms include:
 - -- Red, hot, unusually dry skin;
 - -- Lack of or reduced perspiration;
 - -- Nausea;
 - -- Dizziness and confusion;
 - -- Strong, rapid pulse; and
 - -- Coma.

A worker who exhibits any of these symptoms will be immediately relieved of responsibilities and told to consume electrolyte fluid or cool water while resting in a shaded area. The individual should not return to work until symptoms are no longer recognizable. If symptoms appear critical, persist, or get worse, the Supervisor will seek immediate medical attention for the employee. If the individual does resume work, he/she will be monitored for any increase in heart

The Supervisor will monitor workers hourly when:

- Symptoms of heat stress are reported or observed;
- Ambient temperatures exceed 70°F and workers are dressed in impervious clothing; or
- Ambient temperatures exceed 90°F and workers are dressed in normal clothing.

Workers will be monitored for heat stress conditions by measuring the heart rate (HR) by radial (wrist) pulse for 30 seconds after one minute of rest. The HR after one minute of rest should not exceed 110 beats per minute. If HR is higher, the next work period shall be shortened by 33 percent (%), while the rest period length remains the same. If the pulse rate is still 110 beats per minute after one minute of rest in the next rest period, the following work cycle will be shortened by another 33%. This shortening of the work period must continue until the worker's HR is no greater than 110 beats per minute regularly.

Since the remediation activities are scheduled to begin late fall, heat stress is not anticipated.

5.2.3 Sunburn

Prolonged exposure of the skin to the sun, even on overcast days, can result in sunburn, which can be severe enough to be incapacitating, especially with fair-skinned individuals.

Repeated sunburn can eventually cause premature aging of the skin and skin cancer in individuals. Always wear clothing to reduce the amount of exposed skin and frequently use sun block creams or lotions.

5.2.4 Cold Stress

The body gains heat from food and muscular work. In response to cold environments, the blood vessels in the skin constrict to conserve heat, resulting in a faster heartbeat. When this is not sufficient, the body begins shivering to generate more heat by use of muscular work. During physical activity and fatigue, the body is more prone to heat loss. As exhaustion approaches, blood vessels can suddenly enlarge, resulting in rapid loss of heat. Exposure to extreme cold causes nerve pulses to be slowed, resulting in fumbling, sluggish, and clumsy reactions.

Ambient air temperatures during site activities may create cold stress for on-site workers. Procedures for recognizing and avoiding cold stress must be followed. Cold stress can range from frostbite to hypothermia. The signs and symptoms of cold stress are listed below.

<u>Hypothermia</u> is the condition that occurs when the body's natural warming mechanisms (muscle activity and shivering) cannot counteract the loss of body heat to the environment. The onset of hypothermia is greatly hastened by being wet. Hypothermia is marked by severe, uncontrollable shivering. The patient will show signs of excessive fatigue, drowsiness, irritability, or euphoria. As hypothermia progresses, the patient will begin to lose consciousness, blood pressure will drop, shivering will cease, and the patient may slip into a coma and possibly die.

FIRST AID: If these symptoms occur, remove the patient to a warm, dry place. If clothing is wet, remove and replace with dry clothing. Keep the patient warm, but not overheated. The patient should be gradually rewarmed to prevent shock. If the patient is conscious and alert, warm liquids should be provided. Coffee and other caffeinated liquids should be avoided because of diuretic and circulatory effects. Notify the emergency clinic if conditions worsen, the patient loses consciousness, or the patient has an altered mental status. Have the patient transported to an emergency facility.

<u>Frostbite</u> is defined as the actual freezing of one or more layers of skin. In severe cases, organs and structures below the skin can become frozen. Usually, body areas

exposed to the most cold, and least body warmth, are affected first. These areas include fingers, toes, ears, and the tip of your nose. Frostbite is characterized by pain and loss of dexterity in the affected limb. The tissue initially appears reddened, but may progress to white, blue, or black. The freezing point of the skin is approximately 30°F. As wind velocity increases, heat loss is greater and frostbite will occur more rapidly.

FIRST AID: Bring the affected employee indoors and call the local emergency clinic. Rewarming of frostbitten parts is best left to a medical doctor in a controlled setting.

Cold Stress Prevention

Cold stress can be prevented through a combination of factors: acclimation; water and salt displacement; medical screening, proper clothing selection; and, training and education. Through the use of engineering controls, work practices, work/rest schedules, environmental monitoring and consideration of the wind-chill temperature, the employee can be protected. Workers should be instructed in safety and health procedures regarding cold work environments as part of the pre-work safety meeting. The training program should include instruction in preventing, recognizing, and treating cold stress conditions.





								Tem	pera	ture	(°F)							
	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-8
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-8
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-8
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-9
45	26	29	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-9
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-9
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-9
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-9
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Acclimation

Acclimation can be achieved to some degree. Sufficient exposure to cold causes the body to undergo changes to increase comfort and reduce the risk of injury. But, these changes are minor and require repeated exposure to cold and uncomfortable temperatures to induce them.

Dehydration

The dryness of cold air causes the body to lose a significant amount of water through the skin and lungs. It is essential that caffeine-free, non-alcoholic beverages be available at the worksite for fluid replacement. Dehydration also increases the risk of injury due to cold and affects blood flow to the extremities.

Control Measures

When the wind-chill factor results in an equivalent temperature of -26°F, continuous exposure of the skin will not be permitted. Any worker exposed to temperatures of 36°F or less who becomes immersed in water will be given dry clothing immediately and treated for hypothermia at the local hospital if any symptoms of hypothermia are present. Notification of this incident will be provided to the Health and Safety Department immediately after sending the worker to the hospital.

5.2.5 Hot Work,

Cutting or grinding onsite railroad track dictates that caution must be taken while conducting hot work. A hot work permit must be obtained for any operation or device that has the potential to cause a spark or produces an open flame.

5.2.6 Exposure to Excessive Noise

Overexposure to noise can result in hearing loss. If it is difficult to hear normal speech when the speaker is 3 feet from the listener, for more than 4 hours a day, the noise level must be measured. If it exceeds 85 decibels (dBA) as an 8-hour, time-weighted average (TWA), hearing protection will be worn in accordance with 29 CFR 1910.95. If a sound level meter is not available, then the noise level will be assumed to be 85 dBA if one cannot communicate at normal voice level within 3 feet from another person. If this is the case, then appropriate hearing protection will be donned.

5.2.7 Excavation, Truck Loading and Backfilling Hazards

Soil excavation will take place at the Site as part of remediation activities. These excavations are anticipated to be to approximately 2 to 4 feet below grade surface (bgs) but no deeper than 4 feet bgs. All excavations will be performed in accordance with 29 CFR 1926 Subpart P. Excavations are defined to include trenching. Prior to starting any

excavation, the presence of underground pipelines, electric wires, conduits, or vessels containing material under pressure will be investigated. All surface encumbrances that will create a hazard to workers will be removed or supported.

Excavations, adjacent areas, and protective systems will be inspected on the following schedule:

- Daily, prior to work in or around the excavation beginning;
- After every rain storm or other hazard-increasing occurrence; and
- As needed throughout the work shift as conditions change.

If the inspector notes a hazardous condition, all endangered workers must be immediately removed from the hazard, and all work in the excavation stopped until the necessary corrections have been made.

Although excavations beyond 4 feet in depth are not anticipated, the following safety controls will be implemented if excavation activities proceed beyond 4 feet in depth:

- Excavations that may contain toxic or oxygen-deficient atmospheres will be monitored by the TRC OHSS or designated person prior to the start of each shift and at periodic intervals during the shift. Results of air monitoring will be documented. Additional safeguards may be necessary when excavating areas that may contain a hazardous atmosphere. Refer to the OSHA excavation standards if a hazardous atmosphere is suspected.
- The sides of all excavations in which workers may be exposed to danger from shifting soil will be guarded by a protective system. Appendices B and C of 29 CFR 1926 Subpart P provide information on proper sloping, shoring, and benching protective systems.
- If the excavation endangers the stability of adjacent structures, then support systems such as shoring, bracing, or underpinning will be provided.
- Personnel will not work in excavations in which there is accumulated or accumulating water unless adequate precautions have been taken to protect workers against the hazards caused by water accumulation.
- Workers will be protected from loose rock or soil that could fall from an excavation face.

- When mobile equipment is operated near an excavation, or required to approach the edge of an excavation, a warning system (e.g., barricades, hand signals, mechanical signals, stop logs) will be used.
- A stairway, ladder, ramp, or other safe means of exit will be located in trench excavations that are greater than 4 feet in depth. The means of exit will require no more than 25 feet of lateral travel for each person in the excavation.
- Workers are not permitted underneath loads handled by lifting or excavating equipment.
- Workers are not permitted to make contact with (i.e. lean on, sit on...etc.) an excavator or other piece of heavy equipment while operating or moving.

5.2.8 Heavy Equipment and Motor Vehicle Operation

Heavy equipment will be used at the Site for the removal of rail and associated ties, excavating soil and loading the material into trucks, backfilling the excavations and grading the surface. Moving vehicles and equipment can be a source of danger at the Site. Heavy equipment and motor vehicles will be operated only by qualified personnel. Equipment will not be operated in a manner that will endanger persons or property. All heavy equipment and motor vehicles will be operated in accordance with the manufacturer's instructions and 29 CFR 1926 Subpart O.

The following inspection and repair controls will also be implemented during this project:

- Workers exposed to public vehicular traffic or other traffic will wear warning vests.
- Equipment and vehicles will be inspected by the operator on a daily basis, prior to starting work.
- All heavy equipment exhaust systems will be checked daily and confirmed to have no embers or sparking.
- Any unsafe equipment or vehicles will be removed from service until safety defects can be corrected.
- Equipment will be shut down and locked out before maintenance or repairs are made.

• A 360 degree walk around will be performed prior to operating or moving motor vehicles or heavy equipment.

Operators will follow these rules:

- Motor vehicles and heavy equipment will be shut down during re-fueling operations.
- Posted speed limits will be followed.
- Operators will not leave their equipment unattended while it is running.
- Whenever equipment is parked, the parking brake will be set. If the equipment is parked on an incline, in addition to setting the parking brake, the wheels will also be choked.
- Operators will be trained and experienced in the use of their equipment.
- Vehicles or equipment will not be operated in a careless or unsafe manner.
- Personnel will wear appropriate PPE when working with heavy equipment. Dermal protection must fit properly and be taped to prevent "caught on" or "caught between" hazards.
- Personnel will not utilize cellular phones while operating motor vehicles or heavy equipment.
- Personnel will properly wear safety belts when operating motor vehicles or heavy equipment.
- Personnel will operate motor vehicles or heavy equipment in a safe manner in accord with applicable laws and regulations.

Required equipment features include:

All bulldozers, tractors, or similar equipment used in clearing operations will be provided with guards, canopies, or grills to protect the operator from falling or flying debris.

- All equipment and vehicles will have an audible backup alarm and an audible warning device (i.e., a horn).
- Each vehicle and piece of equipment will have a portable fire extinguisher rated not less than 10-B:C.
- When working with moving equipment:

- Signals will be given to the operators of both equipment and vehicles in any work area by one designated person.
- Personnel will stay clear of the operational area of the equipment.
 Workers are not permitted to stand directly underneath any load or piece of equipment, i.e., man-lift, backhoe bucket, crane load, etc.
- Work areas will be adequately illuminated.
- Workers are prohibited from riding in equipment buckets and booms.

Operator visibility may be obscured by the load being handled, dusty conditions, complicated terrain, or other equipment. Other requirements during the use of heavy equipment include:

- Backup alarms are required. Personnel should be constantly aware of moving equipment.
- Operators must stay inside moving equipment and wait until it stops before getting off. Operators must use the built-in stairs/steps/ladders, if available, when exiting tall heavy equipment.
- Occupants must keep all extremities (arms and legs) inside the cab of moving equipment.
- Personnel must be aware of rotating equipment. Do not wear loose clothing or jewelry. Tie long hair back.
- Assure equipment is in working order, check daily and/or monthly inspection records.
- All heavy equipment must be shut down if unoccupied.

5.2.9 Overhead Power Lines

TRC personnel or subcontractors utilizing equipment, vehicles, or machinery at a site where overhead power lines are present shall comply with all parts of OSHA's Standards – 29 CFR Safety and Health Regulations for Construction, specifically 1926.600(a)(6). Special attention will be given to machinery with extendable booms, or any equipment, vehicles, and materials of sufficient height that could potentially contact overhead power lines while traveling or working. As stipulated by OSHA's standards, TRC personnel and subcontractors shall comply with the following principles:

• Assume all overhead power lines are energized.

- For power lines rated up to 50 DEFINE (kV), the minimum clearance between the lines and any part of the equipment, vehicle, machinery, or its associated load shall be 10 feet. Orange cones shall be placed to mark clearance zones.
- For power lines rated above 50 kV, the minimum clearance between the lines and any part of the equipment, vehicle, machinery, or its associated load shall be 10 feet plus 0.4 inch for each 1 kV over 50 kV. Orange cones shall be placed to mark clearance zones.
- For equipment and vehicles traveling with no load and boom lowered, the minimum clearance shall be 4 feet from overhead power lines rated below 50 kV, 10 feet from power lines rated between 50 kV and 345 kV, and 16 feet from power lines rated between 345 kV and 750 kV.
- A person shall be designated to observe utility line clearances during work activities and give timely warning to operators when equipment, vehicles, or machinery are traveling beneath overhead power lines.

TRC personnel and subcontractors are required to operate under these additional principles:

- Document all overhead power lines and their respective location in the HASP and relay this information to all new TRC personnel and subcontractor crews at the Site. This information should be provided during the morning HASP (tailgate) briefing before any piece of equipment has moved onto the Site. It is recommended that an additional HASP briefing be performed to discuss overhead utility line hazards and mitigation procedures if operations beneath overhead power lines do not occur immediately after the morning briefing.
- Avoid setting up machinery with extendable booms or associated loads that could extend or collapse into the setback zone of overhead power lines. While operating beneath overhead power lines, the minimum setback zone of 10 feet shall be maintained at all times. TRC personnel and subcontractors shall designate a person to observe overhead utility line clearance during work activities. This person shall position themselves at a location where safe observation of the setback zone and the operating equipment is possible, while maintaining direct visual communication with the operator. Where possible, utilize orange cones to designate the overhead utility line setback zones.

- TRC personnel or subcontractors standing on the ground shall not make contact (i.e. with hands, feet, etc.) with the machinery while it is traveling or operating beneath overhead power lines.
- Machinery with extendable booms, such as excavators, shall not carry a load while traveling beneath overhead power lines. Extendable booms shall be in their lowered and secured position when traveling beneath overhead power lines. In most circumstances, lowered and secured booms while traveling is a best practice.
- If a crane is to be utilized in the vicinity of overhead power lines, additional revisions to this HASP will be required.

Particular effort to maintain safe working conditions shall be taken by TRC personnel and subcontractors when traveling or operating in the vicinity of overhead power lines.

5.2.10 Slips, Trips, and Falls

As with any remediation activity, commercial or industrial site, uneven work surfaces and other slipping or tripping hazards may be present. Proper housekeeping and removal of trash and debris will reduce slipping and tripping hazards. Proper housekeeping will be the responsibility of all site personnel, and the TRC OHSS will make regular inspections to evaluate if the work area is adequately clean.

5.2.11 Weather-Related Hazards

Weather-related hazards include the potential for heat, cold, electrical storms, treacherous weather-related working conditions, or limited visibility. These hazards correlate with the season in which site activities occur. Outside work will be suspended during electrical storms. In the event of other adverse weather conditions, the TRC OHSS will determine if work can continue without endangering the health and safety of site personnel.

5.2.12 Radiation

Handheld XRF analyzers are secure and dependable instruments when used in accordance with proper techniques and safety procedures. All personnel using the XRF tool will be trained and authorized operators knowledgeable in the hazards associated with ionizing radiation prior to using an XRF tool at the Site.

The specific XRF tool that will be used is expected to be the Innov-X Delta which features a number of safety features to ensure safe user and bystander operation such as a proximity sensor, trigger lock, and various beam guards. All operation of the XRF tool will be in a controlled exclusion zone and a sign warning "Radiation Hazards" or similar

will be visible within the XRF analysis area. All samples to be analyzed via XRF will be placed upon an x-ray beam barrier or sheet at least 3.0 millimeters thick for analysis. Use of this barrier will ensure that the collimated x-ray beam which is emitted by the XRF attenuates to background levels immediately after passing through the sample material. If a barrier/shield is not placed in front of the sensor, the x-ray beam from the XRF may project many meters into open air, creating a radiation hazard for the user and potential bystanders.

5.2.13 Hand and Power Tools

Dangerous hand tools and power tools may be used during some construction activities. All hand and power tools will be maintained in a safe condition and in good repair. Hand and power tools will be used in accordance with 29 CFR 1926, Subpart I (1926.300 through 1926.307).

Workers are not permitted to bring unsafe tools on the Site. All tools will be used, inspected, and maintained in accordance with the manufacturer's instructions. Throwing tools or dropping tools to lower levels is prohibited. Hand and power tools will be inspected, tested, and determined to be in safe operating condition prior to each use. The tool operator, the Task Manager or the TRC OHSS will conduct periodic safety inspections of all tools to evaluate if the tools are in good condition and are being properly maintained. Any tool that fails an inspection will be immediately removed from service and tagged with a "Do Not Use" sign.

Workers using hand and power tools who are exposed to falling, flying, abrasive, or splashing hazards will be required to wear PPE. Eye protection must always be worn when working on the Site. Additional eye and face protection, such as safety goggles or face shields, may also be required when working with specific hand and power tools. Hearing protection will always be worn when working with power tools, and additional hearing protection may be required when working with certain power tools if noise levels are excessively high. Workers using tools that may subject their hands to an injury, such as cuts, abrasions, punctures, or burns, will wear protective gloves. Loose or frayed clothing, dangling jewelry, or loose long hair will not be worn when working with power tools.

Electric power-operated tools require ground-fault circuit interrupters (GFCIs). Electric power-operated tools will be double insulated or grounded, and equipped with an on/off switch. Guards must be provided to protect the operator and other nearby workers from hazards such as in-going nip points, rotating parts, flying chips, and sparks. All reciprocating, rotating, and moving parts of tools will be guarded if contact is possible. Removing machine guards is prohibited. Abrasive wheels will only be used on equipment provided with safety guards. Safety guards must be strong enough to withstand the effect of a bursting wheel. Abrasive wheels will not be operated in excess of their rated speed. Work or tool rests will not be adjusted while the wheel is in motion. All abrasive wheels will be closely inspected and ring tested before each use, and any cracked or damaged wheels will be removed immediately and destroyed.

Operators of these tools will be instructed on the proper operation and safety precautions prior to operating such equipment. Only qualified workers will operate pneumatic tools, powder-actuated tools, and abrasive blasting tools. No one should operate equipment that is in ill repair.

5.2.14 Lifting and Moving of Heavy Objects

TRC employees and subcontractors will recognize situations where lifting and/or moving heavy objects could cause injury due to strain or loss of control of the object. Improper lifting can result in injuries to the back, joints, and muscles, as well as injuries related to dropping objects.

Lifting a heavy or awkwardly sized object should always be properly planned. The weight, size and shape of the object should be considered. If the object is too heavy or cannot be easily grasped, then mechanical advantage or other assistance should be used. Additionally, the environment where the lifting is to take place should be considered. Any obstructions, narrow spaces, stairs, inclines, possible slip, trip, and fall hazardous should be evaluated prior to lifting and moving of the heavy object.

When lifting heavy objects:

- Lifter should determine if the objects weight and size are within safe limits prior to lifting the object;
- Consider the environment where the object is to be handled and the route to be traveled;
- Examine the object for any contact hazards, including protrusions, splinters, and chemical hazards;
- When grasping the object, avoid reaching;
- Bend at the knees when preparing to lift or set down an object;
- Keep the object close to the body at all times; and
- Don appropriate PPE when handling possibly hazardous materials, including the movement of 55-gallon drums.

5.3 Biological Hazards

5.3.1 Animals

It is unlikely that dangerous wild animals would be present at the site; however, dogs, cats, rats, mosquitoes, and perhaps bees or wasps may be encountered. In addition, the presence of Lyme-disease-infected deer ticks and chiggers requires special attention. Deer ticks infected with Lyme disease can pass the disease on to humans through bites. The deer tick is very small (about the size of a pinhead) and thus is not easily detected by visual observation. If a bite from a deer tick or unknown insect is suffered, the bite area should be observed closely and frequently. If between 2 days and 2 weeks after the bite is received, reddening and/or swelling, with central clearing, is observed around the bite (i.e., it looks like a ring), medical attention should be sought immediately. If the insect is seen biting the person, and it is suspected that the insect is a deer tick, medical attention should be sought immediately. The lesion described above may become as large as 5 or 6 cm in diameter. As the disease progresses, pronounced swelling around the bite and/or nearby joints may be observed, and the victim may suffer from flu-like symptoms (malaise, fever, headache, neck pain). If these symptoms are observed after fieldwork, medical attention should be sought immediately.

Chiggers are mite larvae that are typically found in berry bushes such as blackberry or blueberry. Symptoms include small red spots that can cause intense itching.

To greatly reduce insect bites, all site personnel should use insect repellent, keep shirts buttoned, wear long sleeved shirts, keep sleeves rolled down, avoid areas with high grass and dense vegetation whenever possible, and check themselves periodically for ticks. For prevention of chigger bites, personnel can put sulfur powder in their socks.

Long pants and long sleeved shirts will aid in preventing exposure to poison ivy. Knowing the appearance of it and avoiding contact with plant will be the most effective method of preventing accidental exposure; however, if a rash appears, calamine lotion or other medical treatments can be used to treat poison ivy exposure.

5.3.2 Local Population

The Site is located in an urban setting and some interaction with local populations is expected. Utilize the following practical means to promote positive encounters with local populations:

- Conduct all work during daylight hours; most crime, regardless of the area, happens at night. Utilize the "buddy system."
- Dress appropriately with the proper PPE.

- Be respectful, do not crowd or dominate people, and do not enter residences or other unfamiliar structures. Have conversations with adults outdoors in well-lit areas.
- Lock all parked vehicles and hide valuables or keep them with you.

During work activities, you may be confronted by aggressive behavior, perhaps by individuals who may view our activities with suspicion or if we are, or appear to be, on someone's property. Other scenarios apply as well. Utilize the following techniques in this situation:

- **Recognition** -The first step to working with a difficult emotional situation is to recognize when it is present (loud speech, aggressive posture, tone of voice, clenched fists, etc.)
- **Empathy** -Try not to take hostility personally; you may just be the person in the firing line. Try to defuse aggression as early as possible by showing empathy. It is generally easier to avoid the build-up of aggression than to calm things down once anger has flared.
- Awareness -Be aware of your own reactions to aggression and try to remain calm yourself. If you respond aggressively, you will reinforce the other's behavior.
- **Diffusion** -Use non-verbal behavior to help defuse aggression by being aware of your own body language and present a non-threatening, open stance. Keep good eye contact, but avoid appearing confrontational. Move slowly and steadily. Try to speak in a calming/quiet voice, keep physical movements calm and always respect personal space (the region surrounding a person which they regard as psychologically theirs).

6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIREMENTS

6.1 Standard Work Uniform

The following work clothing will be worn by all personnel while on-site:

- Steel-toed boots which have a defined heel, are of the lace-up variety, and are ankle height or taller; in addition, boot covers will be worn at all times while personnel are walking or working in the excavation areas or on exposed soil. The boot covers will be removed when not in the excavations areas or on exposed soil;
- Safety glasses with permanently attached side shields that meet or exceed ANSI Z 87.1-1989;
- Orange hard hat with reflective stripe, hard hats will meet or exceed ANSI Z 89.1, Class B; and,
- Reflective tear-away safety vests.

6.2 Personal Protective Equipment (PPE)

In addition to the standard work uniform, the following PPE will be worn while sampling if the OHSS determines that it is necessary. The Level C protective uniform must be equipped when working directly with hazardous materials. Use the following levels of protection when applicable:

Level D Protective Uniform

- Face shield (use when there is a possibility of splashing);
- Tyvek suit or poly-coated Tyvek suit (when direct contact with chemicals is possible) and replace when ripped;
- Hearing protection will be worn when noise levels exceed 85 dBA (i.e., unable to communicate in a normal voice level at arm's length distance from another individual); and,
- Outer Nitrile gloves and inner (surgical) gloves when handling groundwater.

Note: For Level D, wear dust/mist disposable respirator (3M HEPA Dust Respirator, 3M 9920 dust/mist disposable respirator or equivalent) during dusty site conditions and during excavation activities, but only when the respiratory protection action level is not exceeded (see Level C Protective Uniform below).

Level C Protective Uniform

- Half-face (only for airborne levels of 25 to 100 ppm) or full-face respirator (from 25 to 220 ppm) with organic vapor/mist/dust cartridges (refer to Section 6.3 for respirator use action levels);
- Poly-coated Tyvek suite (replace when ripped);
- Hearing protection will be worn when noise levels exceed 85 dBA (i.e., unable to communicate in a normal voice level at arm's length distance from another individual);
- Disposable overboots if working in wet soil/site conditions; and,
- Outer Nitrile gloves and inner (surgical) gloves when handling groundwater.

Field Monitoring and Other Equipment (Required during excavation operations.)

- Hydrogen sulfide (H₂S) meter;
- Photoionization detector (PID) (calibrated with 100 ppm Isobutylene);
- Combustible gas indicator (CGI);
- Respirable Particulate Matter (PM_{2 5}) monitor;
- Eye wash station;
- First aid kit; and,
- Fire Extinguisher.

Conditions Warranting Upgrade from Level D to C (Notify OHSS)

- PID readings greater than 25 ppm above background in breathing zone for 15 minutes;
- Respirable Particulate Matter (PM_{2.5}) readings greater than 35 micrograms per cubic meter (μ g/m³) for 15 minutes.
- Any personnel becoming faint or nauseous;
- Unusual odors (i.e., organic or aromatic) are noted; and,
- Heavy spill/ splashing potential.

Conditions Warranting Cessation of Work and Leaving Area Immediately (Notify OHSS)

- H_2S meter readings > 10 ppm.
- PID readings exceed 200 ppm above background in breathing zone for 15 minutes;
- The PID malfunctions (work may resume when meter is repaired);
- CGI exceeds the lower explosive limit (LEL) or the upper explosive limit (UEL);
- Odors (organic, aromatic, almond, mothball, sweet tarry, sweet pungent, or mint-like) are experienced while wearing respirators (indicating cartridge breakthrough);
- Any member of field team experiences symptoms possibly related to chemical exposure such as dizziness or nausea; and
- Any member of the field team experiences symptoms related to heat stress.

6.3 **Respirator Use and Care**

6.3.1 Use

The following procedures shall be followed to ensure that air-purifying respirators provide the full protection for which they are rated:

- All employees who are required to wear respirators shall be included in the TRC Medical Monitoring Program and will be medically approved for respirator use before donning a respirator;
- Employees shall wear only respirators for which they have been fit-tested by a competent individual. At a minimum, quantitative fit testing shall be completed annually;
- Respirators are to be donned outside the potential hazard zone in which they are planned to be used;
- Prior to donning, the wearer shall inspect the respirator for any physical defects or breakage including, but not limited to:
 - -- Broken or frayed straps;
 - -- Improperly seated valves;
 - -- Dirt;
 - -- Holes;
 - -- Distorted face seal; and
 - -- Opaque face piece on full-face piece respirators.

- After donning the respirator, the employee shall conduct a negative-pressure fit check to assure that the inlet and exhaust valves, and the respirator cartridges, are properly seated. The employee shall then conduct a positive-pressure fit check to ensure that a proper face piece seal against the fact has been obtained. The zone of potentially hazardous exposure is not to be entered until the employee has successfully executed both positive- and negative-pressure fit checks.
- Employees shall immediately evacuate the work area, if they experience difficulty breathing, dizziness, or other symptoms of potentially harmful chemical exposure.
- Cartridges are to be replaced every morning at the beginning of the workday or when breakthrough is detected (whichever comes first).

Note: If at any time during use of the respirator, the contaminant of concern, or any other contaminant, is detected by smell, taste, or irritation, the employee is to leave the work area immediately and inform the TRC OHSS.

6.3.2 Cleaning

Respirators assigned to an individual employee shall be cleaned by that employee at the end of each day's work involving more than four hours of respirator use and at the end of every week in which the respirator is used for at least two hours. Respirators are to be washed and rinsed in warm water (120 to 140 °F) using a disinfecting solution intended for cleaning respirators, and blot or air dried. Cleaning solutions, available from respirator manufacturers, will be provided.

6.3.3 Storage

Respirators shall be stored in a manner that protects them from exposure to sunlight, dust, chemicals, and extremes of heat and cold. Respirators shall not be stored in tool kits. The preferred storage procedure for respirators is in individual plastic bags placed in rigid containers to prevent deformation of the facepiece.

7.0 DECONTAMINATION PROCEDURES

Reusable sampling equipment will be fully decontaminated between locations, and before it is removed from the Site. Decontamination will consist of soap and water wash and potable water rinse with the addition of a distilled water rinse. Additional scrubbing may be required to remove all encrusted materials.

Potentially lead-impacted soil is present at the Site. TRC personnel and contractors shall take precautions to prevent the spread of potentially impacted soil onto adjoining roadways and properties.

Heavy equipment (e.g., excavator and/or backhoe) utilized for excavation activities will be visually inspected prior to, and at the completion of each excavation area (hazardous and nonhazardous soil excavation areas). If the tracks on the heavy equipment become soiled, the driver will physically clean the tracks of soil with a shovel and place the material within the last truckload of soil going off for treatment and disposal prior to leaving the excavation area and the Site. The driver of heavy equipment will inspect their vehicle for loose soil hanging off the truck, truck tracks, and bucket prior to leaving an excavation area. Decontamination water, if generated, will be mixed into the impacted soil and placed within the last truck-load of soil going off for treatment and disposal.

Trucks and equipment will use the predetermined access road to the excavation area. Refer to the *Transportation Management Plan* included as Attachment B of the RAWP. Trucks will be lined, tarped and inspected prior to leaving the excavation area. Street sweeping shall be made available to keep streets and curbs clean in the exit of the haul road and beyond.

A truck route will be prepared and adhered to for the drivers to minimize travel on the side roads near the community and will bypass the local grammar school two blocks to the East and South of the right of way. Main City of Chicago roads will be utilized with proper weight limits and overhead clearances to the main interstate roads.

8.0 AIR MONITORING

TRC cannot rule out the possibility of vapor and chemical hazards to be present while conducting soil excavation activities. There may be pockets of vapors located in soil excavations. Additionally, materials removed during excavation could contain hazardous chemicals that could volatilize or become airborne as dust. TRC intends to utilize the equipment listed below to monitor select potential hazardous vapors and particulates with the purpose of protecting on-site workers. Air monitoring with the purpose of protecting local populations is described in the *Air Monitoring Plan* included as Attachment D of the RAWP.

TRC will monitor for organic vapors. A PID instrument containing a 10.6-electron-volt lamp and calibrated with 100 ppm isobutylene will be used by the TRC OHSS to monitor organic vapors. The instrument will be read in total hydrocarbon levels.

TRC will monitor for additional gases using a 4-gas CGI. These monitor for hydrogen sulfide, carbon monoxide, oxygen, and combustible gases.

During soil excavation activities, TRC will monitor for dust particulates which could potentially contain lead using a particulate monitor (DataRam). The particulate monitor will be calibrated daily (at a minimum) using a zero bag. The DataRam will measure respirable particulate matter (PM_{2.5}) in micrograms per cubic meter (μ g/m³). Engineering practices such as use of water to control dust shall be implemented.

In the event that detectable levels of air contaminants are found above action levels, personnel will either don respiratory protection and/or site activities will cease and the area will be allowed to ventilate until concentrations drop below the action levels. The Action Levels are outlined in the table on the following page.

If evacuation becomes necessary, the TRC OHSS shall take charge and direct personnel to move from the work area to a predetermined area and to stay there. The TRC OHSS shall first determine that all personnel have left the work area and are safe, then consult the TRC Project Manager on how to proceed.

A detailed description of actions to be taken in the event that air contaminants exceed the established Action Levels is provided in the *Fugitive Dust Control Plan* included as Attachment C of the RAWP.

Equipment Type		Monitoring, Action Levels, and PPE					
		ORGANIC VAPORS					
	PID FID Detector Tube Type: benzene	Reading > 1 ppm or "Background" sustained for 1 minute, upgrade to Level C with half-face air purifying respirator (APR), Notify TRC OHSS. Reading > 10 ppm sustained for 1 minute, upgrade respiratory protection to full-face APR, Notify TRC OHSS. Reading > 50 ppm sustained for 1 minute, shutdown work activities, evacuate the area, move upwind, Notify the TRC OHSS.					
Freq chang		every hour or more frequently based on scope of work or if conditions					
		BENZENE					
\boxtimes	PID (UltraRae) FID Detector Tube Type: benzene	Reading > 1 ppm or "Background" instantaneously, upgrade to Level C with half-face APR, Notify TRC OHSS. Reading > 10 ppm instantaneously, upgrade to Level C with full-face APR, Notify TRC OHSS. Reading > 50 ppm instantaneously, shutdown work activities, evacuate the area, move upwind, Notify TRC OHSS.					
	uency: If organic ventrations >50 ppm	vapor concentrations >10 ppm sustained for 1 minute or VOC n instantaneously.					
test.		HYDROGEN SULFIDE					
\boxtimes	H ₂ S Meter	Reading > 10 ppm, instantaneous, shutdown work activities, evacuate area, move upwind, Notify TRC OHSS.					

Action Levels for Air Monitoring

Equipment Type		Monitoring, Action Levels, and PPE						
		OXYGEN						
		Reading <19.5 % sustained for 1 minute, shutdown work activities, evacuate area, move upwind, Notify the TRC OHSS.						
\boxtimes	Oxygen Meter	Reading 19.5 – 23.5 %, continue normal work operations. Reading >23.5 % for 1 minute, shutdown work activities, evacuate area, move upwind, Notify the TRC OHSS.						
Freq chan		every hour or more frequently based on scope of work or if conditions						
		COMBUSTIBLE ATMOSPHERE						
\boxtimes	Combustible Gas Indicator	Reading > 5 % LEL, instantaneous, shutdown work activities, evacuate area, move upwind, Notify TRC OHSS.						
Freq chan		every hour or more frequently based on scope of work or if conditions						
		POLYCYCLIC AROMATIC HYDROCARBONS						
\boxtimes	DataRam	Reading > 150 μ g/m ³ sustained for 1 minute, upgrade to Level C with half-face APR, Notify TRC OHSS, suspend work, and apply dust control measures.						
1		LEAD/ARSENIC						
	DataRam	Reading > 150 μ g/m ³ sustained for 1 minute, upgrade to Level C with half-face APR, Notify TRC OHSS, suspend work, and apply dust control measures.						

Action Levels for Air Monitoring

9.0 CHANGE IN SITE CONDITIONS OR SAMPLING PLAN

If any change in Site conditions or the remediation work plan occurs and these changes affect the efficacy of this site-specific HASP, the Task Leader and TRC OHSS will be contacted to ensure all changes are appropriately reflected in the HASP.

10.0 EMERGENCY RESPONSE PLAN

This HASP must be reviewed with all field personnel prior to the start of work. This section of the HASP should also be posted in the work area. Prior to work, the facility should provide a briefing on the site-specific emergency procedures. The Task Leader or OHSS must assure that all team members are informed of these specific procedures.

Location of nearest means of emergency communication (telephone, alarm, etc.): A cellular phone will be available in the TRC vehicle.

First aid available at Site? A first aid kit will be made available and kept in the TRC vehicle. WorkCare can provided advice on administering first aid.

First aid telephone number: Contact WorkCare (888) 449-7787

Emergency Call Instructions

- Call 911
- Describe the nature of the accident/emergency
- Give operator site address (below)
- Tell operator that someone will meet emergency personnel at intersection of West 18th Street and South Sangamon.

Site Location

BNSF Railway Company 900 West 18th Street (between 16th to 18th Streets) Chicago, Illinois

Emergency Phone Numbers

Paramedical Services	
Ambulance	911
Police	
WorkCare	(888) 449-7787
BNSF Railway Company Emergency Phone Greg Jeffries	
TRC Corporate Health and Safety Officer Mike Glenn	Office (949) 727-7347

TRC Project Manager Lisa Meagher	.Office (312) 578-0870 ext. 11917, Mobile (312) 405-8794
TRC Task Manager Nicole DeRose	Office (312) 800-5906, Mobile (925) 998-8993
TRC On-Site Health and Safet Tyler Gomoll	y Supervisor (OHSS) Office (312) 578-0870 x 11907, Mobile (847) 871-3000
Poison Control Center	
Hospital	

Rush University Medical Center 1653 W Congress Parkway Chicago, IL 60612

Directions to the hospital are shown on the map at the beginning of this Health and Safety Plan, in the section titled Emergency Plan and Rescue Procedures.

Accident/Incident Notification and Reporting

The following standard accident/incident notification/reporting procedures must be followed whenever any of the following occur:

- An injury to a worker or an illness;
- A spill or release of a hazardous material; or
- Any other type of emergency

Take any and all appropriate emergency response actions necessary to alleviate the emergency as soon as possible. Appropriate response to emergency situations will be based on the type of emergency that has occurred.

Immediate Notification and Reporting Requirements

In the event of an accident or injury, BNSF Railway, TRC personnel, and WorkCare must be notified immediately or as soon as possible, <u>after appropriate emergency response has been conducted</u>. The primary contact at the site will be the TRC OHSS or TRC Project Manager. After notifying the TRC OHSS or Project Manager and BNSF Railway, immediately contact WorkCare and Mike Glenn, TRC's Corporate Health and Safety Officer and provide him with details of the incident. If he is not available leave the following information regarding the incident on his voice mail: your name, your office location, client and project name, date and time of the incident,

location of incident, brief description of incident and what was done to address it (i.e., went to emergency room, etc.). In the event of an incident, a supervisor, the TRC OHSS, or WorkCare must be contacted within 24 hours.

First Aid Procedures for Overt Personnel Exposure

- Skin contact: Use copious amounts of soap and water. Wash/rinse affected area for at least 15 minutes. Thoroughly decontaminate and transport if necessary to provide appropriate medical attention. Eyewash will be provided on-site.
- Inhalation: Move to fresh air and/or, if necessary decontaminate and transport for medical attention.
- Ingestion: Decontaminate and transport to hospital.

Inoculation: Decontaminate and transport for professional medical attention at hospital.

First Aid Procedures for Personnel Injury

Emergency first aid should be applied on-site if possible. Decontaminate and transport individual by the fire department or ambulance to the hospital if needed. Workcare can be contacted for advice on administering first aid.

Procedures For Environmental Incident (Release of Contamination)

Prevent spread of contamination if possible. Down range personnel shall notify the TRC OHSS. Other appropriate emergency response groups will be notified as necessary.

Procedures for Adverse Weather Conditions

In the event of adverse weather conditions, TRC's OHSS will determine if work can continue without adversely affecting the health and safety of field workers. Issues to be considered by the TRC OHSS prior to determining if work should continue are:

- Potential for hypothermia and cold related injuries
- Potential for heat stress and heat related injuries
- Treacherous weather-related working conditions
- Limited visibility
- Potential for severe/electrical storms

Accidents or Incidents (or Safe Catches)

When other problem incidents occur, such as significant property damage or loss, the OHSS will notify the TRC Project Manager of the event. Actions will then be taken to correct the event, which caused the problem incident or near miss accident.

11.0 TRAINING AND MEDICAL MONITORING REQUIREMENTS

Prior to the commencement of the excavation activities, an off-site safety meeting will be held as described in Section 15.0 of this HASP. All field personnel will be trained in the requirements of this HASP.

Prior to the commencement of each day's activities, a daily safety (tailgate) briefing will be held. Topics of discussion will include the daily activities to be conducted, procedures to reduce the chemical, physical, and biological hazards associated with the activities, and any safety concerns noted during previous activities.

TRC field personnel and TRC subcontracted field personnel must participate in hazardous waste training programs as specified by OSHA regulations (per 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response) and BNSF Railway's Safety requirements, which include completion of a track safety on-line safety course.

12.0 FIRE AND EXPLOSION RESPONSE PROCEDURES

Fires can occur unexpectedly during site activities. TRC field personnel should verify that a fire extinguisher is on hand at all times. The procedures for using a fire extinguisher area as follows:

- 1. Pull the safety pin;
- 2. Point the extinguisher at the base of the flames; and
- 3. Discharge the extinguisher by sweeping the flames from a distance of 6 feet. Move in closer as the flames are put out.

Personnel must always use the correct fire extinguisher. Never use water on an electrical fire or a solvent fire. All extinguishers should be dry chemical labeled "Class A, B, or C". Lastly, always keep decontamination solvents a safe distance from the steam cleaner and incompatible chemicals.

13.0 EMERGENCY PROCEDURES

Emergency procedures listed in this HASP are designed to give the field team instructions in handling medical emergencies, fire, and explosions.

Medical problems that can occur on-site need to be handled competently and quickly. Each field team member should be aware of the instructions and information given below:

- Seek professional medical attention for personnel that are bleeding severely, experiencing intense pain, unconscious, or not breathing. Each member of the site team should know how to call for an ambulance.
- If you get anything in your eyes (chemical or dust), flood them with water for 15 minutes. Be sure to tell the Supervisor. The Supervisor will make sure that the victim washes the eyes for the full 15 minutes.
- Do not remove objects that are impaled (stuck) in the eye.
- Always seek medical attention for eye injuries.
- A supervisor, the OHSS, or WorkCare must be contacted within 24 hours of the incident.

Stop bleeding with direct pressure. Place bandage over the wound and press down with your hand. If possible, raise the bleeding extremity above the level of the heart. If bleeding continues, apply pressure to the appropriate pressure point until medical assistance arrives.

14.0 RECORDKEEPING REQUIREMENTS

The following records are to be maintained in the health and safety files:

- 1. A copy of the HASP and original sign-off sheet;
- 2. Documentation of the "Level of Protection" donned during sampling (can be in field logbook);
- 3. Copy of any accident or injury reports;
- 4. Completed copy of the Emergency Response Plan (Section 9.0 of this Health and Safety Plan);
- 5. Completed record of field work; and
- 6. Dust monitoring results

15.0 SITE SPECIFIC BRIEFING

Prior to start-up of field activities, an off-site safety briefing will be presented to all TRC field personnel and subcontractors by the TRC OHSS. Personnel who were not present for the safety briefing will be briefed as necessary by the OHSS. The following topics will be addressed during the off-site briefing.

- Names of personnel and alternates responsible for site health and safety;
- Safety, health, and other hazards present on the site as documented in this Health and Safety Plan, and additional hazards if any found during the site visit;
- Use of site-specific PPE;
- Work practices that will minimize risks from hazards and exposure, including establishment of work zones;
- Safe use of engineering controls and equipment, if any are present on the work site;
- Physical and chemical health hazards, including recognition of symptoms and signs that may indicate over-exposure to such hazards;
- Emergency Response/Contingency Plans, including notification and routes of escape (Section 9.0 of this Health and Safety Plan);
- The importance of the buddy system and importance of work zones;
- Any other site-specific features as deemed necessary by site safety coordinator;
- Any other health and safety-related topics that may arise prior to start up will be discussed at the on-site briefing. Issues that may arise during implementation of the field program will be addressed at on site safety meetings held daily prior to shift start up; and
- Job tasks/project objectives.

In addition, a BNSF-specific daily environmental job briefing will be completed before work commences. This briefing will be documented by using the BNSF-specific form that is included in **Appendix** C or directly in the project field book.

16.0 GENERAL SITE OPERATING PROCEDURES / SAFETY GUIDELINES

NOTE: These are general guidelines for safe operations on areas of sites that are potentially contaminated.

- 1. Never work alone in an isolated area of a site.
- 2. Maintain line-of-sight during activities that could involve potentially hazardous substances.
- 3. Practice contamination avoidance. Never sit down or kneel, <u>never lay</u> <u>equipment on the ground</u>, avoid obvious sources of contamination such as puddles, and avoid unnecessary contact with on-site objects.
- 4. Hard hats must be worn on site when overhead hazards are present and when safety rules by the site owner require it.
- 5. No eating, drinking, or smoking in areas of sites that are suspected of being contaminated.
- 6. In the event PPE is ripped or torn, work will stop and PPE will be removed and replaced as soon as possible.
- 7. Be alert to any unusual changes in your own condition; never ignore warning signs. Notify OSS about suspected exposures or accidents.
- 8. A vehicle will be readily available for emergency use. Personnel going on site will be familiar with the most direct route to the nearest hospital.
- 9. In the event of direct skin contact, the affected area will be washed immediately with soap and water.
- 10. Copies of the Health and Safety Plan will be readily accessible and in the possession of the OHSS.
- 11. Note wind direction. Personnel will remain upwind whenever possible during on-site activities.
- 12. Never climb over or under refuse or obstacles so as to endanger yourself or others. Use safety harness/safety lines when sampling lagoons, stream beds, and ravines with steep banks.
- 13. Wash hands and face thoroughly before eating, drinking, etc.