August 21, 2023

Joyel Dhieux and Valeriy Bizyayev
On-Scene Coordinator
U.S. Environmental Protection Agency (EPA), Region 8
1595 Wynkoop Street
Denver, Colorado 80202

Subject: **Nedlog Property Assessment Letter Report – Revision 0**
Nedlog Property Assessment
Laramie, Albany County, Wyoming
EPA Contract Number: 68HE0820D0001
Technical Direction Number.: 2071-2304-07

Dear Ms. Dhieux and Mr. Bizyayev:

Tetra Tech, Inc. (Tetra Tech) is pleased to submit the following letter report for the Nedlog Property Assessment (Site) in Laramie, Albany County, Wyoming. The Superfund Technical Assessment and Response Team (START) and Emergency and Rapid Response Services (ERRS) assisted the U.S. Environmental Protection Agency (EPA) with removal assessment and removal action activities at the Site from May 22 through 26, 2023. Enclosure 1 provides figures that depict the site location and monitoring and sample locations. Enclosure 2 provides tables that summarize the monitoring and sampling data, analytical results, field screening data, and chemical inventory. Enclosure 3 contains a photographic log of site features and monitoring and sampling locations. Enclosure 4 provides the data validation reports. Enclosure 5 contains the laboratory data packages.

1. PHYSICAL LOCATION AND CHARACTERISTICS

The Site is located at 17 Sand Creek Road in Laramie, Albany County, Wyoming (Enclosure 1, Figure 1). The Site encompasses approximately 31.4 acres. An aerial view showing the site layout is provided on Figure 2 (Enclosure 1). The Site consists of a vacant property containing three manufactory buildings and one administrative and laboratory building. A fifth building (B-3 on Figure 2) is nearby, but off-site. Building B-3 was not included in the property assessment during this mobilization event.

1560 Broadway, Suite 1400
Denver, CO 80202
(303) 312-8800
www.tetratech.com

Building B-1 is a 53,790-square-foot industrial masonry building with processing tanks and elevated work platforms for operations and accessing equipment. A 9,570-square-foot steel canopy is constructed in the northwest corner of B-1. B-1 has a smaller, subsection of the building in the northeast corner used for metals processing including chromated copper arsenate.

Building B-2 is a 64,926-square-foot industrial masonry building with elevated work platforms for accessing equipment. An approximately 1,120-square-foot metal storage area is near the southwest corner of B-2. An aboveground conveyance system connects B-1 and B-2 on the west side of the buildings and an underground conveyance system (tunnel) connects B-1 and B-2 on the east side of the buildings (Tetra Tech 2022). The underground tunnel system was not located or assessed during this mobilization.

Building B-4 is an approximately 3,720-square-foot administrative/laboratory building with a 3.608-square-foot basement. Building B-4 has an approximately 180-square foot utility room on the second floor with roof access. B-4 contained company documents, laboratory grade chemicals, and gas cylinders.

Building B-5 is a 1.5 story building with a metal and wood frame construction on concrete foundation. B-5 operations are suspected to have been for mercury processing.

2. BACKGROUND

The property has undergone remedial efforts since the 1980s. Property operations began as an alumina plant in 1943 during World War II. Operations transitioned under Ideal Cement Company to light aggregate production from mid-1950s to mid-1960s. In mid-1970s through 1982, the facility was operated by Nedlog Technology Group as a secondary metal recovery facility to extract metals such as mercury, indium, and arsenic. In 1982, Nedlog sold the Site (along with other assets and property) to Williams Strategic Metals, Inc. which continued the same operations at the Site. In 1988, an EPA consent agreement was signed for Resource Conservation and Recovery Act (RCRA) violations for Williams Strategic Metals, Inc. operations which continued through 1990. Since the early 1990s, the Nedlog Site has been mostly inactive except for remediation and investigation activities. EPA's RCRA program oversaw property cleanup until 2001 when it determined that the property cleanup had been completed according to the 1988 consent agreement.

Since 2011, the Nedlog Site has been part of the Wyoming Voluntary Remedial Program (as VRP Site 58-147). Since being accepted into Wyoming's VRP program, remediation and environmental investigations have continued at the Nedlog Site. In 2011, an asbestos survey identified asbestos-containing materials (ACM) in buildings B-1 and B-2. A portion of the asbestos in these buildings was either removed or encapsulated in 2017. Since 2012, limited subsurface investigations have found elevated levels of heavy metals in soil and groundwater. In 2022, EPA requested Targeted Brownfields Assessment Phase I and Phase II environmental site assessments for the Nedlog property; these assessments confirmed that elevated levels of heavy metals are present in surface soil and groundwater.

3. REMOVAL ASSESSMENT ACTIVITIES

Removal assessment and removal action activities were conducted at the Site from May 22 through 26, 2023. EPA, START, and ERRS mobilized to the Site on May 22. START conducted background air monitoring and sampling and ERRS performed limited site preparation activities. Field activities conducted from May 23 through 26, 2023 included air monitoring and sampling, limited hazard assessment of the metals processing area in building B-1 (including x-ray fluorescence [XRF] screening and composite dust sampling), limited bulk material sampling for ACM, chemical inventory and hazard characterization of unknown chemicals, on-site treatment of an organic peroxide container, and implementation of security measures designed to reduce unauthorized access to the Site.

Air Monitoring and Sampling

START conducted air monitoring and sampling to assess potential off-site migration of particulates, the possible presence of airborne asbestos and heavy metals, worker exposure to airborne asbestos, and the possible presence of mercury vapor.

<u>Background Air Monitoring and Sampling</u>

START conducted background air monitoring and sampling on May 22, 2023 to establish baseline conditions at the Site before removal assessment activities. Background air monitoring consisted of particulate monitoring at four ambient air locations around the perimeter of the Site and indoor air mercury vapor monitoring at three locations within buildings B-1, B-2, and B-5. Background samples for asbestos and metals were also collected at four ambient air locations on the perimeter

of the Site and from one indoor air location in the chemical processing area of building B-1. Air monitoring and sampling data collected on May 22, 2023 are considered background data because removal assessment activities were limited to mobilization, air monitoring and sampling for START, and limited site preparation for ERRS. Air monitoring and sampling locations and methodologies for ambient and indoor air locations were consistent during background data collection and throughout air data collection during removal assessment activities.

Particulate Air Monitoring

From May 22 through 25, 2023, START conducted daily real-time particulate ambient air monitoring for nuisance dust at four locations on the Site perimeter. Each monitoring location was located in a cardinal direction in reference to the Site (Figure 3, Enclosure 1).

- NH-AA-01, east of building B-4 near the northeastern corner of the property boundary.
- NH-AA-02, on the eastern property boundary, northeast of building B-5.
- NH-AA-03, on the southern property boundary, near River Ranch Road.
- NH-AA-04, near the western property boundary, south and west of all Site structures.
- NH-IA-B1A, in the northeastern portion of building B-1 in the chemical processing area.

At each perimeter ambient air monitoring location, START deployed one TSI DustTrak DRX Model 8533EP monitor. Particulate air monitoring was conducted in accordance with the Nedlog Property Assessment Sampling and Analysis Plan (SAP) (Tetra Tech 2023). Each DustTrak monitor was connected to EPA's VIPER telemetry system to allow for remote monitoring of real-time particulate data and the changing conditions on-Site. Real-time readings were recorded on the device's internal memory and downloaded to a computer once a day. Data downloaded from the DustTrak monitors were processed daily by the START data team to calculate 15-minute and daily rolling time-weighted averages (TWAs) of on-Site particulate concentrations for PM_{10} and PM_{Total}. Calculated TWAs for PM_{10} were compared to the project screening level of 150 micrograms per cubic meter (µg/m^3). Calculated TWAs for PM_{Total} were compared to the project screening level of 1.25 milligrams per cubic meter (mg/m^3) (Table 1, Enclosure 2). A total of 16 particulate data files were collected from ambient air monitoring locations during the removal assessment. Photographs of air monitoring locations are provided in Enclosure 3.

START also monitored and logged meteorological data for the Site using data obtained from the National Weather Service weather station located at the Laramie Regional Airport, 5.1 miles from the Site. The data obtained included temperature, relative humidity, wind direction, wind speed, and current weather condition (such as partly cloudy or rainy).

Mercury Vapor Monitoring and Sampling

From May 22 through 25, 2023, START conducted continuous remote mercury vapor monitoring using a Jerome J405 mercury vapor analyzer (MVA) at three indoor locations within Site buildings: one in B-1, one in B-2, and one in B-5 (Enclosure 1, Figure 3):

- NH-IA-B1M
- NH-IA-B2M
- NH-IA-B5M

At each indoor air mercury vapor monitoring location, START deployed one Jerome J405 MVA connected to VIPER telemetry. Mercury vapor air monitoring was conducted in accordance with the Nedlog Property Assessment SAP (Tetra Tech 2023). In each of the three buildings, the Jerome MVA was placed on existing concrete structures within the buildings to raise the instrument above the ground surface. Monitoring locations were selected based on existing building features and conditions in an attempt to minimize wind and air flow near the MVAs. Exhaustive mercury vapor surveys were not completed throughout the Site. The inlets of the Jerome MVAs were placed on existing concrete structures within the buildings and were approximately 3 inches above the ground surface in B-1, approximately 2 feet above the ground surface in B-2, and approximately 3.5 feet above the ground surface in B-5. Photographs of air monitoring locations are provided in Enclosure 3.

Based on mercury vapor concentrations observed with the Jerome J405 MVA in B-5, START performed additional indoor air monitoring for mercury vapor on May 23, 2023 in buildings B-5 and B-2 using a Lumex 915M MVA (Enclosure 2, Table 2). Prior to monitoring in building B-5, START checked the Lumex analyzer serviceability and recorded a relative deviation value of 3 percent which met manufacturer operating guidelines.

On May 25, 2023, one SKC AirCheckXR5000 personal sampling pump and low-flow kit were used in conjunction with a Carulite sorbent tube to collect an indoor air sample for mercury from building B-5. A calibration train was created by attaching flexible tubing to the outlet of a Bios Defender 510 Low Flow DryCal primary calibrator and the inlet of a Carulite sorbent tube. The SKC sampling pump with low-flow kit was adjusted to a flow rate of approximately 0.2 liter per minute (L/min) and ran for 4.75 hours. The mercury air sample was collocated with the mercury vapor monitoring location in building B-5, approximately 15 feet south of the northern entrance, approximately 2 feet from the western wall of the building, and approximately 4.5 feet above the building floor,

which was on a graded slope. At the end of the day, the sampling pump's final flow rate was checked and recorded, the sampling pump was stopped, and the total run time was recorded in the Survey123 sample data form. The indoor air samples for mercury were submitted to Pace Laboratory, Inc. in Salt Lake City, Utah for analysis via National Institute for Occupational Safety and Health (NIOSH) Method 6009. Two field blank samples and three lot blank samples were submitted to the laboratory with the chain-of-custody form, per method requirements for NIOSH 6009. The mercury air sample location is depicted on Figure 3 (Enclosure 1). The analytical result for the mercury air sample is provided in Table 3 (Enclosure 2) and discussed in Section 4. Photographs of sample locations are provided in Enclosure 3. The data validation report is provided in Enclosure 4. The laboratory data package is provided in Enclosure 5.

Asbestos and Heavy Metals Air Sampling

From May 22 through 25, 2023, START conducted daily air sampling for asbestos and metals at five locations on-Site, including ambient air sampling at four locations on the Site perimeter and indoor air sampling at one location within the building B-1 metals processing area (Figure 3). Each location, except the indoor air location (NH-IA-B1A), was collocated with a particulate air monitoring location.

- NH-AA-01, east of building B-4 near the northeastern corner of the property boundary.
- NH-AA-02, on the eastern property boundary, northeast of building B-5.
- NH-AA-03, on the southern property boundary, near River Ranch Road.
- NH-AA-04, near the western property boundary, south and west of all Site structures.
- NH-IA-B1A, in the northeastern portion of building B-1 in the chemical processing area.

At each asbestos and metals air sampling location, START deployed one Gilian AirCon-2 air sampling pump and two SKC AirCheck Model XR5000 sampling pumps. Asbestos and metals air samples were collected in accordance with the Nedlog Property Assessment SAP (Tetra Tech 2023). At each asbestos air sampling location each day, the low-flow and high-flow samples were evaluated for run time, run period, and volume. The sample deemed more representative of site conditions was selected and submitted to an analytical testing laboratory for analysis. The remaining asbestos air sample was held by START under chain of custody. A total of 20 asbestos air samples were collected during the removal assessment and submitted to the laboratory for analysis, including 16 ambient air samples and four indoor air samples.

Ambient and indoor air samples for asbestos were submitted to Pace Aerobiology Laboratory, Inc. in Golden, Colorado for analysis via NIOSH Method 7400, which uses phase contrast

microscopy (PCM) as the measurement technique to identify fibrous materials. No PCM results from the ambient or indoor air samples exceeded 0.005 fiber per cubic centimeter (f/cc), so no reanalysis via NIOSH Method 7402 was requested. (Method 7402 uses transmission electron microscopy [TEM] to identify asbestos fibers.)

A total of 20 metals air samples were collected during the removal assessment and submitted to the laboratory for analysis, including 16 ambient air samples and four indoor air samples. Ambient and indoor air samples for heavy metals were submitted to Pace Aerobiology Laboratory, Inc. in Boston, Massachusetts for analysis of arsenic, barium, cadmium, chromium, lead, selenium, and silver via NIOSH Method 7300 (modified).

For asbestos and metals air samples, one to two field blank samples were collected daily, and one to two lot blank samples were collected per lot of sample cassettes. A minimum of two blank samples were submitted to the laboratory with each chain-of-custody form, per method requirements for NIOSH Methods 7300 and 7400. Analytical results for asbestos and metals air samples are summarized in Table 3 (Enclosure 2) and discussed in Section 4. Photographs of sample locations are provided in Enclosure 3. Data validation reports are provided in Enclosure 4 and laboratory data packages are provided in Enclosure 5.

Personal Air Sampling for Asbestos

The EPA On-Scene Coordinator (OSC) determined the number and frequency of personal air samples required during the removal assessment. On May 25, 2023, one SKC AirCheckXR5000 personal sampling pump was used in conjunction with a 25-millimeter 0.8-micrometer mixed cellulose ester membrane filter cassette to collect a personal air sample for asbestos from EPA's ERRS contractor working within the exclusion zone in building B-1 during removal assessment activities. The personal air sample was identified as NH-PA-01-20230523-AB. The personal air sampling pump was calibrated and set for a flow rate of 2.0 L/min and ran for the duration of the time that the ERRS contractor was working in the exclusion zone. The cassette was positioned to collect the air sample from the breathing zone, the inlet cap of the cassette was removed (such that it was open-faced) during sampling, and the cassette was positioned downward. Following completion of work in the exclusion zone, START checked and recorded the sampling pump's final flow rate, stopped the sampling pump, and recorded the total run time and calibration information in a Survey123 sample data form. The personal air sample for asbestos was submitted to Pace Aerobiology Laboratory, Inc. in Golden, Colorado for analysis via NIOSH

Method 7400 using PCM to identify fibrous materials. The PCM result from the personal air sample was not detected; therefore, no sample reanalysis via NIOSH Method 7402 using TEM was requested to identify asbestos fibers. The personal air sample result is provided in Table 3 (Enclosure 2). The data validation report is provided in Enclosure 4. The laboratory data package is provided in Enclosure 5.

Limited Hazard Assessment of the Metals Processing Area in Building B-1

XRF screening and composite dust sampling were conducted to assess hazards in building B-1.

XRF Screening

On May 23, 2023, START accessed the northeastern portion of building B-1 containing the arsenic boiler and performed in-situ field screening for heavy metals using an Olympus Vanta XRF spectrometer in geochemical (three-beam) mode. Prior to using the XRF instrument in B-1, START screened a blank standard and two National Institute of Standards and Technology (NIST) standards. All readings were 30 seconds in length, and the XRF instrument was operated in geochemical mode. Upon entering the building, START screened various items and components in the building; the locations of most of these initial readings were not fully documented. After taking these initial readings, START exited the building to discuss screening locations with the project team and a systematic sampling grid was designed to provide adequate representation of the entire chemical processing area.

START re-entered the building and screened floor dust in 11 locations, tanks (including paint and residue) in six locations, a manifold in one location, and a filter in one location that was screened in multiple places. These readings included repeat measurements of the locations that were screened prior to 1400, with the exception of Tank 19, which was documented during the initial entry. Nine of the floor dust locations were associated with the systematic grid sample locations. The remaining sample locations were opportunistic and selected based on visual observations (for example, tanks, equipment, or suspected product). XRF sample locations are depicted on Figure 4 (Enclosure 1). XRF screening data are summarized in Table 4 (Enclosure 2).

Composite Dust Sampling

On May 23, 2023, START collected a total of four three-point composite samples of floor dust from the building B-1 chemical processing area in the northeastern portion of the building. Sample locations corresponded to the XRF sample locations as described below and are shown on Figure 4 (Enclosure 1).

- NH-WR-B1A1-C3-20230523, composed of XRF locations Far NE Corner, Far E Side, and Far SE Side.
- NH-WR-B1A2-C3-20230523, composed of XRF locations Center N Side, Center Building by B1A (air sampling location), and Center S Side.
- NH-WR-B1A3-C3-20230523, composed of XRF locations NW Side of Processing Area, W Side of Processing Area Between Tanks, and SW Side of Processing Area.
- NH-WR-B1A4-C3-20230523, composed of floor dust surrounding XRF location Tank 18 on three sides.

No drying, disaggregating, or sieving was performed on these samples. Composite solid waste (dust) samples were submitted to ALS Environmental (Kelso, Washington) for laboratory analysis of Toxicity Characteristic Leaching Procedure (TCLP) RCRA 8 metals using Methods SW-846 1311/6010/7470. Table 5 (Enclosure 2) provides a summary of the analytical results for composite dust samples collected for building characterization.

Asbestos-Containing Materials

A START Asbestos Hazard Emergency Response Act (AHERA)-certified asbestos building inspector conducted limited bulk sampling of building materials within the Site on May 24 and 25, 2023 to identify the presence, locations, and characterization of ACM on-Site. START performed a visual inspection for potential ACM at the Site and used a combination of search sampling and biased sampling to collect suspect ACM samples at the Site. The limited ACM survey was biased to target ACM throughout the buildings and exterior areas on-Site and did not follow AHERA guidelines. The ACM survey was not exhaustive and not all suspect materials were sampled. All samples collected were placed in plastic bags, labeled, and sealed immediately upon collection, with the exception of a soil sample, which was placed in a 4-ounce glass jar, labeled, and sealed immediately upon collection. A unique sample identification number was assigned to each sample. START followed standard operating procedures (SOPs) and chain of custody procedures referenced in the Nedlog Property

Assessment SAP (Tetra Tech 2023) to ensure the integrity of the samples from the time of collection to submittal to the laboratory.

START collected a total of 65 bulk samples and one soil sample, including:

- 30 bulk samples collected from interior areas of buildings B-1, B-2, B-4, and B-5.
- 32 bulk samples collected from exterior areas of buildings B-1, B-2, B-4, and B-5, including the exterior portions of structures and materials that were observed on the ground surface surrounding the buildings.
- Three bulk samples and one soil sample collected from a detonation pit located west of building B-2; the samples of material were buried below ground surface and encountered when the pit was created for organic peroxide disposal.

All bulk ACM building material samples were submitted to Pace Aerobiology Laboratory Associates, Inc. in Woburn, Massachusetts for analysis via polarized light microscopy (PLM). The ACM soil sample was submitted to Eurofins EPK Built Environment Testing, LLC in Burlingame, California for analysis via California Air Resources Board Method 435, 400-point count. Bulk ACM sample locations are depicted on Figure 5 (Enclosure 1). Results of bulk ACM and asbestos in soil samples are summarized in Table 6 (Enclosure 2) and discussed in Section 4. Photographs of sample locations are provided in Enclosure 3. Data validation reports are provided in Enclosure 4. Laboratory data packages are provided in Enclosure 5.

Chemical Inventory

From May 23 through 26, 2023, ERRS and START identified unsecured chemicals located throughout the Site. ERRS removed chemical containers, including unknown chemicals, gas cylinders, household hazardous waste (HHW), and transformers from buildings B-1, B-2, B-4, B-5, and auxiliary structures. ERRS staged the chemical containers in a central location under the concrete awning attached to the northwestern portion of building B-1. The containers were inventoried and segregated by hazard categorization for disposal. The chemical inventory is provided in Table 7 (Enclosure 2). ERRS secured the chemical containers on-Site in a locked shipping container pending off-site transportation and disposal. The chemical containers remain on-Site at the time of submittal of this report; ERRS is in the process of finalizing waste profile forms and disposal facilities.

Hazard Categorization

On May 25 and 26, 2023, START conducted HazCat field characterization of all unknown chemicals, chemicals in general HHW containers that appeared degraded, or with contents not appearing to match the container label that were discovered during removal assessment activities. Table 8 (Enclosure 2) provides a summary of the hazard categorization results.

4. REMOVAL ACTION ACTIVITIES

On-Site Treatment of Organic Peroxide

On May 23, 2023, START observed a 5-gallon metal container with an organic peroxide label located in the chemical processing area in the northeastern portion of building B-1 (Enclosure 3). Because of the explosive hazard associated with organic peroxide and the degraded condition of the container, EPA contacted the Laramie Fire Department (FD) for assistance. On May 24, 2023, the Laramie FD and Wyoming Regional Response Team (RRT) 3 arrived on-Site and developed a plan for on-Site treatment of the organic peroxide. Laramie FD and WY RRT 3 performed a Level B entry to assess the chemical location, then performed a Level A entry to remove the organic peroxide container from building B-1 and place it in an excavated detonation pit approximately 3 feet deep located west of building B-2 (Figure 2, Enclosure 1). On May 25, 2023, Laramie FD, WY RRT 3, and Laramie Police Department arrived on-Site and destroyed the organic peroxide through a controlled detonation using detonating cord.

Site Security

EPA, START, and ERRS observed and documented numerous signs of trespassing at the Site, including multiple unsecured access points to the property, damaged buildings with missing walls and open doors, and signs of vandalism including extensive graffiti and broken windows. From May 23 through 26, 2023, ERRS performed a variety of measures to increase security at the Site and prevent trespassing and unauthorized personnel from exposure to physical and chemical hazards at the Site. Warning signs, soil barriers, and wooden boards were strategically placed at entrances to the Site and various buildings; however, based on the size and condition of the buildings, and the number of entry points to the Site and buildings, the Site was unable to be completely secured from unauthorized entry. A photographic log depicting site conditions is provided in Enclosure 3.

5. MONITORING AND SAMPLE ANALYTICAL RESULTS

Air Monitoring and Sampling

Sixteen particulate monitoring data files were collected during the removal assessment. On average, each run lasted over 5 hours. Particulate monitoring data downloaded from the instrument internal memory was processed and used to calculate 15-minute and full run duration TWAs for PM_{10} and PM_{Total}. Table 1 (Enclosure 2) summarizes the on-Site particulate air monitoring results collected during the removal assessment. One instantaneous PM_{10} measurement indicated a concentration greater than the project screening level of 150 µg/m^3. At NH-AA-03 on May 22, 2023, the maximum instantaneous PM_{10} measurement was 454 µg/m^3. The high particulate readings were attributed to dust that was generated when START drove a vehicle and trailer near the location after completing setup of the air monitoring station. No other particulate measurements collected during the removal assessment indicated concentrations greater than the project screening levels. The PM_{10} screening level of 150 µg/m^3 is a National Ambient Air Quality Standard which applies to 24-hour averages for permitted facilities and is conservative for comparisons of single readings. No full run TWA or 15-minute TWA exceeded the PM_{10} screening level.

During mercury vapor monitoring with the Jerome J405, START noted inconsistencies between the readings on the instrument display and those displayed via VIPER telemetry. Because of equipment limitations and unresolved technical difficulties, START was unable to obtain the Jerome J405 internal instrument data files to reconcile variances. As a result, the Jerome J405 continuous monitoring data have not been tabulated for presentation or inclusion in this report. In general, START observed mercury vapor concentrations generally below the Jerome J405 lower operating range of 0.5 µg/m^3 and ranging up to 2 µg/m^3 at the mercury vapor monitoring locations in buildings B-1 and B-2, though measurements above 0.5 µg/m^3 fluctuated and were not sustained. Mercury vapor concentrations observed with the Jerome J405 in building B-5 fluctuated but ranged from below the instrument's lower operating range of 0.5 µg/m^3 to greater than 75 µg/m^3 depending on the time of day, ambient air temperature within and outside of the building, and wind direction and speed.

Based on the measurements observed with the Jerome J405, START used the Lumex RA-915M MVA to confirm elevated mercury vapor concentrations in building B-5 on May 23, 2023.

Table 2 summarizes mercury vapor measurements collected with the Lumex RA-915M. The background concentration in the ambient air north of building B-5 was 0.059 μg/m^3. START recorded a spike in the mercury concentration at the air monitoring location in the building (NH-IA-B5M, Figure 6, Enclosure 1), with a maximum mercury vapor concentration of greater than 50 μg/m^3. The air monitoring location is approximately 15 feet south of the northern entrance, approximately 2 feet from the western wall of the building, and approximately 4 feet above the building floor, which was on a graded slope. Because the Lumex RA-915M has a maximum operating range of 50 μg/m^3, START exited the building after the concentration spike was observed. The maximum mercury vapor concentration documented in building B-5 is greater than 10 μg/m^3, the action level specified by the Chemical-Specific Health Consultation for Joint EPA/Agency for Toxic Substances and Disease Registry (ATSDR) National Mercury Cleanup Policy Workgroup: Action Levels For Elemental Mercury Spills, dated March, 22, 2012 (ATSDR 2012) for isolation of contamination in non-residential settings or evacuation of workers not covered by a health and safety program addressing exposure to mercury.

One indoor air sample for mercury vapor was submitted to Pace Laboratories for analysis via NIOSH Method 6009. The analytical result was compared to the EPA Industrial Removal Management Level (RML) with a target risk of 10^{-4} and a hazard quotient of 1. Mercury was detected in the sample at a concentration of 2.4 μg/m^3, which is greater than the RML and project screening level of 1.3 μg/m^3. Table 3 (Enclosure 2) summarizes air analytical results. Mercury monitoring and sampling results are shown on Figure 6 (Enclosure 1).

Ambient, indoor, and personal air samples for asbestos were submitted to Pace Aerobiology Laboratory for analysis via NIOSH Method 7400, which uses PCM as the measurement technique to identify fibrous materials. If PCM results from the samples exceeded the project's threshold of 0.005 f/cc, the samples would be reanalyzed using NIOSH Method 7402, which uses TEM to identify asbestos fibers. PCM sample results were requested on a same-day turnaround time. Asbestos was not detected in any of the 16 ambient, four indoor, or one personal air samples collected during the removal assessment and submitted to the laboratory for analysis. No asbestos air samples had PCM results from NIOSH Method 7400 analysis that exceeded the 0.005 f/cc threshold for reanalysis via NIOSH Method 7402. No asbestos air samples had concentrations exceeding the project screening level of 0.1 f/cc. Table 3 (Enclosure 2) summarizes the ambient air analytical results.

Ambient and indoor air samples for metals were submitted to Pace Aerobiology Laboratory for analysis via NIOSH Method 7300 (modified) for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Results from ambient and indoor air metals samples were compared to EPA Industrial RMLs for air with a target risk of 10^{-4} and a hazard quotient of 1. No ambient air samples had detected metals concentrations exceeding project screening levels. No data were reported by the laboratory for the ambient air sample for metals collected from NH-AA-02 on May 25, 2023 because of a laboratory error during sample preparation. Three of the four indoor air samples for metals collected from location NH-IA-B1A, in the chemical processing area in the northeastern portion of building B-1, had arsenic concentrations that were greater than the project screening level of 0.066 $\mu g/m^3$. The arsenic concentrations at NH-IA-B1A on May 23, May 24, and May 25, 2023 were 1.001, 0.47, and 0.245 $\mu g/m^3$, respectively. Table 3 (Enclosure 2) summarizes air analytical results.

XRF Screening

START recorded arsenic concentrations up to 510,000 parts per million (ppm) at the Suspected CCA Tank, 340,000 ppm arsenic at the floor near the Suspected CCA Tank, 410,000 ppm arsenic at the residue on the Suspected CCA Tank, and 350,000 ppm arsenic at the CCA Manifolds on the east side of the building B-1 area. The XRF data are considered screening-level data for two reasons:

1. Because the XRF was used to screen non-standard materials in-situ; and
2. Because concentrations for various analytes including arsenic, lead, and chromium are greater than the respective concentrations for these analytes in the NIST standards.

XRF screening data are shown on Figure 7 (Enclosure 1) and summarized in Table 4 (Enclosure 2).

Composite Dust Sampling

Analytical TCLP metals results for the four composite solid waste samples were compared to maximum concentrations of contaminants for the toxicity characteristic specified in 40 Code of Federal Regulations (CFR) 261.24 for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Arsenic was detected in all four samples at concentrations ranging from 880 to 10,800 milligrams per liter (mg/L), all of which are greater than the project screening

level and toxicity characteristic of 5 mg/L. No other TCLP metals results exceeded the project screening levels. Table 5 (Enclosure 2) provides a summary of the analytical results for composite dust samples collected for building characterization. TCLP results for arsenic are shown on Figure 8 (Enclosure 1).

Asbestos-Containing Materials

ACMs greater than 1 percent were identified in building components found in buildings B-1, B-2, B-4, and B-5, on the ground surface around the exterior of buildings B-1 and B-2, and buried in the ground west of building B-2.

Of the 65 bulk samples of suspected material and one asbestos soil sample, ACM greater than 1 percent was identified in 15 samples consisting of 17 layers; laboratory results indicate these materials contain the following:

- B-1 Exterior
  - Black Roofing Paper (Sample ID EB1-2): 30 percent chrysotile asbestos.
  - Black Roofing Material with White Cloth (Sample ID EB1-5): 20 percent chrysotile asbestos.
  - Black Tar (Sample ID EB1-6): 20 percent chrysotile asbestos.
  - Black Roofing Material with White Cloth (Sample ID EB1-7): 20 percent chrysotile asbestos.
- B-1 Interior
  - Tan Insulation (Sample ID B1-7): 5 percent chrysotile asbestos.
- B-2 Exterior
  - Black Roofing Material with White Cloth (Sample ID EB2-4): 20 percent chrysotile asbestos.
- B-2 Interior
  - White Paper Wrap (Sample ID B2-6): 75 percent chrysotile asbestos.
  - White Paper Wrap (Sample ID B2-8): 60 percent chrysotile asbestos.
- B-4 Interior
  - Gray Linoleum Tile and Yellow Mastic (Sample ID B4-1): 20 percent chrysotile asbestos and trace chrysotile asbestos.
  - Thick White Pipe Wrap and Yellow Mastic (Sample ID B4-2): 80 percent chrysotile asbestos and 2 percent chrysotile asbestos.
  - Thick White Pipe Wrap (Sample ID B4-3): 80 percent chrysotile asbestos.
- B-5 Exterior
  - Black Tank Coating (Sample ID EB5-2): 15 percent chrysotile asbestos and 20 percent crocidolite asbestos.

- B-5 Interior
  - Gray Window Glazing (Sample ID B5-5): 2 percent chrysotile asbestos.
- Detonation Pit
  - Black Shingle (Sample ID Pit-1): 45 percent chrysotile asbestos.
  - Black Roofing Paper and Tar (Sample ID Pit-3): 45 percent chrysotile asbestos.

ACM sample locations are provided in Figure 5 (Enclosure 1). ACM sample results are presented in Table 6 (Enclosure 2). Photographs of positive samples are included in the photographic log in Enclosure 3. Data validation reports are provided in Enclosure 4. Laboratory analytical reports are provided in Enclosure 5.

6. DATA VALIDATION

Stage 1 data verification involves the review of sample conditions at the time of laboratory sample receipt, ensuring the requested analysis was conducted by the laboratory, verifying all samples are accounted for, the units are present, reporting limits are present, the analysis dates are provided, qualifications and definitions are present. Stage 2A data validation involves the review of sample-related quality control (QC) samples (e.g. method blanks, surrogate recoveries, laboratory control samples, duplicate analyses, and matrix spikes), frequency of QC samples, and sample holding times. Stage 2A builds on top of Stage 1, but the sample-related QC samples for Stage 2A are only applicable to chemical analyses. The sample-related QC samples are not applicable to the analysis of asbestos samples via microscopy. Therefore, in general, asbestos data can only undergo Stage 1 data validation for typical asbestos laboratory reports.

Asbestos and Metals in Air

START conducted a Stage 1 data validation of the laboratory analytical results for asbestos and Stage 2A data validation of the laboratory analytical results for metals testing mercury testing in accordance with the *EPA Region 8 Superfund and Emergency Management Division Response Section Programmatic Quality Assurance Project Plan* (EPA 2021) and the *EPA National Functional Guidelines for Superfund Inorganic Methods Data Review* (EPA 2020). All data were found as usable as reported by the laboratories. Enclosure 4 provides the data validation reports. Enclosure 5 provides copies of the laboratory analytical data packages.

TCLP Metals in Dust

START conducted a Stage 2A data validation of the laboratory analytical results for TCLP RCRA 8 metals in accordance with the *EPA Region 8 Superfund and Emergency Management Division Response Section Programmatic Quality Assurance Project Plan* (EPA 2021) and the *EPA National Functional Guidelines for Superfund Inorganic Methods Data Review* (EPA 2020). All data were found as usable as reported by the laboratories. Enclosure 4 provides the data validation report. Enclosure 5 provides a copy of the laboratory analytical data package.

Asbestos Testing

START conducted a Stage 1 data verification of the laboratory analytical results for asbestos in bulk material, and asbestos in soil in accordance with *EPA Region 8 Superfund and Emergency Management Division Response Section Programmatic Quality Assurance Project Plan* (EPA 2021). All data were found as usable as reported by the laboratories. Enclosure 4 provides the data validation report. Enclosure 5 provides a copy of the laboratory analytical data package.

7. REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 2012. “Chemical-Specific Health Consultation for Joint EPA/ATSDR National Mercury Cleanup Policy Workgroup: Action Levels For Elemental Mercury Spills.” March.

Tetra Tech Inc. (Tetra Tech). 2022. “Targeted Brownfields Assessment – Phase I Environmental Site Assessment Nedlog Holdings Property.” November.

Tetra Tech. 2023. “Nedlog Property Assessment Sampling and Analysis Plan.” Revision 1. June.

U.S. Environmental Protection Agency. 2020. “National Functional Guidelines for Superfund Organic Methods Data Review.” November.

U.S. Environmental Protection Agency, Region 8, Superfund and Emergency Management Division, Response Section. 2021. “Programmatic Quality Assurance Project Plan.” December.

This report was prepared by Tetra Tech START for EPA. Any questions concerning the findings of this report should be directed to Lauren Foster at (973) 238-6743 or Lauren.Foster@tetratech.com.

Sincerely,

Lauren Foster

Digitally signed by Lauren Foster
Date: 2023.08.21 21:00:41 -06'00'

Lauren Foster
START V

Enclosures:

Enclosure 1. Figures

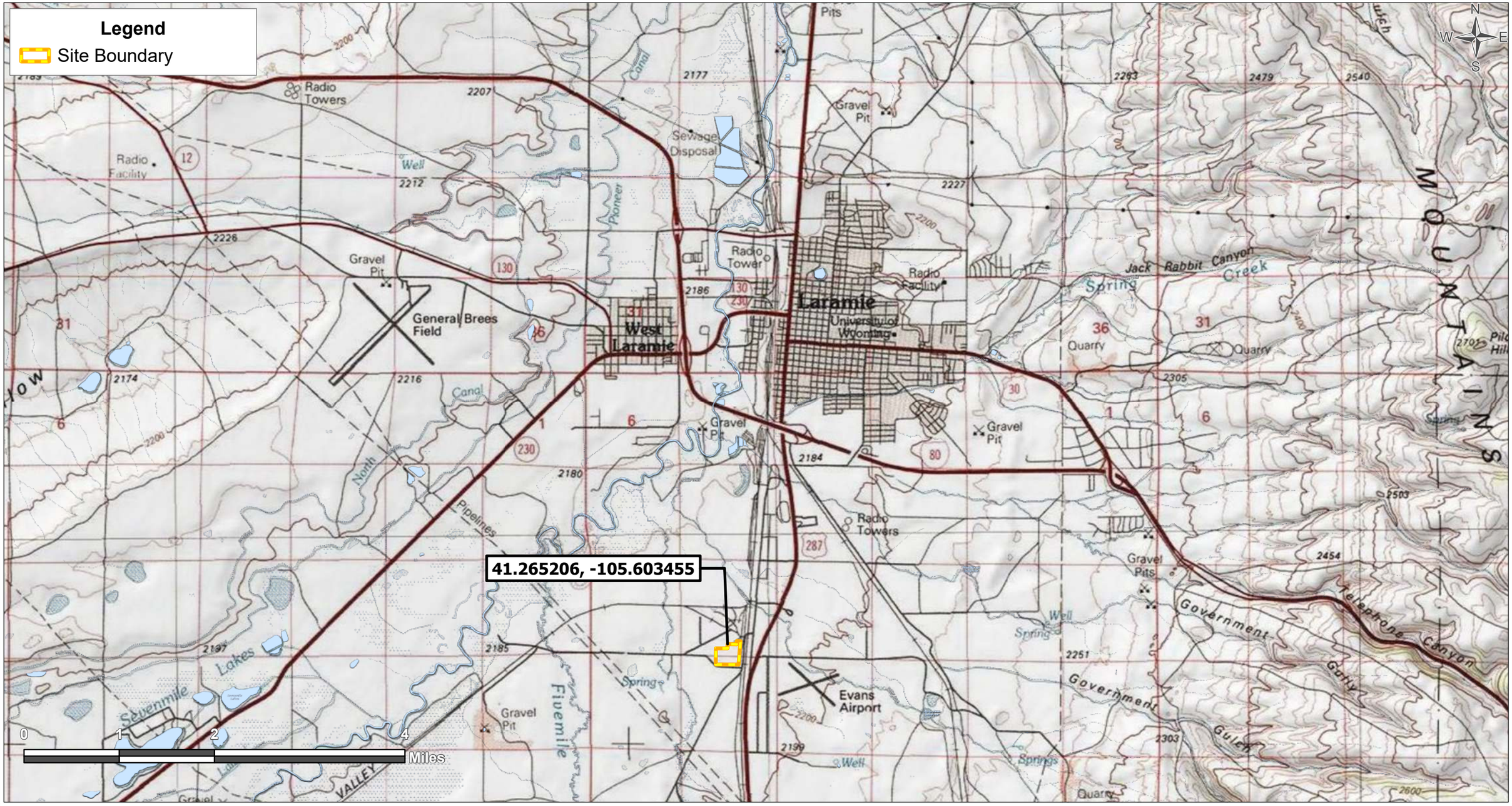
Enclosure 2. Tables

Enclosure 3. Photographic Log

Enclosure 4. Data Validation Reports

Enclosure 5. Analytical Data Packages

ENCLOSURE 1. FIGURES



Source:
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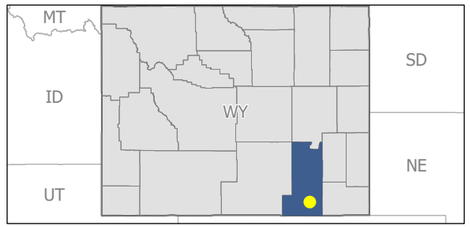
Parcels: Wyoming GIS
Spatial Reference: WGS 1984 Web Mercator Auxiliary Sphere Coordinate System



United States Environmental Protection Agency
Region 8 START V
TD: 2071-2304-07

TETRA TECH

Analyst: M. Caldwell
Date: 8/10/2023

Nedlog Property Assessment

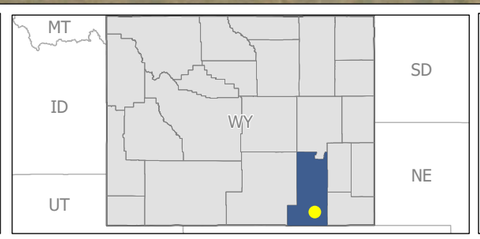
17 Sand Creek Road
Laramie, Albany County, Wyoming

Figure 1
Site Location

Path: C:\R8Projects\Nedlog\ArcGIS_Pro\Region 8 START Nedlog.aprx

Notes:

Source:
Background: ESRI Aerial Basemap
Locations: EPA Region 8 START V (Tetra Tech)
Parcels: Albany County WY GIS
Spatial Reference: NAD 1983 StatePlane Wyoming East FIPS 4901 Feet Coordinate System



United States Environmental Protection Agency

Region 8 START V
TD: 2071-2304-07

TETRA TECH

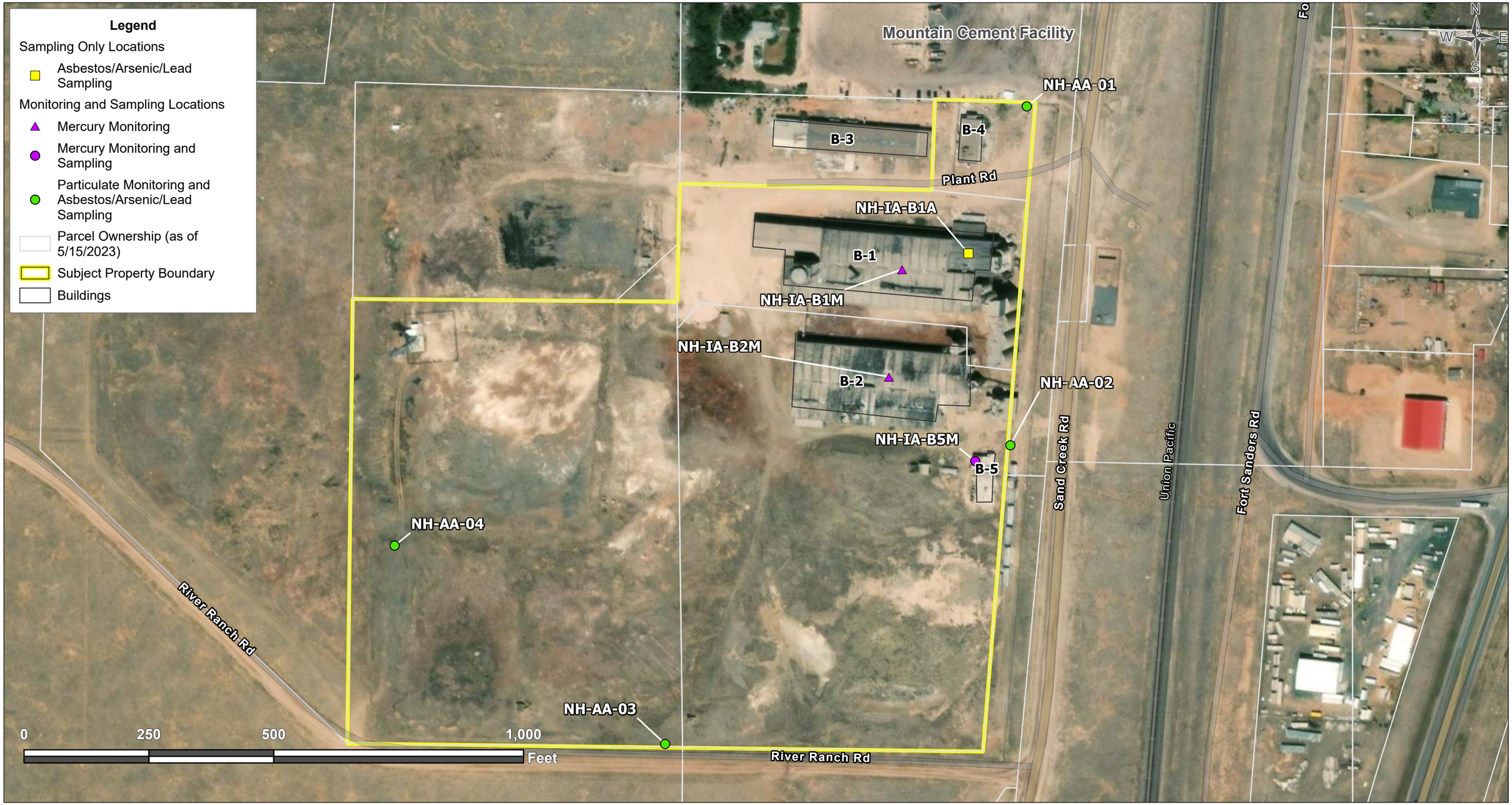
Analyst: M. Caldwell
Date: 8/11/2023

Nedlog Holdings Property

17 Sand Creek Road
Laramie, Albany County, Wyoming

Figure 2
Subject Property Layout

Path: \\etss706gisfs1\CORPArcGisShare\EMI\R08_STARTV\Nedlog\ArcGIS_Pro\Region 8 START Nedlog.aprx\Nedlog_Fig2_11x17_.pagx



Notes:
All locations are approximate.

Source:
Background: ESRI Aerial Basemap
Locations: EPA Region 8 START V (Tetra Tech)
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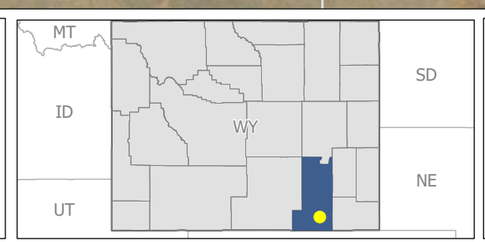
Spatial Reference: NAD 1983 StatePlane Wyoming East FIPS 4901 Feet Coordinate System



United States Environmental Protection Agency

Region 8 START V
TD: 2071-2304-07

TETRA TECH

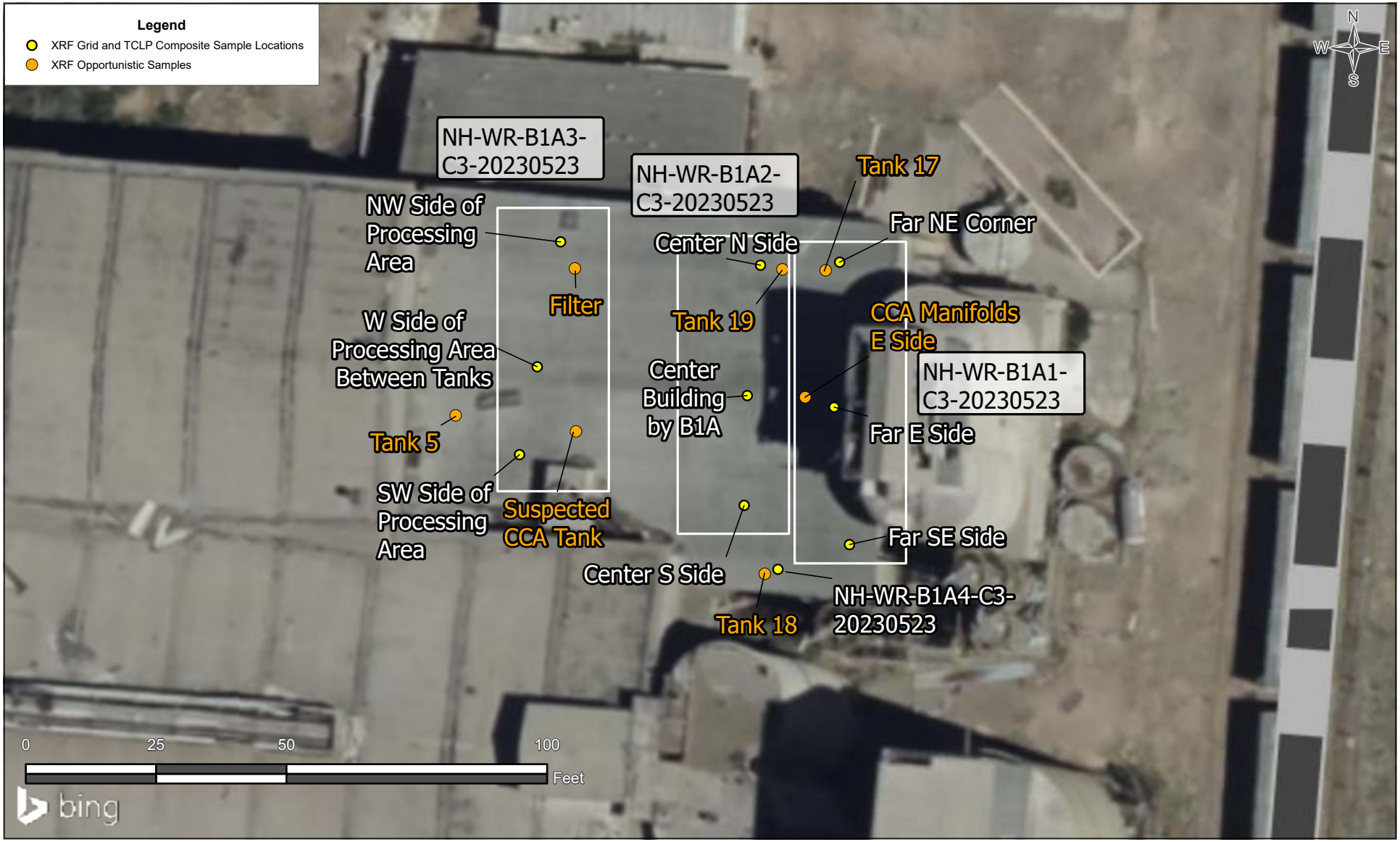
Analyst: S. DeNeice
Date: 8/10/2023

Nedlog Property Assessment

17 Sand Creek Road
Laramie, Albany County, Wyoming

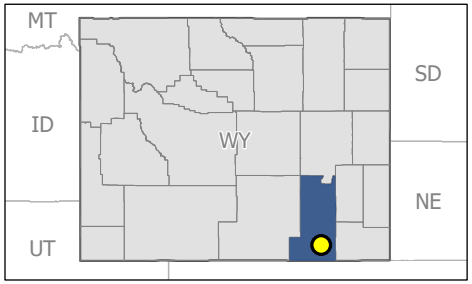
Figure 3
Air Monitoring and Sampling Locations

Path: \\etss706gisfs1\CORPArcGisShare\EMI\R08_STARTV\Nedlog\ArcGIS_Pro\Region 8 START Nedlog.aprx\Nedlog_Fig3_11x17_SampMon.pagx



Notes:
-Points represent the aliquot for the composite sample locations
-Aliquot locations are approximated
-White rectangles are the approximated composite areas for XRF Grid and TCLP composite sample locations
-TCLP – Toxicity Characteristic Leaching Procedure
-XRF – X-ray fluorescence

Source:
Background: Bing Imagery
Sample Locations: EPA Region 8 START V (Tetra Tech)
Spatial Reference: WGS 1984 Web Mercator Auxiliary Sphere Coordinate System



United States Environmental Protection Agency

Region 8 START V
TD: 2071-2304-07

TETRA TECH

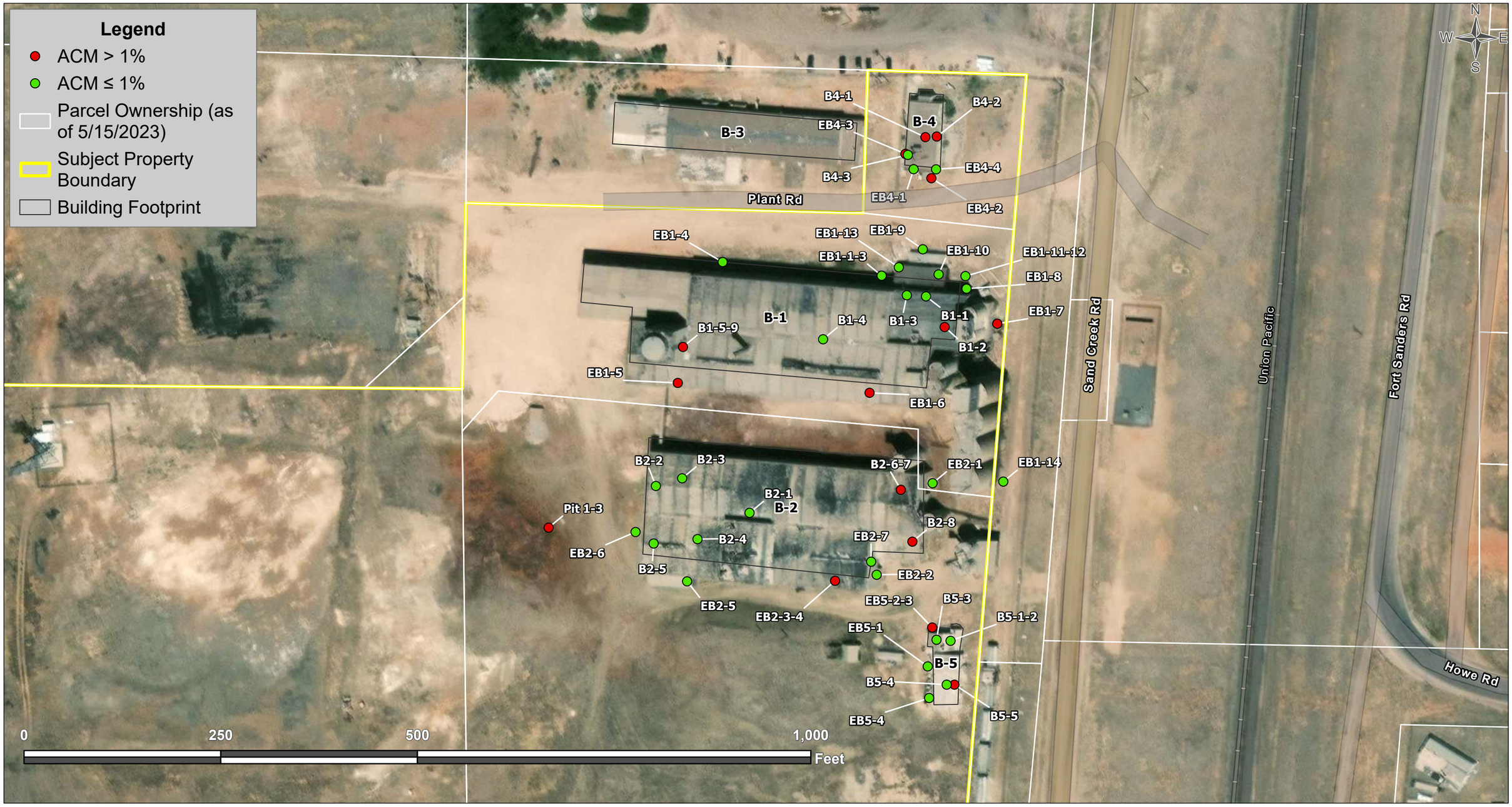
Analyst: S. Graves
Date: 8/11/2023

Nedlog Property Assessment

17 Sand Creek Road
Laramie, Albany County, Wyoming

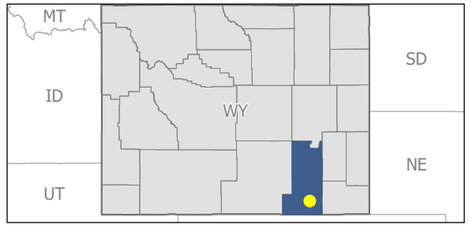
Figure 4
XRF and TCLP Sample Locations

Path: C:\R8Projects\Nedlog\ArcGIS_Pro\Region 8 START Nedlog.aprx\XRF and TCLP Sample Locations



Notes:
ACM - Asbestos-Containing Material

Source:
Background: ESRI Aerial Basemap
AMC Sample Locations: EPA Region 8 START V (Tetra Tech)
Parcels: Albany County WY GIS
Spatial Reference: NAD 1983 StatePlane Wyoming East FIPS 4901 Feet
Coordinate System



United States Environmental Protection Agency

Region 8 START V
TD: 2071-2304-07

TETRA TECH

Analyst: S. DeNeice
Date: 8/11/2023

Nedlog Property Assessment

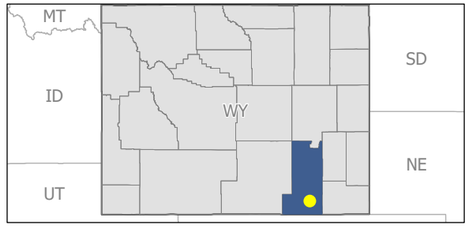
17 Sand Creek Road
Laramie, Albany County, Wyoming

Figure 5
ACM Sample Locations

Path: \\etss706gisfs1\CORPArcGisShare\EMI\R08_STARTV\Nedlog\ArcGIS_Pro\Region 8 START Nedlog.aprx\Nedlog_Fig2_11x17_.pagx

Notes:
- All locations are approximate.
- µg/m3 - Micrograms per cubic meter
- Mercury monitoring data collected with Lumex RA-915M.

Source:
Background: ESRI Aerial Basemap
Locations: EPA Region 8 START V (Tetra Tech)
Parcels: Albany County WY GIS
Spatial Reference: NAD 1983 StatePlane Wyoming East FIPS 4901 Feet Coordinate System



United States Environmental Protection Agency

Region 8 START V
TD: 2071-2304-07

TETRA TECH

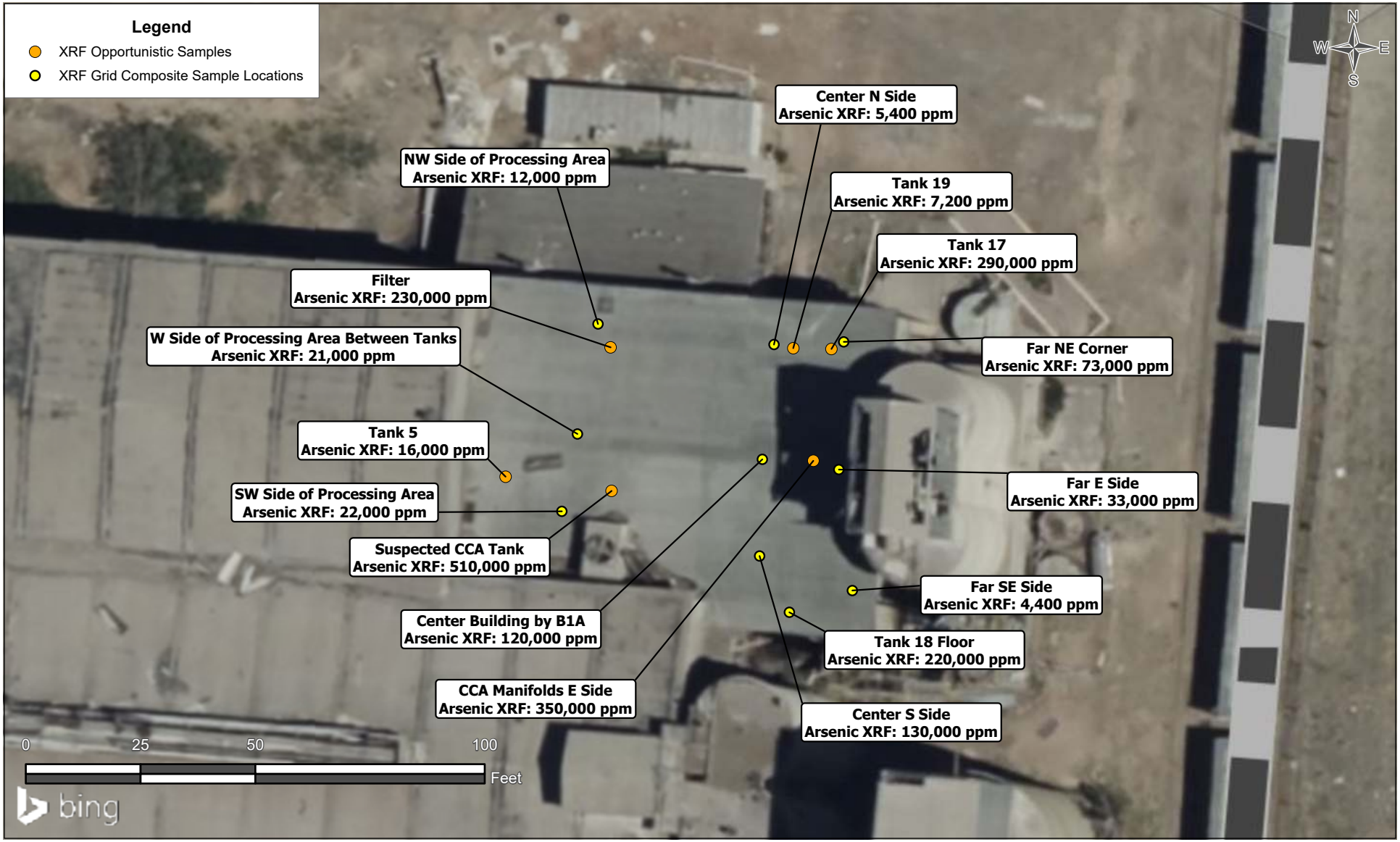
Analyst: S. DeNeice
Date: 8/21/2023

Nedlog Property Assessment

17 Sand Creek Road
Laramie, Albany County, Wyoming

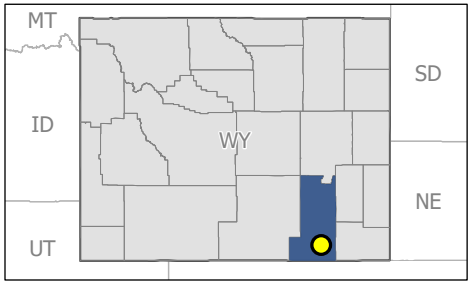
Figure 6
Mercury Air Monitoring and Sampling Results

Path: \\etss706gisfs1\CORPArcGisShare\EMI\R08_STARTV\Nedlog\ArcGIS_Pro\Region 8 START Nedlog.aprx\Nedlog_Fig3_11x17_SampMon.pagx



Notes:
-All sample locations are approximated.
-XRF – X-ray fluorescence
-ppm - Parts per million

Source:
Background: Bing Imagery
Sample Locations: EPA Region 8 START V (Tetra Tech)
Spatial Reference: WGS 1984 Web Mercator Auxiliary Sphere Coordinate System



United States Environmental Protection Agency

Region 8 START V
TD: 2071-2304-07

TETRA TECH

Analyst: S. Graves
Date: 8/21/2023

Nedlog Property Assessment

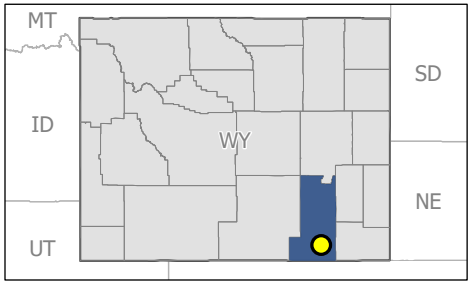
17 Sand Creek Road
Laramie, Albany County, Wyoming

Figure 7
XRF Sample Results

Path: C:\R8Projects\Nedlog\ArcGIS_Pro\Region 8 START Nedlog.aprx\XRF Sample Results fig 7

Notes:
- White rectangles are the approximated composite areas for TCLP composite sample locations
-TCLP - Toxicity Characteristic Leaching Procedure
- mg/L - Milligrams per liter

Source:
Background: Bing Imagery
Sample Locations: EPA Region 8 START V (Tetra Tech)
Spatial Reference: WGS 1984 Web Mercator Auxiliary Sphere Coordinate System



United States Environmental Protection Agency

Region 8 START V
TD: 2071-2304-07

TETRA TECH

Analyst: S. Graves
Date: 8/18/2023

Nedlog Property Assessment

17 Sand Creek Road
Laramie, Albany County, Wyoming

Figure 8
TCLP Composite Sample Results

Path: C:\R8Projects\Nedlog\ArcGIS_Pro\Region 8 START Nedlog.aprx\TCLP Sample Results fig 8

ENCLOSURE 2. TABLES

Table 1
Nedlog Property Assessment
Summary of Particulate Air Monitoring Results

Location ID	DustTrak SN	Run Date	Duration HH:mm	Parameter	Screening Level[a]	Full Run TWA (mg/m^3)	Max 15-Minute TWA (mg/m^3)	Max Instantaneous (mg/m^3)	Min Instantaneous (mg/m^3)	Flow Error
NH-AA-01	8533193305	5/22/2023[b]	0:12	PM_{10}	0.15	0.017	N/A	0.038	0.006	Y
				PM_{Total}	1.25	0.017	N/A	0.038	0.006	
NH-AA-02	8533173303	5/22/2023[b]	7:04	PM_{10}	0.15	0.082	0.119	0.129	0.052	N
				PM_{Total}	1.25	0.082	0.119	0.129	0.052	
NH-AA-03	8533164207	5/22/2023[b]	6:40	PM_{10}	0.15	0.046	0.093	**0.454**	0.012	N
				PM_{Total}	1.25	0.046	0.093	0.502	0.012	
NH-AA-04	8533162908	5/22/2023[b]	5:46	PM_{10}	0.15	0.089	0.123	0.129	0.068	N
				PM_{Total}	1.25	0.089	0.123	0.129	0.068	
NH-AA-01	8533193305	5/23/2023	3:20	PM_{10}	0.15	0.024	0.036	0.053	0.015	Y
				PM_{Total}	1.25	0.026	0.036	0.059	0.016	
NH-AA-02	8533173303	5/23/2023	6:00	PM_{10}	0.15	0.026	0.043	0.092	0.014	N
				PM_{Total}	1.25	0.026	0.043	0.092	0.014	
NH-AA-03	8533164207	5/23/2023	5:38	PM_{10}	0.15	0.027	0.036	0.047	0.015	N
				PM_{Total}	1.25	0.027	0.036	0.047	0.015	
NH-AA-04	8533162908	5/23/2023	5:48	PM_{10}	0.15	0.030	0.039	0.076	0.016	N
				PM_{Total}	1.25	0.030	0.039	0.076	0.016	
NH-AA-01	8533193305	5/24/2023	3:58	PM_{10}	0.15	0.034	0.064	0.129	0.009	Y
				PM_{Total}	1.25	0.035	0.067	0.129	0.01	
NH-AA-02	8533173303	5/24/2023	4:56	PM_{10}	0.15	0.013	0.017	0.026	0.007	N
				PM_{Total}	1.25	0.013	0.017	0.027	0.007	
NH-AA-03	8533164207	5/24/2023	5:46	PM_{10}	0.15	0.013	0.026	0.104	0.002	N
				PM_{Total}	1.25	0.013	0.027	0.105	0.002	
NH-AA-04	8533162908	5/24/2023	6:08	PM_{10}	0.15	0.014	0.026	0.049	0.002	N
				PM_{Total}	1.25	0.014	0.026	0.049	0.002	
NH-AA-01	8533193305	5/25/2023	0:14	PM_{10}	0.15	0.000	N/A	0	0	Y
				PM_{Total}	1.25	0.000	N/A	0	0	
NH-AA-02	8533173303	5/25/2023	8:50	PM_{10}	0.15	0.011	0.022	0.075	0.002	N
				PM_{Total}	1.25	0.011	0.022	0.075	0.002	
NH-AA-03	8533162908	5/25/2023	6:40	PM_{10}	0.15	0.006	0.014	0.079	0	Y
				PM_{Total}	1.25	0.006	0.014	0.081	0	
NH-AA-04	8533164207	5/25/2023	7:58	PM_{10}	0.15	0.006	0.011	0.019	0.002	N
				PM_{Total}	1.25	0.006	0.011	0.02	0.002	

Notes:

[a] PM_{10} screening level adapted from National Ambient Air Quality Standards; 24-hour screening level applied to instantaneous, 15-minute TWA, and Full Run TWA.
PM_{Total} screening level adapted from American Conference for Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV); one-eighth the ACGIH TLV for nuisance dust.

[b] Background monitoring data

Bold	Indicates concentration greater than relevant project screening level		
HH:mm	Hours:minutes	PM	Particulate matter
ID	Identification	PM_{10}	PM with a diameter of 10 microns or less
mg/m^3	Milligrams per cubic meter	SN	Serial number
N	No	TWA	Time-weighted average
NA	Not applicable	Y	Yes

Table 2
Nedlog Property Assessment
Summary of Lumex Mercury Vapor Measurements

Location	Sub-Location	Measurement Height	EPA/ATSDR Non-Residential Action Level [a] ($\mu g/m^3$)	Mercury ($\mu g/m^3$)
Background	North of B-5	Breathing zone	10	0.059
B-5	Building entry (north)	Breathing zone		0.709
B-5	Front of building (north entry)	Breathing zone		1.716
NH-IA-B5M	Near VIPER Jerome setup	Breathing zone		**>50.0**
B-2	Building entry (southeast)	Breathing zone		0.032
B-2	Building entry (southeast)	Floor		0.386
B-2	Front area near entry	Breathing zone		0.850
B-2	Boiler room	Breathing zone		0.501
B-2	Boiler room	Floor		0.722
B-2	Near boiler	Point source		0.942

Notes:

[a] Screening level specified for isolation of contamination in non-residential settings or evacuation of workers not covered by a health and safety program addressing exposure to mercury by the Chemical-Specific Health Consultation for Joint United States Environmental Protection Agency (EPA)/Agency for Toxic Substances and Disease Registry (ATSDR) National Mercury Cleanup Policy Workgroup: Action Levels For Elemental Mercury Spills, March, 22, 2012.

All measurements collected on May 23, 2023 from 1:30 p.m. to approximately 2:00 p.m.

All measurements collected with Lumex RA-915M, Instrument ID 829262.

Instrument relative deviation D=3% prior to collecting measurements.

Ambient temperature: 71 degrees Fahrenheit

ng/m^3	nanograms per cubic meter
NH	Nedlog Holdings
IA	Indoor air
B5M	Building 5 mercury vapor monitoring location
B-2	Building 2
B-5	Building 5

Table 3
Nedlog Property Assessment
Summary of Air Sample Analytical Results

		Analyte	Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury	Asbestos
		Method	NIOSH 7300	NIOSH 7300	NIOSH 7300	NIOSH 7300	NIOSH 7300	NIOSH 7300	NIOSH 7300	NIOSH 6009	NIOSH 7400
		Project Screening Level	0.066[a]	2.2[a]	0.044[a]	NE	NE	88[a]	NE	1.3[a]	0.1[b]
Location ID	Matrix	Date Collected	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(f/cc)
NH-AA-01	Ambient Air	5/22/2023	*0.15 U*	*0.07 U*	*0.04 U*	0.164 J+	*0.15 U*	0.273 J+	0.133 J+	NA	*<0.001*
NH-AA-02	Ambient Air	5/22/2023	*0.16 U*	*0.08 U*	*0.04 U*	*0.04 U*	*0.16 U*	0.258 J+	0.145 J+	NA	*<0.001*
NH-AA-03	Ambient Air	5/22/2023	*0.87 U*	*0.43 U*	*0.22 U*	*0.22 U*	*0.87 U*	1.3 J+	0.779 J+	NA	0.002
NH-AA-04	Ambient Air	5/22/2023	*0.21 U*	*0.1 U*	*0.05 U*	*0.05 U*	*0.21 U*	0.352 J+	0.186 J+	NA	*<0.001*
NH-IA-B1A	Indoor Air	5/22/2023	*0.37 U*	*0.18 U*	*0.09 U*	0.455 J+	*0.37 U*	0.532 J+	0.33 J+	NA	*<0.005*
NH-AA-01	Ambient Air	5/23/2023	*0.18 U*	*0.09 U*	*0.05 U*	*0.05 U*	*0.18 U*	0.272 J+	0.163 J+	NA	*<0.002*
NH-AA-02	Ambient Air	5/23/2023	*0.19 U*	*0.09 U*	*0.05 U*	*0.05 U*	*0.18 U*	0.214 J+	0.168 J+	NA	*<0.002*
NH-AA-03	Ambient Air	5/23/2023	*0.3 U*	*0.15 U*	*0.08 U*	*0.08 U*	*0.3 U*	0.47 J+	0.272 J+	NA	*<0.003*
NH-AA-04	Ambient Air	5/23/2023	*0.19 U*	*0.09 U*	*0.05 U*	*0.05 U*	*0.19 U*	0.294 J+	0.17 J+	NA	*<0.003*
NH-IA-B1A	Indoor Air	5/23/2023	**1.001**	*0.07 U*	*0.04 U*	*0.04 U*	*0.14 U*	0.182 J+	0.126 J+	NA	0.002
NH-AA-01	Ambient Air	5/24/2023	*0.16 U*	*0.08 U*	*0.04 U*	*0.04 U*	*0.16 U*	0.16 J+	0.144 J+	NA	0.001
NH-AA-02	Ambient Air	5/24/2023	*0.22 U*	*0.11 U*	*0.05 U*	0.248 J+	*0.22 U*	0.284 J+	0.196 J+	NA	0.001
NH-AA-03	Ambient Air	5/24/2023	*1.79 U*	*0.9 U*	*0.45 U*	*0.45 U*	*1.79 U*	1.97 J+	1.525 J+	NA	*<0.003*
NH-AA-04	Ambient Air	5/24/2023	*0.18 U*	*0.09 U*	*0.05 U*	*0.05 U*	*0.18 U*	0.19 J+	0.163 J+	NA	*<0.002*
NH-IA-B1A	Indoor Air	5/24/2023	**0.47**	*0.08 U*	*0.04 U*	*0.04 U*	*0.17 U*	0.227 J+	0.151 J+	NA	*<0.002*
NH-AA-01	Ambient Air	5/25/2023	*0.14 U*	*0.07 U*	*0.04 U*	*0.04 U*	*0.14 U*	0.161 J+	0.126 J+	NA	*<0.001*
NH-AA-02	Ambient Air	5/25/2023	NA	NA	NA	NA	NA	NA	NA	NA	*<0.001*
NH-AA-03	Ambient Air	5/25/2023	*1.7 U*	*0.85 U*	*0.43 U*	1.01 J+	2.47	3.15	1.533 J+	NA	*<0.001*
NH-AA-04	Ambient Air	5/25/2023	*0.14 U*	*0.07 U*	*0.03 U*	*0.03 U*	*0.14 U*	0.179 J+	0.117 J+	NA	*<0.001*
NH-IA-B1A	Indoor Air	5/25/2023	**0.245**	*0.07 U*	*0.04 U*	*0.04 U*	0.154	0.203 J+	0.126 J+	NA	*<0.001*
NH-IA-B5M	Indoor Air	5/25/2023	NA	NA	NA	NA	NA	NA	NA	**2.4**	NA
NH-PA-01	Personal Air	5/25/2023	NA	NA	NA	NA	NA	NA	NA	NA	*<0.008*

Notes:

[a] United States Environmental Protection Agency (EPA) Industrial Removal Management Level (RML) with a target risk 10^{-4} and hazard quotient of 1.0

[b] Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL)

Bold The analyte was detected at a concentration is greater than the relevant project screening level.

Italic The analyte was not detected at a concentration greater than the laboratory reporting limit.

< Less than

µg/m^3 micrograms per cubic meter

f/cc fibers per cubic centimeter

ID Identification

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

NA Not applicable

NE Not established

NH Nedlog Holdings

NIOSH National Institue for Occupational Safety and Health Administration

U The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).

Table 4
Nedlog Property Assessment
Summary of XRF Screening Results

		Blank	NIST 2709	NIST 2711a	Tank 19	Far NE Corner	Far E Side	Far SE Corner	Tank 17 Paint	CCA Manifolds E Side	Tank 18 Floor	Center N Side	Center Building by B1A	Center S Side	Filter Bottom	Filter Side	Suspected CCA Tank	Suspected CCA Tank Floor	Suspected CCA Tank Residue	NW Side of Processing Area	W Side of Processing Area Between Tanks	SW Side of Processing Area	Tank 5 SW Side of Processing Area	Tank 5 Green Residue
Sample Type		Blank Sample	Standard Sample	Standard Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Analyte	CAS No.	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023	5/23/2023
		11:59:51	12:01:21	12:02:34	13:08:32	13:57:18	13:58:41	13:59:54	14:01:51	14:04:32	14:06:57	14:14:22	14:15:45	14:18:20	14:20:32	14:28:34	14:23:10	14:24:17	14:25:51	14:30:43	14:32:03	14:33:39	14:35:06	14:36:08
		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Aluminum	7429-90-5	<LOD	32,000	36,000	1,800	3,200	3,800	3,900	2,200	3,600	3,500	3,600	4,600	2,600	5,300	3,900	<LOD	4,100	<LOD	2,400	2,100	4,300	<LOD	<LOD
Antimony	7440-36-0	<LOD	<LOD	31	37	670	350	63	1,500	1,800	2,900	200	5,000	4,400	300	540	6,100	12,000	6,300	350	520	1,200	570	730
Arsenic	7440-38-2	<LOD	11	110	7,200	73,000	33,000	4,400	290,000	350,000	220,000	5,400	120,000	130,000	130,000	230,000	510,000	340,000	410,000	12,000	21,000	22,000	16,000	14,000
Barium	7440-39-3	<LOD	1,100	750	<LOD	<LOD	<LOD	<LOD	<LOD	610	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Bismuth	7440-69-9	<LOD	<LOD	<LOD	33	86	41	39	620	660	390	<LOD	<LOD	65	900	360	950	490	790	<LOD	38	<LOD	<LOD	<LOD
Cadmium	7440-43-9	<LOD	<LOD	69	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	47	17	600	120	<LOD	<LOD	<LOD	93	190	30	<LOD	36	180	77
Calcium	7440-70-2	170	17,000	22,000	13,000	48,000	33,000	39,000	46,000	22,000	46,000	55,000	23,000	37,000	4,100	14,000	<LOD	11,000	<LOD	68,000	20,000	47,000	10,000	5,600
Chromium	7440-47-3	<LOD	110	64	250	370	320	190	300	290	380	95	29,000	1,200	160	210	97,000	12,000	94,000	340	440	210	<LOD	<LOD
Cobalt	7440-48-4	<LOD	<LOD	68	300	87	<LOD	<LOD	<LOD	120	<LOD	160	<LOD	150	<LOD	<LOD	2,400	<LOD	1,900	<LOD	<LOD	<LOD	1,800	2,400
Copper	7440-50-8	<LOD	33	140	410	1,000	350	620	190	240	260	360	10,000	2,800	150	110	2,600	660	2,400	550	510	1,000	400	350
Iron	7439-89-6	21	35,000	27,000	4,700	75,000	61,000	45,000	21,000	33,000	9,900	24,000	31,000	71,000	580,000	230,000	310,000	38,000	400,000	41,000	42,000	67,000	29,000	26,000
Lead	7439-92-1	<LOD	23	1,400	23	330	240	200	<LOD	<LOD	<LOD	420	2,000	2,300	<LOD	<LOD	370	1,600	4,000	510	440	1,400	2,500	1,300
Magnesium	7439-95-4	<LOD	<LOD	<LOD	<LOD	7,500	<LOD	11,000	11,000	12,000	<LOD	<LOD	12,000	<LOD	22,000	25,000	<LOD	16,000	<LOD	<LOD	6,300	<LOD	<LOD	<LOD
Manganese	7439-96-5	<LOD	510	600	37	400	340	280	280	130	110	270	570	490	1,800	470	9,200	310	10,000	390	180	380	150	76
Mercury	7439-97-6	<LOD	10	12	40	<LOD	<LOD	12	<LOD	<LOD	<LOD	29	<LOD	<LOD	<LOD	740	1,000	<LOD	<LOD	15	51	<LOD	19	25
Molybdenum	7439-98-7	<LOD	4	<LOD	4	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	7	<LOD	<LOD	25	23	24,000	25	22,000	6	<LOD	7	<LOD	<LOD
Nickel	7440-02-0	<LOD	100	33	40	42	52	36	36	230	46	29	52	110	<LOD	<LOD	28,000	54	35,000	71	45	57	32	<LOD
Niobium	7440-03-1	<LOD	4	13	<LOD	<LOD	<LOD	<LOD	11	17	<LOD	<LOD	<LOD	<LOD	12	28	130	23	120	<LOD	<LOD	<LOD	<LOD	<LOD
Phosphorus	7723-14-0	<LOD	2,700	2,900	110	590	290	450	320	240	620	2,500	510	330	460	360	<LOD	400	<LOD	540	370	460	<LOD	<LOD
Potassium	7440-02-0	180	14,000	20,000	520	3,300	3,600	3,200	290	2,400	3,600	6,400	2,900	4,100	<LOD	560	<LOD	710	<LOD	4,500	3,100	5,400	390	170
Rubidium	7440-17-7	<LOD	98	120	77	17	36	9	<LOD	13	18	40	25	29	<LOD	16	<LOD	<LOD	<LOD	60	27	39	10	3
Selenium	7782-49-2	<LOD	<LOD	<LOD	4	63	37	<LOD	210	310	220	<LOD	120	150	60	87	450	340	380	10	8	16	16	18
Silicon	7440-21-3	530,000	130,000	170,000	11,000	20,000	12,000	19,000	10,000	24,000	18,000	20,000	17,000	15,000	5,800	12,000	<LOD	8,500	<LOD	17,000	11,000	20,000	9,400	9,500
Silver	7440-22-4	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	330	600	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	550	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Strontium	7440-24-6	<LOD	240	230	160	180	140	57	140	120	140	210	240	240	<LOD	9	<LOD	49	26	250	130	300	31	21
Sulfur	7704-34-9	<LOD	470	710	2,500	6,200	3,600	4,200	1,800	6,000	3,000	5,200	2,500	16,000	1,500	3,200	<LOD	1,700	<LOD	9,400	11,000	13,000	1,900	1,200
Thallium	7440-28-0	<LOD	32	13	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	10	<LOD	<LOD	19	<LOD
Tin	7440-31-5	<LOD	<LOD	<LOD	21	71	31	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	120	<LOD	310	<LOD	280	<LOD	19	63	<LOD	<LOD
Titanium	7440-32-6	<LOD	3,200	2,700	100,000	6,600	1,500	1,000	<LOD	430	750	970	770	1,800	<LOD	<LOD	840	<LOD	7,100	1,200	1,500	1,200	190,000	220,000
Tungsten	7440-33-7	<LOD	9	13	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	260	<LOD	170	<LOD	<LOD	<LOD	<LOD	<LOD
Uranium	7440-61-1	<LOD	4	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	6	<LOD	<LOD	110	<LOD	<LOD	<LOD	<LOD	6	<LOD	6	6	8
Vanadium	7440-62-2	<LOD	110	65	<LOD	130	<LOD	47	<LOD	<LOD	<LOD	48	67	<LOD	<LOD	<LOD	260	<LOD	<LOD	<LOD	47	81	540	270
Yttrium	7440-65-5	<LOD	16	32	<LOD	4	5	<LOD	<LOD	<LOD	10	8	13	15	18	<LOD	<LOD	24	<LOD	4	<LOD	10	<LOD	<LOD
Zinc	7440-66-6	5	110	430	170	3,800	8,000	9,800	330	12,000	1,600	1,700	2,900	4,500	57,000	4,300	450	240	3,300	3,600	1,400	6,500	1,000	420
Zirconium	7440-67-7	4	140	310	65	44	70	30	<LOD	<LOD	21	76	29	31	<LOD	<LOD	<LOD	<LOD	150	96	52	68	120	130
Light elements	N/A	470,000	760,000	710,000	850,000	750,000	840,000	860,000	620,000	530,000	690,000	870,000	730,000	710,000	190,000	470,000	<LOD	550,000	<LOD	840,000	880,000	810,000	730,000	720,000

Notes:
All measurements collected using Olympus Vanta XRF, serial number 806363.
All measurements collected using XRF in geochemical (three-beam) mode.
All measurements collected in situ.
START rounded the raw results reported by the XRF to two significant figures based on the observed accuracy of the instrument from positive control samples (the NIST standards).
Light elements have low atomic numbers with weaker X-ray energies which cannot be measured by handheld XRF analyzers.

<	Less than	NIST	National Institute of Standards and Technology
B1A	Building 1 arsenic air sample location	NW	Northwest
CAS	Chemical Abstracts Service	PPM	parts per million
CCA	Chromated copper arsenate	S	South
E	East	SE	Southeast
LOD	Limit of detection	SW	Southwest
N	North	W	West
NE	Northeast	XRF	X-ray flourescence

Table 5
Nedlog Property Assessment
Summary of Composite Dust Analytical Results

	Sampling Location:	EPA TCLP[a]	NH-WR-B1A1	NH-WR-B1A2	NH-WR-B1A3	NH-WR-B1A4
	Matrix:		Dust	Dust	Dust	Dust
	Sample Type:		Field Sample	Field Sample	Field Sample	Field Sample
	Date Sampled:		5/23/2023	5/23/2023	5/23/2023	5/23/2023
CAS Number	Analyte		Metals (mg/L)			
7440-38-2	Arsenic	5	**10,100**	**5,720**	**880**	**10,800**
7440-39-3	Barium	100	*0.1 U*	*0.1 U*	*0.1 U*	*0.1 U*
7440-43-9	Cadmium	1	0.00073	0.0048	0.0416	0.0649
7440-47-3	Chromium	5	*0.1 U*	0.37	0.38	*0.1 U*
7439-92-1	Lead	5	*0.1 U*	*0.1 U*	*0.1 U*	*0.1 U*
7439-97-6	Mercury	0.2	0.0003 J	0.0023	0.0033	0.0008 J
7782-49-2	Selenium	1	0.018 J	0.123	0.505	0.726
7440-22-4	Silver	5	*0.0004 UJ*	*0.0004 U*	*0.0004 U*	*0.0004 U*

Notes:

[a] Maximum concentration of contaminants for the toxicity characteristic specified in 40 CFR 261.24.

Bold	The analyte was detected at a concentration greater than the relevant project screening level.
Italic	The analyte was not detected at a concentration greater than the laboratory reporting level.
CAS	Chemical Abstracts Service
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
mg/L	milligrams per liter
NH	Nedlog Holdings
TCLP	Toxicity Characteristic Leaching Procedure
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate because of deficiencies in one or more quality control criteria.
WR	Waste sample

Table 6
Nedlog Property Assessment
Summary of Asbestos-Containing Material Sample Results

Sample ID	Material Description	Material Location	PLM Result (% asbestos)
B1-1	Yellow Pipe Wrap	B-1	ND
B1-2	White Fibrous Material	B-1	ND
B1-3	Gray Cement Block Filler	B-1	ND
B1-4	White Pipe Insulation	B-1	ND
B1-5	Red Fire Brick	B-1	ND
B1-6	Black Fill Material	B-1	ND
B1-7	**Tan Insulation**	**B-1**	**5% Chrysotile**
B1-8	Red Brick	B-1	ND
B1-8	Tan Plaster	B-1	ND
B1-9	Yellow Insulation	B-1	ND
B2-1	Black Insulation Paper	B-2	ND
B2-2	White Plaster	B-2	ND
B2-3	Red Gasket	B-2	ND
B2-4	White Gasket	B-2	ND
B2-5	Tan Window Glazing	B-2	ND
B2-6	**White Pipe Wrap**	**B-2**	**75% Chrysotile**
B2-7	White Insulation Paper	B-2	ND
B2-8	**White Pipe Wrap**	**B-2**	**60% Chrysotile**
B4-1 (4 layers)	**Gray Linoleum Tile**	**B-4**	**20% Chrysotile**
	White Linoleum	B-4	ND
	Yellow Mastic	**B-4**	**Trace Chrysotile**
	Yellow Mastic	B-4	ND
B4-2 (2 layers)	**Thick White Pipe Wrap**	**B-4**	**80% Chrysotile**
	Yellow Mastic	**B-4**	**2% Chrysotile**
B4-3	**Thick White Pipe Wrap**	**B-4**	**80% Chrysotile**
B5-1	Yellow Insulation	B-5	ND
B5-2	Silver Wrap	B-5	ND
B5-3	White Ceiling Tile	B-5	ND
B5-4	White Plaster	B-5	ND
B5-5	Gray Window Glazing	B-5	ND
B5-5	**White Joint Compound**	**B-5**	**2% Chrysotile**
EB1-1	Gray Shingle	Exterior B-1	ND
EB1-2	**Black Roofing Paper**	**Exterior B-1**	**30% Chrysotile**
EB1-3	White Pipe Wrap	Exterior B-1	ND
EB1-4	Brown Particle Board	Exterior B-1	ND
EB1-5	**Black Roofing Material w/ White Cloth (inseparable)**	**Exterior B-1**	**20% Chrysotile**
EB1-6	**Black Tar**	**Exterior B-1**	**20% Chrysotile**
EB1-7	**Black Roofing Material w/ White Cloth (inseparable)**	**Exterior B-1**	**20% Chrysotile**
EB1-8	Black Gasket	Exterior B-1	ND
EB1-9 (2 layers)	Brown Backing	Exterior B-1	ND
	White Insulation	Exterior B-1	ND
EB1-10	Gray Shingle	Exterior B-1	ND
EB1-11	Black Pipe Insulation	Exterior B-1	ND
EB1-12	White Insulation	Exterior B-1	ND
EB1-13	Blue Shingle	Exterior B-1	ND
EB1-14	Black Gasket	Exterior B-1	ND
EB2-1	Black Insulation Paper	Exterior B-2	ND

Table 6
Nedlog Property Assessment
Summary of Asbestos-Containing Material Sample Results

Sample ID	Material Description	Material Location	PLM Result (% asbestos)
EB2-1	Multi-color Particle Board w/ Black Tar (inseparable)	Exterior B-2	ND
EB2-2	Black Roofing Paper w/ Tar (inseparable)	Exterior B-2	ND
EB2-3	Gray Ash	Exterior B-2	ND
EB2-4	**Black Tar w/ White Cloth (inseparable)**	**Exterior B-2**	**20% Chrysotile**
EB2-5	Black Roofing Paper w/ Tar (inseparable)	Exterior B-2	ND
EB2-6	Black Gasket	Exterior B-2	ND
EB2-7	Gray Grout	Exterior B-2	ND
EB4-1	White Caulking	Exterior B-4	ND
EB4-2	White Wire Insulation	Exterior B-4	ND
EB4-3	Black Cement Block Filler	Exterior B-4	ND
EB4-4	White Window Glazing	Exterior B-4	ND
EB5-1	Green Shingle	Exterior B-5	ND
EB5-2 (2 layers)	**Black Tank Coating**	**Exterior B-5**	**15% Chrysotile**
	Black Tank Coating	**Exterior B-5**	**20% Crocidolite**
EB5-3	Black Gasket	Exterior B-5	ND
EB5-4	Gray Caulking	Exterior B-5	ND
NH-SO-DA01-C5-20230523	Brown Soil	Detonation Pit	ND
Pit-1	**Black Shingle**	**Detonation Pit**	**45% Chrysotile**
Pit-2	Multi-color Insulation	Detonation Pit	ND
Pit-3	**Black Roofing Paper and Tar**	**Detonation Pit**	**45% Chrysotile**

Notes:
% percent
ND The laboratory did not detect asbestos-containing material in the sample.
PLM Polarized Light Microscopy

Table 7
Nedlog Property Assessment
Container Inventory

Container ID	Container Comments	Contents	Original Container Type	Container Size	Container Condition	Type Of Closure	Distributor or Manufacturer
Organic Peroxide	Disposed by on-site treatment	Treated as labeled	Metal	5 gal	Rusted; dented; poor	Closed top with bung and handle	Unknown
WC-B1	Open bucket with neon green transparent liquid under tank in building 1	Suspected CCA	Poly	5 gal	Fair	Missing lid; open top	Facility Generated Waste[1]
WC-1	Overpacked into paint bucket - contents in original, unopened container.	Uranyl Nitrate (depleted)	Amber Glass	4 oz	Poly; unopened; intact; fair	Poly screw cap	Fisher Scientific
WC-2	Outdoor Insect Fogger in mfg container.	As Labeled	Aerosol Can	16 oz	Used; slightly rusted, intact; fair	Aerosol Spray Top	Ortho
WC-3	Spray cleaner concentrate in mfg container.	As Labeled	Poly	1 gal	Intact; fair	Poly screw cap	Zoom
WC-4	Unlabeled container, 5-gal bucket stacked in a secondary 5-gal bucket.	Unknown	Poly Bucket	5 gal	Rust at opening; discoloration on top of bucket	Poly bung	N/A
WC-5	Trowleze. Air-setting, high temperature, bonding mortar.	Bonding mortar	Poly Bucket	5 gal	Significantly rusted	Metal lug lid; open top	National Refectories & Minerals
WC-6	Most of label is illegible due to metallic coating covering container. ASTM D2824 note is legible and indicated a aluminum coating for roofing material.	As labeled	Metal	5 gal	Minimal rust on top; contents coating sides of container	Metal lug lid; open top	Colorado Asphalt Products
WC-7	VANWET 9N9 Nonionic surfactant.	As Labeled	Metal	5 gal	Fair	Closed top with handle and bung	Van Waters & Rogers
WC-8	TERGiTOL Nonionic surfactant Min-Foam 1-X Fine Finishes - Methanol. Shipping addressed to WR Metals Inc. on lid.	As Labeled	Metal	5 gal	Rusty lid,; fair	Closed top with handle and bung	Union Carbide Corp.
WC-9	Scotch-Clad brand protective coating (black) 176. Shipping addressed to Resource Refining Co.	As Labeled	Metal	5 gal	Rusty lid; fair	Metal lug lid; open top	3M
W-10	Flammable Liquid. Cement Adhesive N.O.S. Label appears to have been removed or degraded.	Suspected Scotch-Clad Protective Coating (black) 176	Metal	5 gal	Some rust visible on lid; fair	Metal lug lid; open top	Unknown
WC-11	Fine Finishes - Methanol. Shipping addressed to Williams Strategic Metals under front label.	As Labeled	Metal	5 gal	Fair	Closed top with handle and bung	Paint & Lacquer Company Denver, CO
WC-12	Prait & Lambert Epoxy Enamel Mattermorn White Shipping addressed to Nedlog Technology Group Inc.	As Labeled	Metal	5 gal	Contents on side of container; some visible rust	Metal lug lid; open top	Paint & Lacquer Company Englewood, CO
WC-13	TERGiTOL Nonionic surfactant Min-Foam 1-X Fine Finishes - Methanol. Shipping addressed to WR Metals Inc. on lid.	As Labeled	Metal	5 gal	Fair	Closed top with handle and bung	Union Carbide Corp.
WC-14	Prait & Lambert Epoxy Enamel Mattermorn White Shipping addressed to Nedlog Technology Group Inc.	As Labeled	Metal	5 gal	Significant rust on base and lid	Metal lug lid; open top	Paint & Lacquer Company Englewood, CO

Table 7
Nedlog Property Assessment
Container Inventory

Container ID	Container Comments	Contents	Original Container Type	Container Size	Container Condition	Type Of Closure	Distributor or Manufacturer
WC-15	Prait & Lambert Epoxy Enamel Mattermorn White Shipping addressed to Nedlog Technology Group Inc.	As Labeled	Metal	5 gal	Significant rust; some dents	Metal lug lid; open top	Paint & Lacquer Company Englewood, CO
WC-16	Mobile container with "Bird Clutch" handwritten on lid.	Unknown	Poly	5 gal	Some rust on lid; fair	Metal lug lid with bung	Unknown
WC-17	Unlabeled white container with blue stains on upper half and lid.	Unknown	Poly	5 gal	Some dust and wear; fair	Poly lid with bung	Unknown
WC-18	Unlabeled white container with blue stains on lid.	Unknown	Poly	5 gal	Some dust and wear; fair	Poly lid with bung	Unknown
WC-19	Foundation Coating No. 12 ABC Quality Products	As Labeled	Poly	5 gal	Some dust and wear; fair	Resealable top	DRESCO
WC-20	Unlabeled container; shipping labeled states Concrete Protective Systems and addressed to WR Metals Industries.	Unknown	Poly	5 gal	Some dust and wear; fair	Poly lid with bung	Unknown
WC-21	Scotch-Clad brand protective coating (black) 176. Shipping addressed to Resource Refining Co.	As Labeled	Metal	5 gal	Significant rust on lid; visible rust on base	Metal lug lid; open top	3M
WC-22	Q-STIK Polymer Additive Q-Bond.	As Labeled	Poly	5 gal	Some dust and wear; fair	Poly lid with bung	Q-STIK
WC-23	Fibered Roof Coatings No. 13 ABC Quality Products.	As Labeled	Poly	5 gal	Cracked top; poor	Resealable top	American Blackline Coatings Inc. Denver, CO
WC-24	Unlabeled container with "Grey Paint" handwritten on lid.	Unknown	Metal	5 gal	Visible rust, fair	Resealable top	Unknown
WC-25	Prait & Lambert Epoxy Enamel Mattermorn White Shipping addressed to Nedlog Technology Group Inc.	As Labeled	Metal	5 gal	Significant rust; some dents	Metal lug lid; open top	Paint & Lacquer Company Englewood, CO
WC-26	Hydrochloric Acid Reagent Bottle with "Acid Dump" handwritten on side.	Laboratory Waste	Glass	2 L	Stained; fair	Poly screw cap	Facility Generated Waste[1]
WC-27	Folgers Coffee Can with reddish brown oily contents.	Unknown	Metal	2 lb.	dented; fair	Poly lid	Unknown
WC-28	Unlabeled container.	Suspected Apple Cider Vinegar	Poly	2 L	Fair	Poly screw cap	Unknown
WC-29	Folders can with rusted color solids fillings with less than 10% filled.	Unknown	Metal	2 lb.	Poor	Poly lid	Unknown
WC-30	Solution No. SO726 1:1 HCl, dark aqueous contents.	Unknown	Poly	5 mL	Fair	Poly screw cap	NALCO Chemicals
WC-31	Unlabeled laboratory container.	Unknown	Amber Glass	5 mL	Fair	Poly screw cap	Unknown
WC-32	Formula HD-27 Organic Acid Type Lime Solvent. Some illegible handwritten labels on top. Yellow translucent aqueous contents.	As Labeled	Poly	1 gal	Fair	Poly screw cap	Gallant
WC-33	Safe Spray Liquid Cleaner (fireproof). Removes grease, oil, wax, soap, light carbon, dirt, gum.	As Labeled	Poly	1 gal	Fair	Poly screw cap	Lovingers Co.
WC-34	Cleaning Agent Drum.	As Labeled	Metal	55 gal	Rusty; weathered; poor	Closed top bung and spigot	American Sanitary Products

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Container ID	Container Comments	Contents	Original Container Type	Container Size	Container Condition	Type Of Closure	Distributor or Manufacturer
WC-35	Seven containers of bowl cleanse disinfectant .	As Labeled	Poly	1 L	Fair	Poly screw cap	Vani-sol
WC-36	One case of Oxygen Bleach Cleanser Powder.	As Labeled	Cardboard/Metal	1 lb.	Fair	Open top	Ajax
WC-37	Thread-eze Antiseize and lubricating aerosol.	As Labeled	Metal	5 mL	Fair	Aerosol Spray Top	National Chemsearch
WC-38	All temperature detergent, RCRA empty, solid material on bottom 1/4 of bucket.	As Labeled, exposed to environmental conditions	Poly	5 gal	Fair, no top	Open top	Unknown
WC-39	Apple Cider Vinegar.	As labeled	Poly	1 gal	Fair	Poly screw cap	SPEAS
WC-40	33 containers of Component II Enpox catalyst Thinner. Adduct concentration BMS-1-39C Class A can.	As labeled	Metal	1 L	Rusted; poor	Resealable top	Prait & Lambert
WC-41	Corotar Three containers of curing agent 256-C-27.	As labeled	Metal	1/2 gal	Contents on side of container; fair	Screw cap	Cook
WC-42	Unopened plastic roof cement paint can.	As labeled	Metal	1 L	Some dents; fair	Resealable top	Fortress
WC-43	Velva-Sheen for floor maintenance.	As labeled	Metal	5 gal	Some rust; fair	Closed top bung with handle	Majestic Wax Co. Denver, CO
WC-44	Unopened N/25 neoprene troweling compound corrosion protectant paint can.	As labeled	Metal	1 L	Fair	Resealable top	GACO Products
WC-45	Five containers of PJ hardener.	As labeled	Glass	1 mL	Fair	Poly screw cap	Unknown
WC-46	Three unlabeled containers with gel and crystal like substance with "15" stamped on lid.	Aged polyester adhesive RP-15	Glass	2 oz	Fair	Metals screw top	Ameron
WC-47	Multi-purpose Enamel, marine grade, polyurethane fortified paint can. ISE7 Gloss Red.	As labeled	Metal	25 mL	Fair	Resealable top	Gibson's
WC-48	Spanish oak wood stain with Kmart price tag.	As labeled	Metal	25 mL	Fair	Resealable top	Carver Tripp
WC-49	Purple glass stain powder.	As labeled	Glass	6 mL	Fair	Poly screw cap	Deco Glass
WC-50	Unlabeled white opaque jar.	Unknown	Glass	25 mL	Fair	Metal screw cap	Unknown
WC-51	Pre-mixed vinyl spackling compounds (no asbestos).	As labeled	Poly	25 mL	Some unknown contents on side; fair	Resealable top	Red Devil
WC-52	E-Z Kare latex flat finish EZF-1 White.	As labeled	Metal	1 L	Fair	Resealable top	Tru-Test
WC-53	Tri-sodium phosphate all-purposes general cleaner.	As labeled	Cardboard	1 lb.	Fair	Lift flap	Bondex
WC-54	Liquid organic cleaner (L.O.C) concentrate multi purpose surfactant.	As labeled	Poly	1 gal	Fair	Poly screw cap with tubing	Amway
WC-55	Two unopened containers in box packaging of Bondstrand polyester adhesive RP-15.	As labeled	Glass	2 oz	Fair	Metals screw top	Ameron
WC-56	Non-slip liquid floor wax.	As labeled	Metal	5 mL	Fair	Resealable top	TREWAX
WC-57	Sterile first aid treatment. Eye and skin neutralizer for acid and alkali burns.	As labeled	Poly	5 mL	Fair	Poly screw cap	Zee

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WC-58	Primer N item No. 76456 curing Loctite adhesive and sealant.	As labeled	Metal	17 g	Some rust; fair	Poly screw cap	LOCQUIC
WC-59	Activator , full label missing.	Unknown	Glass	25 mL	some contents on side; some rust; fair	Metal screw cap	GACO Products
WC-60	Silicone sealer. Water repellent exterior finish for brick, stone, asbestos siding, stucco, concrete blocks.	As labeled	Metal	1 gal	Some rust, fair	Screw top and handle	Wel-cote
WC-61	Opened, original closure not present. Lubriplate silicone sealer. Water repellent exterior finish for brick, stone, asbestos siding, stucco, concrete blocks.	As labeled	Metal	5 gal	Some rust; fair	Closed top with handle and pour spout	Fiske Brothers Refining Co.
WC-62	Three opened paint cans. Some RCRA Empty. White paint.	As labeled	Metal	1 gal	Fair	Resealable top	Sherwin Williams
WC-63	Two opened enamel paint cans.	As labeled	Metal	1 gal	Fair	Resealable top	Tru-Test
WC-64	Eight epoxy enamel.	As labeled	Metal	1 gal	Fair	Resealable top	Enamel Chemical Company
WC-65	Two containers of latex semi-gloss white 2254.	As labeled	Poly	1 gal	Fair	Resealable top	Enterprise
WC-66	Eight paint cans of N-7A liquid neoprene coatings black.	As labeled	Metal	1 gal	Fair	Resealable top	GACO Products
WC-67	Par Motor Oil SAE 10W.	As labeled	Metal	5 gal	Some rust; fair	Resealable top	Conoco
WC-68	3812S fast dry enamel reducer paint thinner.	As labeled	Metal	5 gal	Some rust; poor	Resealable top	Dupont
WC-69	Two tanks.	Empty	Metal	>100 gal	Some rust; poor	Closed top	Unknown
WC-70	Three cylinders with "WSM" spray painted.	Empty	Metal	100 lbs.	Rusted; poor	Closed top with connection for regulator	Unknown
WC-71	Sulfur dioxide cylinder.	As labeled	Metal	50 L	Rusted; poor	Closed top with connection for regulator	Unknown
WC-72	Carbon monoxide cylinder.	As labeled	Metal	50 L	Some rust; fair	Closed top with connection for regulator	Air Products & Chemicals Inc.
WC-73	Hydrogen chloride cylinder.	As labeled	Metal	25 lbs.	Rusted; poor	Closed top with connection for regulator	Union Carbide Corp.
WC-74	Propane cylinder.	Empty	Metal	5 lbs.	Rusted; poor	Closed top with connection for regulator	Unknown
WC-75	Three fire extinguishers.	As labeled	Metal	5-20 lbs.	Rusted; poor	Nozzel w/ hose	Unknown
WC-76	Tungstic Acid H2WO4.	As labeled	Poly	100 g	Fair	Screw top	Mallinckrodt
OP1-01	Five pH 7 buffer solution (RCRA empty). Exp 1982.	As labeled	Poly	5 mL	Fair	Resealable top	Fisher Scientific
OP1-02	Two containers with handwritten labels noting pH of 4 and 7 with NaCl.	As labeled or empty	Poly	25 mL	Fair	Screw top	Lab made reagent[2]
OP1-03	Saturated KCl solution.	As labeled	Poly	25 mL	Fair	Screw top	Corning
OP1-04	Handwritten label "NALCO SO274 NON HAZ AS PER MSDS".	As labeled	Glass	25 mL	Fair	Screw top	Lab made reagent[2]
OP1-05	Partial handwritten label "ZINC SULFATE 11.11 ZaSO4 VWR".	As labeled	Glass	25 mL	Fair	Screw top	Lab made reagent[2]

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OP1-06	Two containers of test reagent PA-2 SO-636 exp 1986. Handwritten note "dilute quarter/vary amine".	As labeled	Poly	5 mL	Residue on sides; fair	Screw top	NALCO Chemicals
OP1-07	Two containers of test reagent Solution No. So274 H-1 exp 1986. Handwritten note "titratus sol Non-haz per MSDS".	As labeled	Poly	5 mL	Residue on sides; fair	Screw top	NALCO Chemicals
OP1-08	Handwritten label "Ammonium Acetate 5M 1/8/81".	As labeled	Poly	5 mL	Residue on sides; fair	Screw top	Lab made reagent[2]
OP1-09	Handwritten label "CL- 1ppm; 1.6485 gm NaCl/L; 7/27".	As labeled	Poly	5 mL	Residue on sides; fair	Screw top	Lab made reagent[2]
OP1-01	Sodium borate crystal, 1-hydrate.	As labeled	Glass	1 lb.	Crystal-like residue coating sides; fair	Screw top	J.T. Baker
OP1-11	Calcium chloride crystal reagent.	As labeled	Carboard	25 lbs.	Crystal-like residue coating sides; water damage; poor	Cardboard lid	Fisher Scientific
OP1-12	Two containers of sodium thiosulfate crystal reagent.	As labeled	Poly	5 g	Fair	Screw top	Sargent-Welch
OP1-13	Tartaric acid crystals technical grade SC 15162-5GM.	As labeled	Poly	5 g	Fair	Screw top	Sargent-Welch
OP1-14	Universal indicator solution pH range 4-11. SC1563-1PT.	As labeled	Glass	5 mL	Fair	Screw top	Sargent-Welch
OP1-15	Handwritten label "PA 2 quarter solution".	As labeled	Poly	25 mL	Fair	Resealable top	Lab made reagent[2]
OP1-16	Stannous chloride crystals analytical reagent.	As labeled	Poly	5 g	Fair	Screw top	Mallinckrodt
OP1-17	Nine containers of amberlite synthetic ion exchange resin, red/white colors.	As labeled	Glass	5 g	Fair	Screw top	Rohm & Haas, Philadelphia, PA
OP1-18	Amberlite LA-2 6-5779.	As labeled	Glass	25 mL	Poor	Screw top	Rohm & Haas, Philadelphia, PA
OP1-19	Two containers with handwritten labels "1M ethylene glycol".	As labeled	Poly	5 mL	Fair	Screw top	Lab made reagent[2]
OP1-20	Handwritten label "3M NH4Cl 7/21/81".	As labeled	Poly	5 mL	Fair	Screw top	Lab made reagent[2]
OP1-21	Handwritten label "3N NaCl in table salt tech grade".	As labeled	Poly	5 mL	Fair	Screw top	Lab made reagent[2]
OP1-22	Two containers of aliquat 336 methyl tricaprylyl ammonium chloride.	As labeled	Glass	25 mL	Fair	Screw top	Kankakee
OP1-23	Two containers of "Amine 336" Label partially worn.	As labeled	Poly	5 mL	Poor	Screw top	Kankakee
OP1-24	Ferric sulfate; worn label.	As labeled	Glass	5 g	Crystallized contents on side; poor	Screw top	Mallinckrodt
OP1-25	Sodium cyclohexane butyrate standard for atomic absorption.	As labeled	Glass	5 g	Fair	Screw top	Kodak
OP1-26	1, 1 - Phenanthroline ferrous sulfate complex. Unopened.	As labeled	Glass	25 mL	Good	Screw top	Fisher Scientific
OP1-27	Handwritten label "DOW DOWEX HCR-W Lot# MM 3134-115 2356".	As labeled	Glass	25 g	Fair	Screw top	Lab made reagent[2]

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OP1-28	Ammonium acetate.	As labeled	Cardboard	25 lbs.	Water damage; crystal-like residue on sides; poor	Cardboard lid	J.T. Baker
OP1-29	Control sample product number 2552 mang sulfate dated 2/2/1983.	As labeled	Glass	25 mL	Fair	Screw top	J.T. Baker/Lab made reagent[1]
OP1-30	d-Sorbitol purified S-459.	As labeled	Glass	5 g	Fair	Screw top	Fisher Scientific
OP1-31	Sodium sulfate anhydrous S-43.	As labeled	Glass	1 kg	Good	Screw top	Fisher Scientific
OP1-32	Manganese sulfate PM 1754.	As labeled	Glass	5 g	Fair	Screw top	Eastman Techmangam
OP1-33	Bag with illegible handwritten label. White powder substance.	Unknown	Plastic	1 gal	Poor	Zip top	Lab made reagent[2]
OP1-34	Printed label "coal" black powder substance.	As labeled	Glass	25 g	Fair	Screw top	Lab made reagent[2]
OP1-35	pH buffer solution container with handwritten label "lime-away".	As labeled	Poly	25 mL	Fair	Screw top	Lab made reagent[2]
OP1-36	Handwritten label ".1 N; Na2S2O3; 24.82 Na2S2O3· 5 H2O/L".	As labeled	Poly	5 mL	Fair	Screw top	Lab made reagent[2]
OP1-37	DOWEX anion exchange resin 1X4 2/5 mesh Cl.	As labeled	Glass	25 g	Fair	Screw top	Dow Chemical Co.
OP1-38	Manganous sulfate monohydrate.	As labeled	Glass	25 g	Fair	Screw top	Fisher Scientific
OP1-39	Two containers of emulsified polydimethylsiloxane.	As labeled	Glass	25 g	Fair	Screw top	Union Carbide Corp.
OP1-40	Trioctylphosphine oxide power.	As labeled	Plastic	1 lb.	Poor	Open bag	Cyanamid
OP1-41	Five containers of acculate sodium thiosulfate 1/1 normal for iodometric titrations.	As labeled	Plastic	1 mL	Fair	Screw top	Anachemia Champlain, NY
OP1-42	High vacuum grease silicone lubricant for glass stopcocks tube.	As labeled	Aluminum tube	15 g	Fair	Screw top	Dow Corning
OP1-43	s-Diphenyl carbazone reagent.	As labeled	Glass	25 g	Fair	Screw top	Kodak
OP1-44	Red gage oil .826 specific gravity red liquid.	As labeled	Glass	1L	Fair	Screw top	Unknown
OP1-45	Zinc oxide power.	As labeled	Glass	5 g	Fair	Screw top	J.T. Baker
OP1-46	Zinc oxide power.	As labeled	Poly	5 g	Fair	Screw top	J.T. Baker
OP1-47	Zinc oxide power.	As labeled	Poly	5 g	Fair	Screw top	Mallinckrodt
OP1-48	Zinc sulfate granular.	As labeled	Poly	5 g	Fair	Screw top	Mallinckrodt
OP1-49	Four containers with handwritten label "CuO".	As labeled	Poly	1 g	Fair	Screw top	Lab made reagent[2]
OP1-50	Three containers of cupric hydroxide pure SC11568-5GM.	As labeled	Poly	5 g	Fair	Screw top	Sargent-Welch
OP1-51	15 containers of TERGiTOL 15-S: 3, 5, 7, 9, 12, 15, 2, 3, 4. TMN: 3, 6, 9, 1 XH and XD.	As labeled	Poly	25 mL	Fair	Screw top with spout	Union Carbide Corp.
OP1-52	Pipe thread sealant with Teflon model 4X222.	As labeled	Metal	25 mL	Rusted; poor	Screw top	Dayton
OP1-53	Zinc carbonate powder.	As labeled	Glass	1 lb.	Fair	Cork top	Baker's/J.T. Bakers
OP1-54	Handwritten label "potassium iodide".	As labeled	Glass	1 L	Fair	Screw top	Lab made reagent[2]
OP1-55	Two containers of LIX-63 ion exchange reagent.	As labeled	Poly	1 L	Fair	Screw top	Henkel Chemical
OP1-56	LIX-64 N ion exchange reagent.	As labeled	Poly	1 L	Fair	Screw top	Henkel Chemical

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OP1-67	Two containers of LIX-64 N ion exchange reagent.	As labeled	Poly	1 L	Fair	Screw top	General Mills Chemicals, Inc.
OP1-68	Stannous chloride crystals.	As labeled	Poly	500 g	Fair	Screw top	Fisher Scientific
OP1-69	8-Quinoolinol/8-hydroxyquinoline.	As labeled	Glass	100 g	Fair	Screw top	Fisher Scientific
OP1-70	Devarda's alloy, granular.	As labeled	Poly	500 g	Fair	Screw top	Mallinckrodt
OP1-71	Ferrous sulfate crystal I-146.	As labeled	Glass	500 g	Fair	Screw top	Fisher Scientific
OP1-72	Cuprous oxide powder 1878-1.	As labeled	Glass	500 g	Fair	Screw top	J.T. Baker
OP1-73	Three containers of zinc oxide 299, 699, and 999.	As labeled	Metal	2 lbs.	Rusted; poor	Screw top	The New Jersey Zinc Company, Inc.
OP1-74	Handwritten label "flour". White powder contents.	As labeled	Poly	500 mL	Fair	Screw top	Lab made reagent[2]
OP1-75	Potassium phosphate monobasic P-285.	As labeled	Poly	500 g	Good	Screw top	Fisher Scientific
OP1-76	Potassium chloride, granular.	As labeled	Poly	500 g	Good	Screw top	Mallinckrodt
OP1-77	Flowers of sulfur (sublimed sulfur).	As labeled	Poly	500 g	Good	Screw top	Medi Kay
OP1-78	Copper oxide, 75% minimum.	As labeled	Poly	500 g	Good	Screw top	So. Cal. Chemicals
OP1-79	Handwritten label "potassium Iodide" in Nalgene pill bottle.	As labeled	Poly	100 g	Fair	Screw top	Unknown
OP1-80	Diphenyl carbazone D-86.	As labeled	Glass	5 g	Good	Screw top	Fisher Scientific
OP2-01	Boric Acid shipping addressed to Williams Strategic Metals.	As labeled	Cardboard	5 lbs.	Poor	Open box	Fisher Scientific
OP2-02	Ammonium carbonate lumps.	As labeled	Glass	5 lbs.	Fair	Screw top	Fisher Scientific
OP2-03	Ammonium carbonate.	As labeled	Glass	5 lbs.	Fair	Screw top	Mallinckrodt
OP2-04	Handwritten label "Filter Aid Diatomaceous Earth".	As labeled	Plastic	1 gal	Fair	Open bag	Makita Power Tools
OP2-05	Two containers of ammonium sulfate.	As labeled	Poly	5 lbs.	Fair	Screw top	Mallinckrodt
OP2-06	Two containers of ferric sulfate granular; worn label.	As labeled	Poly	5 lbs.	Fair	Screw top	Mallinckrodt
OP2-07	Potassium sulfate granular; worm label, container appears neon yellow.	As labeled	Poly	1 lb.	Fair	Screw top	Mallinckrodt
OP2-08	Sodium sulfate; unopened.	As labeled	Glass	1 lb.	Good	Screw top	Fisher Scientific
OP2-09	Sodium citrate.	As labeled	Glass	1 lb.	Good	Screw top	Fisher Scientific
OP2-10	Carborundum Powder SC 11290-500GM.	As labeled	Poly	500 g	Good	Screw top	Sargent-Welch
OP2-11	Sodium fluorine powder technical.	As labeled	Poly	2.5 kg	Good	Screw top	Sargent-Welch
OP2-12	Handwritten label" Ammonia Bicarbonate solution in excess ammonia".	As labeled	Poly	250 mL	Good	Screw top	Lab made reagent[2]
OP2-13	Two containers of calcium chloride dihydrate.	As labeled	Poly	1 lb.	Fair	Screw top	Mallinckrodt
OP2-14	Nitron 1077; C20H16N4.	As labeled	Poly	25 g	Good	Screw top	Kodak
OP2-15	Handwritten label partially illegible "Magnesium" legible.	As labeled	Poly	250 mL	Fair	Screw top	Lab made reagent[2]
OP2-16	Germanium dioxide.	As labeled	Glass	1 g	Fair	Screw top	DFG
OP2-17	SUPERLOC 1202 Flocculant.	As labeled	Glass	1 g	Fair	Screw top	Cyanamid
OP2-18	Illegible label on container.	Unknown	Poly	1 gal	Corrosion; poor	Screw top	Unknown
OP2-19	Sodium sulfate handwritten label "Na2SO4".	As labeled	Poly	250 g	Fair	Screw top	Lab made reagent[2]

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OP2-20	Two containers of tributyl phosphate.	As labeled	Metal	5 gal	Rusted; poor	Closed top with bung and handle	Mobil Chemical
OP2-21	Two containers of magnesium cyclohexane butyrate standard for atomic absorption.	As labeled	Glass	5 g	Fair	Screw top	Kodak
OP2-22	Diethyldithiocarbomic acid sodium salt.	As labeled	Poly	100 g	Discoloration; fair	Pop top	Lab made reagent[2]
OP2-23	Clinic Epsom salt (magnesium sulfate U.S.P.).	As labeled	Cardboard	4 lbs.	Discoloration; some water-like damage; fair	Cardboard flap	Simpak Corp.
OP2-24	Drietire anhydrous calcium sulfate drying agent.	As labeled	Glass	5 lbs.	Residue on sides; fair	Screw top	W.A. Hammond Drierite Company
OP2-25	Sodium chloride crystals, technical.	As labeled	Poly	2.5 kg	Dented; fair	Screw top	Sargent-Welch
OP2-26	Thiourea, practical.	As labeled	Glass	3 kg	Fair	Screw top	Kodak
OP2-27	Silica S-150.	As labeled	Glass	3 kg	Fair	Screw top	Fisher Scientific
OP2-28	Iodine I-37.	As labeled	Glass	100 g	Green residue on side; fair	Screw top	Fisher Scientific
OP2-29	Iodine, worn label.	As labeled	Glass	100 g	Residue on sides; broken lid; poor	Screw top	Sargent-Welch
OP2-30	Handwritten label "chemcoal solids N-403".	As labeled	Glass	100 g	Fair	Screw top	Lab made reagent[2]
OP2-31	Titanium powder GEO5-1 TMI 5.	As labeled	Poly	50 g	Fair	Screw top	Hex Industries
OP2-32	Handwritten label "chemcoal E".	As labeled	Glass	100 g	Fair	Screw top	Lab made reagent[2]
OP2-33	Ruthenium and carbon mix.	As labeled	Poly	100 g	Fair	Screw top	Metallgesellschaft
OP2-34	2-ethylhexanoic acid calcium salt standard for atomic absoption.	As labeled	Glass	5 g	Good	Screw top	Kodak
OP2-35	Handwritten label "Triton X-100".	As labeled	Glass	20 mL	Fair	Screw top	Lab made reagent[2]
OP2-36	Handwritten label "Fe crude".	As labeled	Glass	100 g	Good	Screw top	Lab made reagent[2]
OP2-37	Handwritten label "Fe crude".	Nails	Glass	100 g	Good	Screw top	Unknown
OP2-38	Sodium bromide.	As labeled	Poly	500 g	Poor	Screw top	Mallinckrodt
OP2-39	Diethyldithiocarbomic acid sodium salt.	As labeled	Glass	500 g	Fair	Screw top	Fisher Scientific
OP2-40	Handwritten label "6N AlCl3".	As labeled	Poly	1 L	Fair	Screw top	Lab made reagent[2]
OP2-41	Two containers with handwritten labels "Na2BO4 tech".	As labeled	Poly	1 L	Fair	Screw top	Lab made reagent[2]
OP2-42	High vacuum grease silicone lubricant for glass stopcocks tube.	As labeled	Aluminum tube	150 g	Poor	Screw top	Dow Corning
OP2-43	Handwritten label "Zinc sulfate monohydrate 5 drum grab sample 8/31/1987 WR metals industries".	As labeled	Poly	500 g	Fair	Screw top	Lab made reagent[2]
OP2-44	Handwritten label "zirconium". Metal pieces.	As labeled	Glass	60mL	Good	Screw top	Unknown
OP2-45	Molybdenum trioxide.	As labeled	Glass	100 g	Good	Screw top	Mallinckrodt
OP2-46	Ferric oxide powder 2024-01.	As labeled	Glass	500 g	Good	Screw top	J.T. Baker
OP2-47	Handwritten label "titanium metal piece".	As labeled	Glass	250 mL	Good	Screw top	Unknown
OP2-48	Cupris sulfate 5-hydrate, fine crystal.	As labeled	Glass	500 g	Good	Screw top	J.T. Baker
OP2-49	Antimony potassium tartrate, trihydrate powder, U.S.P.	As labeled	Glass	500 g	Good	Screw top	J.T. Baker
OP2-50	Copper metal powder, 150 mesh (electrolytic) SC11544-001LB.	As labeled	Poly	500 g	Fair	Screw top	Sargent-Welch

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OP2-51	Dibutyl butyl phosphate March 17, 1981.	As labeled	Glass	1 L	Good	Screw top	Mobil Chemical
OP2-52	Ferric chloride I-88.	As labeled	Glass	500 g	Fair	Screw top	Fisher Scientific
OP2-53	Calcium hydroxide C-97.	As labeled	Cardboard	3 kg	Poor	Cardboard flap	Fisher Scientific
OP2-54	Two containers of zinc granular 10 mesh 4240-1.	As labeled	Poly	500 g	Fair	Screw top	J.T. Baker
OP2-55	Glycerol.	As labeled	Glass	500 mL	Fair	Screw top	Sargent-Welch
OP2-56	Handwritten label "antifreeze" yellow-orange translucent liquid.	As labeled	Glass	4L	Fair	Screw top	Lab made reagent[2]
OP2-57	Handwritten label "polyacrylamide". Biphasic. Yellow-orange translucent liquid top layer, white solid bottom layer.	As labeled	Glass	250 mL	Fair	Screw top	Lab made reagent[2]
OP2-58	Sodium pyrophosphate crystal.	As labeled	Poly	500 g	Fair	Screw top	Fisher Scientific
OP2-59	Two containers of ammonium chloride SC10583-001.	As labeled	Poly	1 lb.	Fair	Screw top	Sargent-Welch
OP2-60	Handwritten label "stainless steel shavings".	As labeled	Poly	250 mL	Fair	Screw top	Unknown
OP2-61	Handwritten label "pump oil". Dark viscous liquid.	As labeled	Poly	1 L	Fair	Screw top	Unknown
OP2-62	Ammonium bicarbonate.	As labeled	Poly	1 lb.	Fair	Screw top	Mallinckrodt
OP2-63	Mfg. label illegible due to degradation. Blue liquid contents.	As labeled	Poly	1 gal	Poor	Screw top	Cyanamid
OP2-64	Duo seal pump oil 1407K-15.	As labeled	Poly	1 gal	Rusty lid; Poor	Screw top	Sargent-Welch
OP2-65	Handwritten label "superfloc". Biphasic. Yellow-orange translucent liquid top layer, white solid bottom layer.	As labeled	Glass	250 mL	Fair	Screw top	Lab made reagent[2]
OP2-66	Handwritten label "Na2CO3 tech".	As labeled	Poly	1 L	Fair	Screw top	Lab made reagent[2]
OP2-67	Iron metal shavings.	As labeled	Poly	1 lb.	Fair	Screw top	Sargent-Welch
OP2-68	Handwritten label "Na2CO3 10% 9/15/1981" liquid solution.	As labeled	Poly	1 L	Fair	Screw top	Lab made reagent[2]
OP2-69	Handwritten label "6N CaCl2 2H2O" liquid solution.	As labeled	Poly	1 L	Fair	Screw top	Lab made reagent[2]
OP2-70	Handwritten label "zirconium rod".	As labeled	Poly	2 L	Fair	Screw top	Unknown
OP3-01	Nine containers of potassium iodide U.S.P 18 mesh.	As labeled	Cardboard	25 lbs.	Fair	Cardboard lid	Deepwater
OP4-01	Cyanex 272.	As labeled	Glass	250 mL	Fair	Screw top	Cyanamid
OP4-02	Damaged label LIX 26 copper extractant MX 4756. Oxime and amine extractants.	As labeled	Poly	500 mL	Contents on side of container; poor	Screw top	Unknown
OP4-03	Label has foreign script noting contents are SRAFION NMRR water conditioning. Commonly used for Hg(II) removal in wastewater.	As labeled	Poly	1 kg	Fair	Screw top	Ayalon
OP4-04	Handwritten label "floc 208".	As labeled	Poly	1 L	Fair	Screw top	Lab made reagent[2]
OP4-05	11 pieces o green rubber 3663-0250.	As labeled	Plastic	250 mL	Poor	Open bag	Nalgene
OP4-06	Unknown white powder.	Unknown	Metal w/ fiber lining	1 lb.	Rusted; poor	Tied bag	Unknown

Table 7
Nedlog Property Assessment
Container Inventory

Container ID	Container Comments	Contents	Original Container Type	Container Size	Container Condition	Type Of Closure	Distributor or Manufacturer
OP4-07	Five boxes with handwritten label noting superfloc/misc. Cyanamid products.	As labeled	Cardboard	1 lb.	Degraded; stained; poor	Cardboard flap	Cyanamid
OP4-08	LIX 65N 6A19205. Oxime and amine extractants.	As labeled	Poly	500 mL	Dented; possible crack; poor	Screw top	General Mills Chemicals, Inc.
OP4-09	Special Indicator Solution No. 260.	As labeled	Poly	100 mL	Poor	Screw top with pipette	NALCO Chemicals
OP4-10	LIX 51 β diketone derivative solvent extractant for metals. Oxime and amine extractants.	As labeled	Poly	500 mL	Poor	Screw top	Henkel Chemical
OP4-11	Two containers of H-3 Solution 277.	As labeled	Poly	100 mL	Fair	Screw top with dropper	NALCO Chemicals
OP4-12	Handwritten label "prince agri product VR 10/1981" Dark powder.	As labeled	Whirlpool bag	1 lb.	Fair	Resealable bag	Prince Agri Product
OP4-13	Handwritten label "prince agri product faller TM #2 10/29/1981" Dark powder.	As labeled	Whirlpool bag	1 lb.	Fair	Resealable bag	Prince Agri Product
OP4-14	P indicator solution 222.	As labeled	Poly	500 mL	Fair	Screw top	NALCO Chemicals
OP4-15	Handwritten label "Nalco test reagents PA-1 SO-635" Dark-reddish liquid.	As labeled	Poly	500 mL	Contents on side; Fair	Screw top with dropper	Lab made reagent[2]
OP4-16	Test Reagent Solution No. 0234 TDS-1.	As labeled	Poly	250 mL	Contents on side; Fair	Screw top	NALCO Chemicals
OP4-17	PA-1 SO-635 expired May 1987. Dark reddish liquid.	As labeled	Poly	1 L	Contents on side; Fair	Screw top	NALCO Chemicals
OP4-18	Solution No. SO725 H-2. Orange liquid.	As labeled	Poly	500 mL	Fair	Screw top	NALCO Chemicals
OP4-19	LIX 70 Oxime and amine extractants.	As labeled	Poly	500 mL	Fair	Screw top	Henkel Chemical
OP4-20	Two unmarked bottles with reddish translucent liquid.	Suspected LIX solution	Poly	500 mL	Fair	Screw top	Henkel Chemical
OP4-21	11 containers of various Aero aqueous promoters.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-22	Agent S-4037 promoter.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-23	Aerodri 100 dewatering aid.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-24	Three containers of Aerofloc 550.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-25	Aerosol surface active agent.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-26	Nine containers of various Aerofloat promoter solutions.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-27	20 containers of various superfloc flocculant solutions.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-28	Eight containers of various superfloc flocculant solutions.	As labeled	Glass	100 mL	Fair	Screw top	Cyanamid
OP4-29	Two containers of DP-6 Antipercipitant.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-30	Two containers of Aerofroth frother.	As labeled	Poly	100 mL	Fair	Screw top	Cyanamid
OP4-31	Nine containers of ion analyzer electrode filling solution.	As labeled	Poly	50 mL	Fair-poor; some crystallization	Screw top	Orion

Table 7
Nedlog Property Assessment
Container Inventory

Notes:
[1] Facility Generated Waste is assumed based on area found and handwritten notes on containers
[2] Lab-made reagent is assumed based on handwritten label , visible contents, and Hazcat results

>	Greater than	Mang sulfate	Manganese(II) sulfate
6N CaCl2 2H2O	Calcium chloride dihydrate	Mfg	Manufacturer
6N AlCl3	Aluminum chloride	mL	Milliliter
ASTM	American Society for Testing and Materials	MSDS	Material Safety Data Sheet
C20H16N4	Dihydroporphine	Na2SO4	Sodium sulfate
CCA	Chromated copper arsenate	Na2CO3	Sodium carbonate
CO	Colorado	Na2S2O3	Sodium thiosulfate
CuO	Copper(II) oxide	NaCl	Sodium chloride
Exp	Expiration	NH4CL	Ammonium chloride
Fe	Iron	NON HAZ	Non-hazardous
KCl	Potassium chloride	No.	Number
Kg	Kilogram	N.O.S.	Not otherwise specified
g	Gram	NY	New York
Gal	Gallon	oz	Ounce
Gm	Gram (on handwritten label)	ppm	Parts per million
H2O	Water	RCRA	Resource Conservation and Recovery Act
HCl	Hydrochloric acid	RCRA Empty	A container that meets the relavant standards specified in 40 Code of Federal Regulations 261.7 and is exempt from most of the RCRA hazardous waste management requirements.
Hg	Mercury	SO274	Solution Number 274 (manufacturer generated)
L	Liter	U.S.P.	United States Pharmacopeia
lb	pound	w/	With
L.O.C.	liquid organic cleaner	ZaSO4	Zinc sulfate

Table 8
Nedlog Property Assessment
Summary of Hazard Categorization Field Screening Results

Sample Information		Characterization Field Tests																	Gemini Results		MultiRae	Clor-n-Oil	Comments
Container ID	Sample Description	Water Present	Water Solubility	Water Reactive	Viscosity[1]	pH	Peroxide (ppm)	Oxidizer	Sulfide	Cyanide	Iodine Cyanide	Beilstein	Flammability/ Combustibility [2]	Thermal Test	Char	Chromium	Copper	Arsenic	Raman	FTIR	VOC	ppm	
WC-B1	Translucent green, aqueous	Y	Soluble when mixed	N	3	0	Y	Y	--	N	No change	White flame turned to neon green	Did not ignite directly or with wick	No ignitable vapors, vapors are acidic	Turned deep blue, melted into solid gel	Y	Y	Y	No Match	Did not run due to pH	--	--	Suspected strong oxidizer - strip turn dark purple then bleached.
Transformers	Oil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 50	Clor-n-oil purple indicating little or no PCBs present
WC-04	White powder solids [3]	N	Partially soluble	N	NA	11	N	N	N	N	No change	--	--	--	--	--	--	--	No Match	Potassium thiosulfate hydrate (65%) sodium carbonate monohydrate (6%)	--	--	Exothermic reaction with sulfuric & hydrochloric acids, turns yellow, reacts with water on pH strip but did not react in test tube
WC-07	Clear, aqueous	N	Emulsion	N	5	6	N	N	N	N	Yellow	--	Wick holds flame, sample does not ignite directly	Ignitable vapors, black webbed smoke	Turned black	--	--	--	Polyethylene glycol	Triton	Y	--	Flashpoint >140 °F
WC-08	Clear, aqueous	N	Emulsion	N	3	5	N	N	N	N	Yellow/ orange	No color change, white smoke	Wick holds flame, sample does not ignite directly	Ignitable vapors, black webbed smoke once boiling	Turned black	--	--	--	Poly Sorbate	Polyethylene glycol monoalker ether	N	--	Flashpoint >140 °F
WC-09	Nearly solid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-11	Fine Finishes container labeled methanol	Y	Y	N	1	4	10	N	N	N	--	--	Wick holds flams and sample will ignite with low, clean burn	Immediately pops with light heat applied	--	--	--	--	Methanol	--	Y	--	Flashpoint <140 °F
WC-12	Paint Product	N	--	--	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-16	Translucent brownish-yellow, aqueous	N	Sinks	N	3	5	N	N	--	--	No change	Orange sparks, white smoke	Did not ignite directly or with wick	Ignitable vapors, black webbed smoke	--	--	--	--	No Match	No Match	--	--	Flashpoint >140 °F
WC-17	Paint Product	Y	--	--	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-18	Paint Product	Y	--	--	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-19	Foundation Coating	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-20	White sand [3]	N	N	N	NA	6	N	N	N	N	No change	--	Did not ignite directly or with wick	--	--	--	--	--	--	--	--	--	Suspected sand for concrete
WC-22	Polymer additive	Y	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-24	Paint Product	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-26	Laboratory acid waste	Y	Y	N	2	2	50	Y	N	N	--	Orange flames	Did not ignite directly or with wick	No ignitable vapors, violently pops and smokes	--	--	--	--	Ammonium dichromate	--	--	--	Oxidizer strip turned black then dried yellow, stains yellow on sulfide paper and test may be inconclusive
WC-27	Reddish brown, oil	--	N	N	4	--	--	--	--	--	--	--	--	Ignitable vapors, black webbed smoke	--	--	--	--	No Match	Power steering fluid	N	--	--
WC-28	Transparent deep yellow, aqueous	N	Soluble when mixed, bubbles present	N	2	0	N	N	N	N	No change	Caked	Did not ignite directly or with wick	No ignitable vapors, bubbles	--	--	--	--	--	--	--	--	--
WC-29	Reddish orange, aqueous	N	Floats	N	1	4	N	N	N	N	Deep red	White flames	Wick holds flame, sample does not ignite directly	Ignitable vapors, black webbed smoke	Turned black	--	--	--	No Match	Bromo tetradecane	--	--	Flashpoint >140 °F
WC-30	Green, aqueous	Y	Y	N	1	0	--	--	--	--	No change	Green and white flames	Did not ignite directly or with wick	No ignitable vapors, no smoke	--	--	--	--	--	--	--	--	--
WC-31	Clear, aqueous	N	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	trichloroethane/ 1,4 dioxane	--	Y	--	--
WC-32	Yellow, aqueous	N	--	--	--	12	--	N	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-33	Clear, aqueous	N	--	--	--	12	--	N	--	--	--	--	--	--	--	--	--	--	--	--	Y	--	--
WC-34	Cleaning Agent Drum	Y	Y	N	1	11	N	N	N	N	No change	Caked	Did not ignite directly or with wick	No ignitable vapors, bubbles	--	--	--	--	No Match	Water [4]	N	--	Peroxide test ~ 2ppm when mixed with acids
OP4-06	White powder solids [3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	No Match	No Match	--	--	Same as WC-04
OP1-34	Black powder solids [3]	N	Y	N	NA	0	25	Y	N	N	--	--	Did not ignite, Chars	--	--	--	--	--	No Match	No Match	--	--	--

NOTES:

[1] Viscosity was measured on the HazCat scale of 1 to 6, with 1 being as viscous as methanol, and 6 being as viscous as glycerin
[2] Flammability and combustibility was performed with a clean reagent wick covered with the sample, as well as positioned in a pool of the sample to measure flashpoint
[3] Hazard categorization tests were performed on solids by wetting test strips and placing them on the solid material.
[4] May have interference on the FTIR due to high water content
-- No data
~ Approximately
> Greater than
< Less than
% Percent
°F Degrees Fahrenheit
FTIR Fourier-transform infrared spectroscopy
ppm parts per million
N No detection
VOC Volatile organic compound
WC Waste container
Y Positive Detection
-- Test not performed

ENCLOSURE 3. PHOTOGRAPHIC LOG

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/23/2023 Not Available
Photographer:	Foster_Lauren
Latitude:	41.263504
Longitude:	-105.603093
Photo Direction:	WNW
Category:	
Photo Description: View of sample location NH-AA-02 facing west from along eastern property boundary. Building B-2 in background.	
Photo Name: Photos-20230523-162808.jpg	

Date/Time Taken:	5/23/2023 Not Available
Photographer:	Foster_Lauren
Latitude:	41.265332
Longitude:	-105.602957
Photo Direction:	WSW
Category:	
Photo Description: View of sample location NH-AA-01 facing west-southwest with laboratory-admin building (B-4) in background.	
Photo Name: Photos-20230523-163934.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/25/2023 Not Available
Photographer:	Foster_Lauren
Latitude:	41.26339
Longitude:	-105.60325
Photo Direction:	NNW
Category:	
Photo Description: Mercury vapor sample location in building B-5.	
Photo Name: Photos-20230525-170132.jpg	

Date/Time Taken:	5/22/2023 3:55:00 PM
Photographer:	Foster_Lauren
Latitude:	41.26456
Longitude:	-105.603298
Photo Direction:	SE
Category:	
Photo Description: Close up view of air sampling location NH-IA-B1A.	
Photo Name: Photos-20230522-215545.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/23/2023 10:38:00 AM
Photographer:	Foster_Lauren
Latitude:	41.265288
Longitude:	-105.603056
Photo Direction:	NNE
Category:	
Photo Description: View of sample location NH-AA-01 facing north from along northern property boundary.	
Photo Name: Photos-20230523-163851.jpg	

Date/Time Taken:	5/24/2023 Not Available
Photographer:	Foster_Lauren
Latitude:	41.263415
Longitude:	-105.603243
Photo Direction:	S
Category:	Assessment
Photo Description: Mercury vapor monitoring in building B-5 on west side of building from north entrance.	
Photo Name: Photos-20230524-151057.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

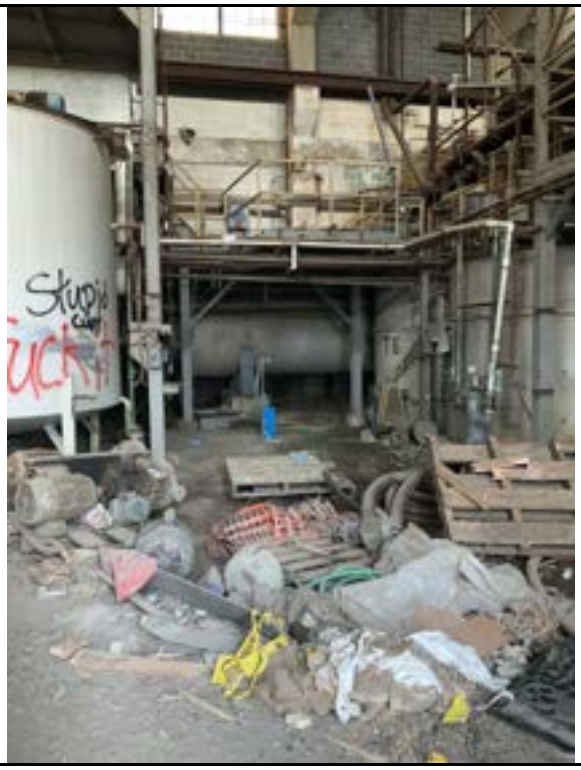
Date/Time Taken:	5/24/2023 Not Available
Photographer:	Foster_Lauren
Latitude:	41.264428
Longitude:	-105.603963
Photo Direction:	WNW
Category:	Assessment
Photo Description: Mercury vapor monitoring location in central portion of building B-1.	
Photo Name: Photos-20230524-144818.jpg	

Date/Time Taken:	5/23/2023 10:25:00 AM
Photographer:	Foster_Lauren
Latitude:	41.263618
Longitude:	-105.603129
Photo Direction:	S
Category:	Assessment
Photo Description: View from north of station NH-AA-02, facing south. Building B-5 visible on west side of photo.	
Photo Name: Photos-20230523-162542.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/23/2023 Not Available
Photographer:	Foster_Lauren
Latitude:	41.264547
Longitude:	-105.60332
Photo Direction:	S
Category:	Removal
Photo Description: Overview of air sampling location NH-IA-B1A.	
Photo Name: Photos-20230522-215705.jpg	



Date/Time Taken:	5/22/2023 Not Available
Photographer:	McAleese_Maura
Latitude:	41.264465
Longitude:	-105.603963
Photo Direction:	NW
Category:	Removal
Photo Description: Overview of Jerome mercury vapor analyzer setup in southern section of building B-1.	
Photo Name: Photos-20230522-223335.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

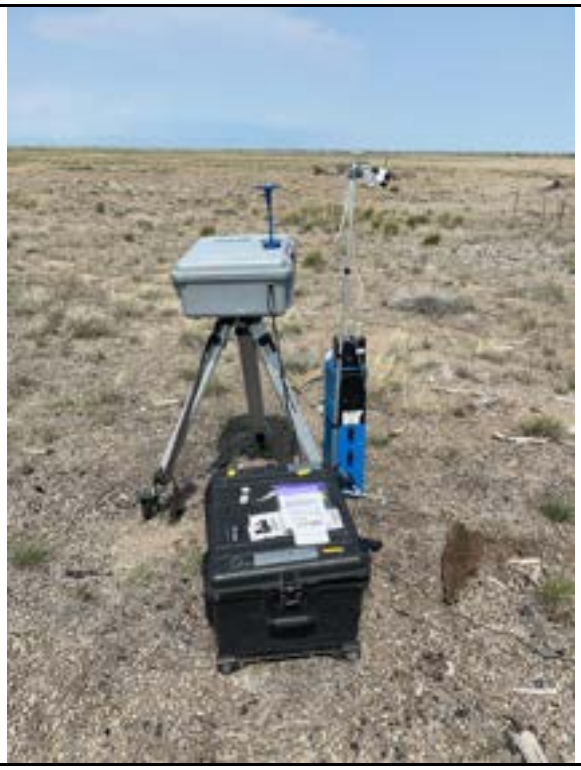
Date/Time Taken:	5/23/2023 Not Available
Photographer:	McAleese_Maura
Latitude:	41.263763
Longitude:	-105.603928
Photo Direction:	WSW
Category:	Removal
Photo Description: Overview of monitoring location, building B-1.	
Photo Name: Photos-20230522-231230.jpg	

Date/Time Taken:	5/23/2023 10:46:00 AM
Photographer:	Broome_Chandler
Latitude:	41.261808
Longitude:	-105.605555
Photo Direction:	SW
Category:	Removal
Photo Description: View of sample location NH-AA-03 lon south border of property facing southwest.	
Photo Name: Photos-20230523-164624.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/23/2023 11:06:00 AM
Photographer:	Broome_Chandler
Latitude:	41.262977
Longitude:	-105.60762
Photo Direction:	WNW
Category:	Removal
Photo Description: View of sample location NH-AA-04 in far southwest corner of property facing west-northwest.	
Photo Name: Photos-20230523-170626.jpg	



Date/Time Taken:	5/23/2023 11:31:00 AM
Photographer:	Foster_Lauren
Latitude:	41.264411
Longitude:	-105.603811
Photo Direction:	NW
Category:	Removal
Photo Description: Sample monitoring set up.	
Photo Name: Photos-20230523-173102.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	8/4/2023 2:51:35 PM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: Toxicity characteristic leaching procedure (TCLP) sample, building B-1, sample location 1.	
Photo Name: Photos-20230804-145133.jpg	

Date/Time Taken:	5/23/2023 2:54:00 PM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: TCLP sample, building B-1, sample location 2.	
Photo Name: Photos-20230804-145412.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/23/2023 2:54:00 PM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: TCLP sample, building B-1, sample location 3.	
Photo Name: Photos-20230804-145449.jpg	

Date/Time Taken:	5/23/2023 2:55:00 PM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: TCLP sample, building B-1, sample location 4.	
Photo Name: Photos-20230804-145531.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 12:28:00 PM
Photographer:	Brennan_John
Latitude:	41.264286
Longitude:	-105.604714
Photo Direction:	NNE
Category:	Removal
Photo Description: (Sample EB1-5) Laboratory results indicate the material contains 20 percent chrysotile asbestos.	
Photo Name: IMG_4467.JPG	

Date/Time Taken:	5/24/2023 12:32:00 PM
Photographer:	Brennan_John
Latitude:	41.264186
Longitude:	-105.603347
Photo Direction:	ENE
Category:	Removal
Photo Description: (Sample EB1-6): Laboratory results indicate the material contains 20 percent chrysotile asbestos.	
Photo Name: IMG_4471.JPG	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 12:52:00 PM
Photographer:	Brennan_John
Latitude:	41.263547
Longitude:	-105.603461
Photo Direction:	W
Category:	Removal
Photo Description: (Sample EB2-4): Laboratory results indicate the material contains 20 percent chrysotile asbestos.	
Photo Name: IMG_4487.JPG	

Date/Time Taken:	5/24/2023 1:18:00 PM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: (Sample B2-8): Laboratory results indicate the white pipe wrap material contains 60 percent chrysotile asbestos.	
Photo Name: b2-8.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 12:36:00 PM
Photographer:	Brennan_John
Latitude:	41.264436
Longitude:	-105.603317
Photo Direction:	N
Category:	Removal
Photo Description: (Sample EB1-7): Laboratory results indicate the material contains 20 percent chrysotile asbestos.	
Photo Name: IMG_4474.JPG	

Date/Time Taken:	5/24/2023 2:54:00 PM
Photographer:	Brennan_John
Latitude:	41.26505
Longitude:	-105.603394
Photo Direction:	N
Category:	Removal
Photo Description: (Sample B4-1): Laboratory results indicate the material (gray floor tile and mastic) contains 20 percent chrysotile asbestos and trace chrysotile asbestos, respectively.	
Photo Name: B4-1c-and-1d-_2_.jpeg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 3:41:00 PM
Photographer:	Brennan_John
Latitude:	41.263581
Longitude:	-105.605103
Photo Direction:	NW
Category:	Removal
Photo Description: (Sample Pit-1): Laboratory results indicate the material contains 45 percent chrysotile asbestos.	
Photo Name: Pit-1_Pit-with-shingles.JPG	

Date/Time Taken:	5/24/2023 3:45:00 PM
Photographer:	Brennan_John
Latitude:	41.263919
Longitude:	-105.605147
Photo Direction:	WSW
Category:	Removal
Photo Description: (Sample Pit-3): Laboratory results indicate the material contains 45 percent chrysotile asbestos.	
Photo Name: Pit-3.jpeg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/25/2023 9:32:00 AM
Photographer:	Brennan_John
Latitude:	41.264314
Longitude:	-105.603203
Photo Direction:	E
Category:	Removal
Photo Description: (Sample B2-6): Laboratory results indicate the material contains 75 percent chrysotile asbestos.	
Photo Name: B2-6.JPG	

Date/Time Taken:	5/25/2023 9:48:00 AM
Photographer:	Brennan_John
Latitude:	41.263222
Longitude:	-105.603194
Photo Direction:	E
Category:	Removal
Photo Description: (Sample B5-5): Laboratory results indicate the window glazing material contains 2 percent chrysotile asbestos.	
Photo Name: B5-5.JPG	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/25/2023 11:24:00 AM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: (Sample B4-2): Laboratory results indicate the pipe wrap material contains 80 percent chrysotile asbestos (white pipe wrap) and 2 percent chrysotile asbestos (yellow mastic), respectively.	
Photo Name: b4-2.jpg	

Date/Time Taken:	5/25/2023 3:42:00 PM
Photographer:	Brennan_John
Latitude:	41.264436
Longitude:	-105.604447
Photo Direction:	WSW
Category:	Removal
Photo Description: (Sample B1-7): Laboratory results indicate the pipe wrap material contains 5 percent chrysotile asbestos.	
Photo Name: B1-7.JPG	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/25/2024 11:21:00 AM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: (Sample B4-3): Laboratory results indicate the pipe wrap material contains 80 percent chrysotile asbestos.	
Photo Name: b4-3.jpg	

Date/Time Taken:	12/7/2022 11:43:00 AM
Photographer:	Brennan_John
Latitude:	41.263478
Longitude:	-105.603325
Photo Direction:	S
Category:	Removal
Photo Description: (Sample EB5-2): Laboratory results indicate the tank coating material contains 15 percent chrysotile asbestos and 20 percent crocidolite asbestos.	
Photo Name: EB5-2.JPEG	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 10:35:00 AM
Photographer:	Foster_Lauren
Latitude:	41.264558
Longitude:	-105.604683
Photo Direction:	S
Category:	Assessment
Photo Description: Contents of non-hazardous drum 1.	
Photo Name: Photos-20230526-163520.jpg	

Date/Time Taken:	5/26/2023 10:33:00 AM
Photographer:	Foster_Lauren
Latitude:	41.264546
Longitude:	-105.604774
Photo Direction:	SSW
Category:	Assessment
Photo Description: Contents of non-hazardous drum 2.	
Photo Name: Photos-20230526-163312.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 10:37:00 AM
Photographer:	Foster_Lauren
Latitude:	41.264539
Longitude:	-105.604671
Photo Direction:	E
Category:	Removal
Photo Description: Contents of non-hazardous drum 4.	
Photo Name: Photos-20230526-163756.jpg	

Date/Time Taken:	5/26/2023 10:28:00 AM
Photographer:	Brennan_John
Latitude:	41.264636
Longitude:	-105.604734
Photo Direction:	W
Category:	Assessment
Photo Description: 2-liter (L) Hydrochloric Acid Reagent Bottle with "Acid Dump" handwritten on side.	
Photo Name: Photos-20230526-163007.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 10:32:00 AM
Photographer:	Brennan_John
Latitude:	41.264614
Longitude:	-105.604752
Photo Direction:	WSW
Category:	Assessment
Photo Description: 2-pound metal Folgers Coffee Can with reddish brown oily contents.	
Photo Name: Photos-20230526-163208.jpg	

Date/Time Taken:	5/26/2023 10:36:00 AM
Photographer:	Brennan_John
Latitude:	41.264619
Longitude:	-105.604866
Photo Direction:	WNW
Category:	Assessment
Photo Description: 55-gallon metal drum of super cleaning agent.	
Photo Name: Photos-20230526-163644.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 11:58:00 AM
Photographer:	Reed_David
Latitude:	41.264531
Longitude:	-105.604658
Photo Direction:	E
Category:	Assessment

Photo Description:
Fifteen 200 milliliter (mL) bottles of various TERGITOL reagents.

Photo Name: Photos-20230526-175816.jpg

Date/Time Taken:	5/24/2023 2:56:00 PM
Photographer:	Brennan_John
Latitude:	41.265056
Longitude:	-105.603364
Photo Direction:	W
Category:	Removal

Photo Description:
4-ounce amber glass bottle of Uranyl Nitrate (depleted). Overpacked into paint bucket WC-1.

Photo Name: Photo-May-24-2023_-14-56-05.jpg

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 3:01:00 PM
Photographer:	Brennan_John
Latitude:	41.265019
Longitude:	-105.603456
Photo Direction:	SSE
Category:	Removal
Photo Description: High volatile organic compound readings from metal container WC-11 in Admin-Laboratory building.	
Photo Name: Photo-May-24-2023_-15-01-50.jpg	

Date/Time Taken:	5/26/2023 10:45:00 AM
Photographer:	Foster_Lauren
Latitude:	41.264557
Longitude:	-105.604679
Photo Direction:	E
Category:	Removal
Photo Description: Five 1-pint poly containers of buffer solution pH 7.	
Photo Name: Photos-20230526-164506.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 10:53:00 AM
Photographer:	Foster_Lauren
Latitude:	41.264595
Longitude:	-105.604665
Photo Direction:	E
Category:	Removal
Photo Description: 500-mL glass container with white pellets, hand labeled: zinc sulfate, 19-11, ZnSO4, VWR.	
Photo Name: Photos-20230526-165356.jpg	

Date/Time Taken:	5/26/2023 11:08:00 AM
Photographer:	Reed_David
Latitude:	41.264511
Longitude:	-105.604604
Photo Direction:	SSW
Category:	Removal
Photo Description: 500-mL glass container of CYANEX 272.	
Photo Name: Photos-20230526-170856.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 11:09:00 AM
Photographer:	Reed_David
Latitude:	41.264535
Longitude:	-105.604622
Photo Direction:	SSW
Category:	Removal
Photo Description: 500-mL poly container of CYANEX 923.	
Photo Name: Photos-20230526-170926.jpg	

Date/Time Taken:	5/26/2023 11:17:00 AM
Photographer:	Reed_David
Latitude:	41.264492
Longitude:	-105.604603
Photo Direction:	S
Category:	Removal
Photo Description: 500-mL poly bottle of test solution SO275 H-2.	
Photo Name: Photos-20230526-171717.jpg	

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 12:06:00 PM
Photographer:	Foster_Lauren
Latitude:	41.264557
Longitude:	-105.604676
Photo Direction:	E
Category:	Removal
Photo Description: 1.5-L amber glass container labeled d-Sorbitol.	
Photo Name: Photos-20230526-180657.jpg	

Date/Time Taken:	5/26/2023 12:22:00 PM
Photographer:	Reed_David
Latitude:	41.264502
Longitude:	-105.604595
Photo Direction:	SSW
Category:	Removal
Photo Description: 500-mL bottle labeled copper oxide.	
Photo Name: Photos-20230526-182259.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 10:15:00 AM
Photographer:	Foster_Lauren
Latitude:	41.264902
Longitude:	-105.603078
Photo Direction:	SW
Category:	Assessment
Photo Description: Wyoming Regional Response Team on site to assess peroxide located in metals processing area in building B-1.	
Photo Name: Photos-20230524-161503.jpg	

Date/Time Taken:	5/24/2023 12:24:00 PM
Photographer:	Brennan_John
Latitude:	41.265911
Longitude:	-105.599244
Photo Direction:	WSW
Category:	Removal
Photo Description: Laramie Fire Rescue team preparing a decontamination line for peroxide assessment activities.	
Photo Name: Photo-May-24-2023_-12-24-25.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 12:36:00 PM
Photographer:	Brennan_John
Latitude:	41.264689
Longitude:	-105.603264
Photo Direction:	Not available
Category:	Removal
Photo Description: START and local fire department entering building B-1 to assess peroxide container.	
Photo Name: Photo-May-24-2023_-12-36-44.jpg	

Date/Time Taken:	5/24/2023 12:38:00 PM
Photographer:	Brennan_John
Latitude:	41.30305
Longitude:	-105.583922
Photo Direction:	W
Category:	Removal
Photo Description: START and local fire department inspecting peroxide container.	
Photo Name: Photo-May-24-2023_-12-38-53.jpg	

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/23/2023 4:41:00 PM
Photographer:	Brennan_John
Latitude:	41.264511
Longitude:	-105.603447
Photo Direction:	WNW
Category:	Removal
Photo Description: Side view with hazardous materials identification system rating label of peroxide container.	
Photo Name: Peroxide-container-4.jpg	

Date/Time Taken:	5/23/2023 4:41:00 PM
Photographer:	Brennan_John
Latitude:	41.264533
Longitude:	-105.603408
Photo Direction:	NNE
Category:	Removal
Photo Description: Front view with organic peroxide hazard label.	
Photo Name: Peroxide-container-2.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 12:45:00 PM
Photographer:	Brennan_John
Latitude:	41.266875
Longitude:	-105.600769
Photo Direction:	ENE
Category:	Removal
Photo Description: Laramie fire department team entering decontamination line after peroxide assessment activities.	
Photo Name: Photo-May-24-2023_-12-45-03.jpg	

Date/Time Taken:	5/24/2023 1:31:00 PM
Photographer:	Brennan_John
Latitude:	41.263858
Longitude:	-105.605225
Photo Direction:	W
Category:	Removal
Photo Description: Local fire department staff drilling hole in soil for controlled detonation of peroxide.	
Photo Name: Photo-May-24-2023_-13-31-43.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/25/2023 2:22:00 PM
Photographer:	Brennan_John
Latitude:	41.2639
Longitude:	-105.605072
Photo Direction:	SSW
Category:	Removal
Photo Description: Crater left by controlled detonation of peroxide before it was backfilled.	
Photo Name: Photo-May-25-2023_-14-22-50.jpg	

Date/Time Taken:	5/26/2023 2:30:00 PM
Photographer:	Foster_Lauren
Latitude:	41.264125
Longitude:	-105.604944
Photo Direction:	ESE
Category:	Assessment
Photo Description: Detonation pit filled in following demolition of organic peroxide.	
Photo Name: Photos-20230526-203005.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 2:24:00 PM
Photographer:	Brennan_John
Latitude:	41.265144
Longitude:	-105.603256
Photo Direction:	NW
Category:	Removal
Photo Description: START preparing to make entry for radiation screening.	
Photo Name: Photo-May-24-2023_-14-24-09.jpg	

Date/Time Taken:	5/24/2023 2:27:00 PM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: Lobby of the admin/laboratory building B-4.	
Photo Name: IMG_1222.jpeg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 2:29:00 PM
Photographer:	Brennan_John
Latitude:	Not available
Longitude:	Not available
Photo Direction:	Not available
Category:	Removal
Photo Description: START inspecting contents in office area of admin/laboratory building B-4.	
Photo Name: IMG_1228.jpeg	

Date/Time Taken:	5/24/2023 2:54:00 PM
Photographer:	Brennan_John
Latitude:	41.26505
Longitude:	-105.603394
Photo Direction:	N
Category:	Removal
Photo Description: START screening for radiation in laboratory area admin/laboratory building B-4.	
Photo Name: Photo-May-24-2023_-14-54-20.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/24/2023 3:02:00 PM
Photographer:	Brennan_John
Latitude:	41.265067
Longitude:	-105.603456
Photo Direction:	NNW
Category:	Removal
Photo Description: Basement hallway of admin/laboratory building B-4.	
Photo Name: Photo-May-24-2023_-15-02-40.jpg	

Date/Time Taken:	5/26/2023 2:32:00 PM
Photographer:	Broome_Chandler
Latitude:	41.263577
Longitude:	-105.604668
Photo Direction:	NE
Category:	Assessment
Photo Description: Restricted access to door on south side of building B-2.	
Photo Name: Photos-20230526-203212.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 2:34:00 PM
Photographer:	Broome_Chandler
Latitude:	41.263652
Longitude:	-105.603335
Photo Direction:	N
Category:	Assessment
Photo Description: Restricted access completed by Emergency and Rapid Response Services to east side of building B-2.	
Photo Name: Photos-20230526-203406.jpg	

Date/Time Taken:	5/26/2023 2:41:00 PM
Photographer:	Broome_Chandler
Latitude:	41.263567
Longitude:	-105.603377
Photo Direction:	SSW
Category:	Assessment
Photo Description: Restricted access to shed west of building B-5 with debris and piles of dirt.	
Photo Name: Photos-20230526-204149.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 2:44:00 PM
Photographer:	Broome_Chandler
Latitude:	41.263456
Longitude:	-105.603054
Photo Direction:	SW
Category:	Assessment
Photo Description: Restricted access to building B-5.	
Photo Name: Photos-20230526-204411.jpg	

Date/Time Taken:	5/26/2023 2:46:00 PM
Photographer:	Broome_Chandler
Latitude:	41.264744
Longitude:	-105.603228
Photo Direction:	S
Category:	Assessment
Photo Description: Restricted access to building B-1 arsenic building.	
Photo Name: Photos-20230526-204651.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 2:47:00 PM
Photographer:	Broome_Chandler
Latitude:	41.264664
Longitude:	-105.603553
Photo Direction:	SE
Category:	Assessment
Photo Description: Restricted access to west side of decontamination area of building B-1.	
Photo Name: Photos-20230526-204746.jpg	

Date/Time Taken:	5/26/2023 2:49:00 PM
Photographer:	Broome_Chandler
Latitude:	41.26485
Longitude:	-105.603413
Photo Direction:	N
Category:	Assessment
Photo Description: Restricted access to south side of building B-4.	
Photo Name: Photos-20230526-204937.jpg	

PHOTOGRAPH LOG

Project Name:	Site Location:	Project No.
Nedlog Property Assessment	Laramie, WY 82070	2071-2304-07

Date/Time Taken:	5/26/2023 2:50:00 PM
Photographer:	Broome_Chandler
Latitude:	41.265054
Longitude:	-105.603081
Photo Direction:	SSW
Category:	Assessment
Photo Description: Restricted access to east side of building B-4.	
Photo Name: Photos-20230526-205043.jpg	

ENCLOSURE 4. DATA VALIDATION REPORTS

August 02, 2023

Mr. Valeriy Bizyayev and Ms. Joyel Dhieux
U.S. Environmental Protection Agency, Region 8
Superfund and Emergency Management Division
1595 Wynkoop Street
Denver, CO 80202

Subject: **Data Validation Report**
Nedlog Property Assessment
EPA Contract No.: 68HE0820D0001
Task Order/Technical Direction No.: 2071-2304-07
Document Tracking No. 1409

Dear Mr. Bizyayev and Ms. Dhieux:

Tetra Tech, Inc. (Tetra Tech) is submitting this data validation report for 4 solid samples and 50 air samples (including 14 air blanks) collected at the Nedlog Property Assessment Site. The samples were collected between May 22, 2023 through May 25, 2023. Solid samples were analyzed for metals by ALS Environmental, and air samples were analyzed for metals and fiber concentrations by Aerobiology Laboratory Associates. The final laboratory data package was received on June 15, 2023.

Analytical data were evaluated in general accordance with the EPA Programmatic Quality Assurance Project Plan for EPA Region 8 Superfund and Emergency Management Division Response Section (December 2021) and the EPA *NFG for Inorganic Superfund Methods Data Review* (November 2020).

No rejection of results was required for this data package. The results may be used as qualified based on the findings of this validation effort.

If you have any questions regarding this data validation report, please contact me via the project manager.

Sincerely,

Nichole Boyea

Digitally signed by Nichole Boyea
Date: 2023.08.03 12:09:57 -05'00'

Nichole Boyea
Environmental Scientist

Enclosure
cc: Didi Fung, Tetra Tech Program Manager
Drew Umyn, Tetra Tech Project Manager
Clayton Longest, Tetra Tech Project Document Control Coordinator
TO/TD File

Tetra Tech, Inc.
1560 Broadway, Suite 1400, Denver, CO 80202
Tel 303.312.8800
www.tetratech.com

ATTACHMENT 1

DATA VALIDATION REPORT
ALS ENVIRONMENTALREPORT NO. K2306131

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Site Name	Nedlog Property Assessment		**TO/TD No.**	68HE0820F0071/2071-2304-07
Document Tracking No.	DTN 1409			
Data Reviewer (name and date)	Nichole Boyea July 17, 2023		**Technical Reviewer (name and date)**	Allison O'Neill July 31, 2023
Laboratory Report No.	K2306131		**Laboratory**	ALS Environmental/Kelso, WA
Analyses	Toxicity characteristic leaching procedure (TCLP) metals by EPA SW-846 methods 6020B and 7470A			
Samples and Matrix	Four solid samples			
Collection Date(s)	5/24/2023			
Field Duplicate Pairs	None			
Field QC Blanks	None			

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA Programmatic Quality Assurance Project Plan for U.S. Environmental Protection Agency, Region 8, Superfund & Emergency Management Division, Version 1 (December 2021) and the EPA *NFGs for Inorganic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection of data was required for this data package. The results may be used as qualified based on the findings of this validation effort.

Data completeness:

Within Criteria	Exceedance/Notes
Y	

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
N	The method blank detected arsenic, barium, chromium, and lead at concentrations above the method detection limit (MDL) and below the reporting limit (RL). • All barium and lead results and the chromium results in samples NH-WR-B1A1-C3-20230523 and NH-WR-B1A4-C3-20230523 were detected below the RL; therefore, these results were raised to the RL and qualified as non-detect (flagged U). • All arsenic results were detected at concentrations greater than ten times the RL, and the chromium results in samples NH-WR-B1A2-C3-20230523 and NH-WR-B1A3-C3-20230523 had raw concentrations greater than ten times the raw blank value; therefore, no qualification was required for these results.

Field blanks:

Within Criteria	Exceedance/Notes
NA	

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
NA	

MS/MSDs:

Within Criteria	Exceedance/Notes
N	**NH-WR-B1A1-C3-20230523:** The matrix spike had percent recovery (%R) below the laboratory's acceptance criteria for arsenic and silver. No matrix spike was analyzed for mercury. • The arsenic concentration in parent sample NH-WR-B1A1-C3-20230523 was greater than four times the spiked value, therefore, no qualification was required. • The non-detect silver result in sample NH-WR-B1A1-C3-20230523 was qualified as estimated (flagged UJ).

Laboratory duplicates:

Within Criteria	Exceedance/Notes
N	**NH-WR-B1A1-C3-20230523:** Barium exceeded the relative percent difference (RPD) criteria in the laboratory duplicate sample. However, the parent sample and duplicate results were detected at concentrations above the MDL and below the RL, and the laboratory indicated that the control limits were not applicable for barium; therefore, no qualification was required. No laboratory duplicate was analyzed for mercury.

Field duplicates:

Within Criteria	Exceedance/Notes
NA	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	In all four field samples, arsenic was reported at a dilution factor of 5,000 and all other metals were reported at a dilution factor of 10.

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	The laboratory reported results less than the MDL as "ND" in the data package and at the RL in the electronic data deliverable. Validated non-detect results have been reported at the sample reporting limits in the EDD and qualified data table.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

Other [none]:

Within Criteria	Exceedance/Notes
NA	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
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.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

NEDLOG PROPERTY ASSESSMENT SOLID ANALYTICAL RESULTS SUMMARY
ALS ENVIRONMENTAL REPORT NO. K2306131

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	MDL	RL	Units	Val Result	Val Qual
NH-WR-B1A1-C3-20230523	6020B	7440-38-2	Arsenic	10100		0.5	5.0	mg/L	10100	
NH-WR-B1A1-C3-20230523	6020B	7440-39-3	Barium	0.03	J	0.0002	0.10	mg/L	0.10	U
NH-WR-B1A1-C3-20230523	6020B	7440-43-9	Cadmium	0.00073		0.00008	0.00040	mg/L	0.00073	
NH-WR-B1A1-C3-20230523	6020B	7440-47-3	Chromium	0.05	J	0.0003	0.10	mg/L	0.10	U
NH-WR-B1A1-C3-20230523	6020B	7439-92-1	Lead	0.0009	J	0.00006	0.10	mg/L	0.10	U
NH-WR-B1A1-C3-20230523	7470A	7439-97-6	Mercury	0.0003	J	0.0001	0.0010	mg/L	0.0003	J
NH-WR-B1A1-C3-20230523	6020B	7782-49-2	Selenium	0.018	J	0.002	0.020	mg/L	0.018	J
NH-WR-B1A1-C3-20230523	6020B	7440-22-4	Silver	0.0004	U	0.00009	0.00040	mg/L	0.00040	UJ
NH-WR-B1A2-C3-20230523	6020B	7440-38-2	Arsenic	5720		0.5	5.0	mg/L	5720	
NH-WR-B1A2-C3-20230523	6020B	7440-39-3	Barium	0.02	J	0.0002	0.10	mg/L	0.10	U
NH-WR-B1A2-C3-20230523	6020B	7440-43-9	Cadmium	0.00480		0.00008	0.00040	mg/L	0.00480	
NH-WR-B1A2-C3-20230523	6020B	7440-47-3	Chromium	0.37		0.0003	0.10	mg/L	0.37	
NH-WR-B1A2-C3-20230523	6020B	7439-92-1	Lead	0.0005	J	0.00006	0.10	mg/L	0.10	U
NH-WR-B1A2-C3-20230523	7470A	7439-97-6	Mercury	0.0023		0.0001	0.0010	mg/L	0.0023	
NH-WR-B1A2-C3-20230523	6020B	7782-49-2	Selenium	0.123		0.002	0.020	mg/L	0.123	
NH-WR-B1A2-C3-20230523	6020B	7440-22-4	Silver	0.0004	U	0.00009	0.00040	mg/L	0.00040	U
NH-WR-B1A3-C3-20230523	6020B	7440-38-2	Arsenic	880		0.5	5.0	mg/L	880	
NH-WR-B1A3-C3-20230523	6020B	7440-39-3	Barium	0.04	J	0.0002	0.10	mg/L	0.10	U
NH-WR-B1A3-C3-20230523	6020B	7440-43-9	Cadmium	0.0416		0.00008	0.00040	mg/L	0.0416	
NH-WR-B1A3-C3-20230523	6020B	7440-47-3	Chromium	0.38		0.0003	0.10	mg/L	0.38	
NH-WR-B1A3-C3-20230523	6020B	7439-92-1	Lead	0.008	J	0.00006	0.10	mg/L	0.10	U
NH-WR-B1A3-C3-20230523	7470A	7439-97-6	Mercury	0.0033		0.0001	0.0010	mg/L	0.0033	
NH-WR-B1A3-C3-20230523	6020B	7782-49-2	Selenium	0.505		0.002	0.020	mg/L	0.505	
NH-WR-B1A3-C3-20230523	6020B	7440-22-4	Silver	0.0004	U	0.00009	0.00040	mg/L	0.00040	U
NH-WR-B1A4-C3-20230523	6020B	7440-38-2	Arsenic	10800		0.5	5.0	mg/L	10800	
NH-WR-B1A4-C3-20230523	6020B	7440-39-3	Barium	0.08	J	0.0002	0.10	mg/L	0.10	U
NH-WR-B1A4-C3-20230523	6020B	7440-43-9	Cadmium	0.0649		0.00008	0.00040	mg/L	0.0649	
NH-WR-B1A4-C3-20230523	6020B	7440-47-3	Chromium	0.02	J	0.0003	0.10	mg/L	0.10	U
NH-WR-B1A4-C3-20230523	6020B	7439-92-1	Lead	0.002	J	0.00006	0.10	mg/L	0.10	U
NH-WR-B1A4-C3-20230523	7470A	7439-97-6	Mercury	0.0008	J	0.0001	0.0010	mg/L	0.0008	J
NH-WR-B1A4-C3-20230523	6020B	7782-49-2	Selenium	0.726		0.002	0.020	mg/L	0.726	
NH-WR-B1A4-C3-20230523	6020B	7440-22-4	Silver	0.0004	U	0.00009	0.00040	mg/L	0.00040	U

ATTACHMENT 2

DATA VALIDATION REPORT
AEROBIOLOGY LABORATORY ASSOCIATES REPORT NOS. 23019910, 23020119, 23020319, 23020838A, C314485, C14501, C314509

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2034-07

Reviewed by: Nichole Boyea

Laboratory: Aerobiology Laboratory Associates, Incorporated, Golden, Co
Report No: 23020319

√[2,3] 1. Chain of custody (CoC) documentation is present.

√[1,2,3] 2. Sample receipt condition information is present and acceptable.

√ 3. Laboratory conducting the analysis is identified.

√ 4. All samples submitted to the laboratory are accounted for.

√ 5. Requested analytical methods were performed.

√ 6. Analysis dates are provided.

√ 7. Analyte results are provided.

NA 8. Result qualifiers and definitions are provided.

√ 9. Result units are reported.

√ 10. Requested reporting limits are present.

NA 11. Method detection limits are present.

√[2,4] 12. Sample collection date and time are present.

Discrepancies:

1. It was noted on the CoC by the laboratory that several samples were labelled differently on the sample containers than they were identified on the CoC. The laboratory reported the samples as they were identified on the CoC.

Notes:

2. The CoC and results summary were provided by the laboratory in two separate documents. Both documents were evaluated as part of this verification effort.

3. The laboratory stated that samples noted as overloaded, damaged, received in poor condition, or otherwise unsatisfactory cannot be analyzed. As there were no samples identified as such and all samples on the CoC were reported, it is assumed the samples met method criteria for analysis.

4. Only the CoC listed both the sample collection date and time; the PDF report only listed the sample collection date.

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2034-07

Reviewed by: Nichole Boyea

Laboratory: Aerobiology Laboratory Associates, Incorporated, Golden, Co

Report No: 23019910

√[1] 1. Chain of custody (CoC) documentation is present.

√[1,2] 2. Sample receipt condition information is present and acceptable.

√ 3. Laboratory conducting the analysis is identified.

√ 4. All samples submitted to the laboratory are accounted for.

√ 5. Requested analytical methods were performed.

√ 6. Analysis dates are provided.

√ 7. Analyte results are provided.

NA 8. Result qualifiers and definitions are provided.

√ 9. Result units are reported.

√ 10. Requested reporting limits are present.

NA 11. Method detection limits are present.

√[1,3] 12. Sample collection date and time are present.

Discrepancies:

None

Notes:

1. The CoC and results summary were provided by the laboratory in two separate documents. Both documents were evaluated as part of this verification effort.

2. The laboratory stated that samples noted as overloaded, damaged, received in poor condition, or otherwise unsatisfactory cannot be analyzed. As there were no samples identified as such and all samples on the CoC were reported, it is assumed the samples met method criteria for analysis.

3. Only the CoC listed both the sample collection date and time; the PDF report only listed the sample collection date.

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2034-07

Reviewed by: Nichole Boyea

Laboratory: Aerobiology Laboratory Associates, Incorporated, Golden, Co
Report No: 23020119

√[1]	1.	Chain of custody (CoC) documentation is present.
√[1,2]	2.	Sample receipt condition information is present and acceptable.
√	3.	Laboratory conducting the analysis is identified.
√	4.	All samples submitted to the laboratory are accounted for.
√	5.	Requested analytical methods were performed.
√	6.	Analysis dates are provided.
√	7.	Analyte results are provided.
NA	8.	Result qualifiers and definitions are provided.
√	9.	Result units are reported.
√	10.	Requested reporting limits are present.
NA	11.	Method detection limits are present.
√[1,3]	12.	Sample collection date and time are present.

Discrepancies:

None

Notes:

1. The CoC and results summary were provided by the laboratory in two separate documents. Both documents were evaluated as part of this verification effort.

2. The laboratory stated that samples noted as overloaded, damaged, received in poor condition, or otherwise unsatisfactory cannot be analyzed. As there were no samples identified as such and all samples on the CoC were reported, it is assumed the samples met method criteria for analysis.

3. Only the CoC listed both the sample collection date and time; the PDF report only listed the sample collection date.

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2034-07

Reviewed by: Nichole Boyea

Laboratory: Aerobiology Laboratory Associates, Incorporated, Golden, Co
Report No: 23020838a

√[2]	1.	Chain of custody (CoC) documentation is present.
√[1,2,3]	2.	Sample receipt condition information is present and acceptable.
√	3.	Laboratory conducting the analysis is identified.
√	4.	All samples submitted to the laboratory are accounted for.
√	5.	Requested analytical methods were performed.
√	6.	Analysis dates are provided.
√[4]	7.	Analyte results are provided.
NA	8.	Result qualifiers and definitions are provided.
√	9.	Result units are reported.
√	10.	Requested reporting limits are present.
NA	11.	Method detection limits are present.
√[2,5]	12.	Sample collection date and time are present.

Discrepancies:

1. It was noted on the CoC by the laboratory that a sample identified as NH-AA-0**1**-202230525-AH on the CoC was labelled as NH-AA-0**2**-20230525-AH on the sample container. The project manager confirmed the correct sample ID was NH-AA-0**2**-20230525-AH and a revised report was provided.

Notes:

2. The CoC and results summary were provided by the laboratory in two separate documents. Both documents were evaluated as part of this verification effort.

3. The laboratory stated that samples noted as overloaded, damaged, received in poor condition, or otherwise unsatisfactory cannot be analyzed. As there were no samples identified as such and all samples on the CoC were reported, it is assumed the samples met method criteria for analysis.

4. The laboratory noted that sample NH-PA-01-20230525-AB contained 35-40% debris.

5. Only the CoC listed both the sample collection date and time; the PDF report only listed the sample collection date.

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2034-07

Reviewed by: Nichole Boyea

Laboratory: Aerobiology Laboratory Associates, Incorporated, Boston, MA
Report No: C314485

√[1] 1. Chain of custody (CoC) documentation is present.

√[2] 2. Sample receipt condition information is present and acceptable.

√ 3. Laboratory conducting the analysis is identified.

√ 4. All samples submitted to the laboratory are accounted for.

√ 5. Requested analytical methods were performed.

√ 6. Analysis dates are provided.

√ 7. Analyte results are provided.

√ 8. Result qualifiers and definitions are provided.

√ 9. Result units are reported.

√ 10. Requested reporting limits are present.

NA 11. Method detection limits are present.

√[3] 12. Sample collection date and time are present.

Discrepancies:

1. The CoC lists samples NH-LB-20230522-HM and NH-IA-B1A-20230522-HM but the laboratory report mislabeled the samples as NH-LB20230522-HM and NH-IA-B1A-**01**-20230522-HM. The report was revised to reflect the correct sample IDs.

Notes:

2. The laboratory stated that all samples were received in acceptable condition unless otherwise noted. There were no additional details; therefore, it is assumed the samples met method criteria for analysis.

3. Only the CoC listed both the sample collection date and time; the PDF report only listed the sample collection date.

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2034-07

Reviewed by: Nichole Boyea

Laboratory: Aerobiology Laboratory Associates, Incorporated, Boston, MA
Report No: C314501

√ 1. Chain of custody (CoC) documentation is present.

√[1] 2. Sample receipt condition information is present and acceptable.

√ 3. Laboratory conducting the analysis is identified.

√ 4. All samples submitted to the laboratory are accounted for.

√ 5. Requested analytical methods were performed.

√ 6. Analysis dates are provided.

√ 7. Analyte results are provided.

√ 8. Result qualifiers and definitions are provided.

√ 9. Result units are reported.

√ 10. Requested reporting limits are present.

NA 11. Method detection limits are present.

√[2] 12. Sample collection date and time are present.

Discrepancies:

None

Notes:

1. The laboratory stated that all samples were received in acceptable condition unless otherwise noted. There were no additional details; therefore, it is assumed the samples met method criteria for analysis.

2. Only the CoC listed both the sample collection date and time; the PDF report only listed the sample collection date.

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2034-07

Reviewed by: Nichole Boyea

Laboratory: Aerobiology Laboratory Associates, Incorporated, Boston, MA
Report No: C314509

√[1] 1. Chain of custody (CoC) documentation is present.

√[2] 2. Sample receipt condition information is present and acceptable.

√ 3. Laboratory conducting the analysis is identified.

√ 4. All samples submitted to the laboratory are accounted for.

√ 5. Requested analytical methods were performed.

√ 6. Analysis dates are provided.

√ 7. Analyte results are provided.

√ 8. Result qualifiers and definitions are provided.

√ 9. Result units are reported.

√ 10. Requested reporting limits are present.

NA 11. Method detection limits are present.

√[3] 12. Sample collection date and time are present.

Discrepancies:

1. The CoC lists sample NH-LB-20230524-HM but the laboratory report mislabeled this sample as NH-LB202230524-HM. The report was revised to reflect the correct sample IDs.

Notes:

2. The laboratory stated that all samples were received in acceptable condition unless otherwise noted. There were no additional details; therefore, it is assumed the samples met method criteria for analysis.

3. Only the CoC listed both the sample collection date and time; the PDF report only listed the sample collection date.

August 4, 2023

Mr. Valeriy Bizyayev and Ms. Joyel Dhieux
On-Scene Coordinators
U.S. Environmental Protection Agency, Region 8
Superfund and Emergency Management Division
1595 Wynkoop Street
Denver, CO 80202

Subject: **Data Validation Report**
Nedlog Property Assessment
EPA Contract No.: 68HE0820D0001
Task Order/Technical Direction No.: 68HE0820F0071 / 2071-2304-07
Document Tracking No. 1409d

Dear Mr. Bizyayev and Ms. Dhieux:

Tetra Tech, Inc. (Tetra Tech) is submitting this data validation report for 13 air samples (including 5 air blanks) and 58 building material samples collected at the Nedlog Property Assessment Site. The samples were collected between May 24 through May 30, 2023. Six air samples were analyzed for mercury by ALS Global. The remaining seven air samples were analyzed for metals by Aerobiology Laboratory Associates, Inc. The building material samples were analyzed for asbestos by Aerobiology Laboratory Associates, Inc. and Eurofins EPK Built Environment Testing, LLC. The final laboratory data package was received on June 12, 2023.

Analytical data were evaluated in general accordance with the EPA Programmatic Quality Assurance Project Plan for U.S. Environmental Protection Agency, Region 8, Superfund & Emergency Management Division, Version 1 (December 2021) and the EPA NFGs for Inorganic Superfund Methods Data Review (November 2020).

No rejection or qualification of data was required for this data package. The data can be used as reported by the laboratory.

If you have any questions regarding this data validation report, please contact me via the project manager.

Sincerely,

Kayla Phye Digitally signed by Kayla Phye Date: 2023.08.04 14:10:23 -06'00'

Environmental Chemist

Tetra Tech, Inc.
1560 Broadway, Suite 1400, Denver, CO 80202
Tel 303.312.8800
www.tetratech.com

Enclosure

cc: Didi Fung, Tetra Tech Program Manager
Drew Umyn, Tetra Tech Project Manager
Clayton Longest, Tetra Tech Project Document Control Coordinator
TO/TD File

ATTACHMENT 1

DATA VALIDATION REPORT
ALS GLOBAL REPORT NO. 34-2315188

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Site Name	Nedlog Property Assessment		**TO/TD No.**	68HE0820F0071 / 2071-2304-07
Document Tracking No.	1409d – A			
Data Reviewer (name and date)	Kayla Phye, 07/31/2023		**Technical Reviewer (name and date)**	Bruce Welch, 08/02/2023
Laboratory Report No.	34-2315188		**Laboratory**	ALS Global – Salt Lake City, Utah
Analyses	Mercury by NIOSH 6009 Modified			
Samples and Matrix	Six air samples (including two field blank samples and three lot blank samples)			
Collection Date(s)	05/25/2023			
Field Duplicate Pairs	None			
Field QC Blanks	NH-FB-01-20230525-HG, NH-FB-02-20230525-HG, NH-LB-01-20230525-HG, NH-LB-02-20230525-HG, NH-LB-03-20230525-HG			

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA Programmatic Quality Assurance Project Plan for U.S. Environmental Protection Agency, Region 8, Superfund & Emergency Management Division, Version 1 (December 2021), and the EPA *NFGs for Inorganic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection or qualification of data was required for this data package. The data can be used as reported by the laboratory.

Data completeness:

Within Criteria	Exceedance/Notes
Y	The laboratory misnamed sample NH-IA-B5M-20230525-HG as NH-IA-B**M5**-20230525-HG. The sample ID was manually corrected in the electronic data deliverable (EDD), and hence the qualified data table attachment. A revised laboratory report and EDD were not requested from the laboratory. The laboratory EDD was not formatted correctly per the Scribe specifications. The laboratory EDD was manually formatted into Scribe format.

TETRA TECH

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
Y	

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
N/A	

MS/MSDs:

Within Criteria	Exceedance/Notes
N/A	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
N/A	

Field duplicates:

Within Criteria	Exceedance/Notes
N/A	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
N/A	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
N/A	

MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	Sample results were reported in µg/sample, mg/m^3, and ppm in the laboratory report and the EDD. The non-detect results in units of µg/sample were reported as less than the RL (<0.010 µg/sample) in the laboratory report and the EDD. The field blank and lot blank results in units of mg/m^3 and ppm were reported as not applicable (NA) in the EDD and laboratory report because no air volume was collected. The non-detect results are reported to the RL and qualified as nondetect (flagged U).

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
N/A	

Other [none]:

Within Criteria	Exceedance/Notes
N/A	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
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.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
ALS GLOBAL REPORT NO. 34-2315188

Sample ID	CAS #	Analyte	Lab Result	Lab Qual	Reporting Limit	Units	Val_result	Val_qual
NH-IA-B5M-20230525-HG	7439-97-6	Mercury	0.15		0.010	ug/sample	0.15	
NH-IA-B5M-20230525-HG	7439-97-6	Mercury	0.0024		0.00016	mg/m^3	0.0024	
NH-IA-B5M-20230525-HG	7439-97-6	Mercury	0.00030		0.00002	ppm	0.00030	
NH-FB-01-20230525-HG	7439-97-6	Mercury	<0.010	U	0.010	ug/sample	0.010	U
NH-FB-02-20230525-HG	7439-97-6	Mercury	<0.010	U	0.010	ug/sample	0.010	U
NH-LB-01-20230525-HG	7439-97-6	Mercury	<0.010	U	0.010	ug/sample	0.010	U
NH-LB-02-20230525-HG	7439-97-6	Mercury	<0.010	U	0.010	ug/sample	0.010	U
NH-LB-03-20230525-HG	7439-97-6	Mercury	<0.010	U	0.010	ug/sample	0.010	U

ATTACHMENT 2

DATA VALIDATION REPORT
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NOS. 23020737, 23020955, AND C314539

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2304-07

Reviewed by: Kayla Phye

Laboratory: Aerobiology Laboratory Associates, Inc. – Woburn, Massachusetts

Report No: 23020737

√ 1. Chain of custody (CoC) documentation is present.

X 2. Sample receipt condition information is present and acceptable.

√ 3. Laboratory conducting the analysis is identified.

X 4. All samples submitted to the laboratory are accounted for.

√ 5. Requested analytical methods were performed.

√ 6. Analysis dates are provided.

√ 7. Analyte results are provided.

√ 8. Result qualifiers and definitions are provided.

√ 9. Result units are reported.

√ 10. Requested reporting limits are present.

X 11. Method detection limits are present.

X 12. Sample collection date and time are present.

Discrepancies:

1. The laboratory incorrectly named sample B2-1 as **E**B2-1 in the laboratory report.
1. Sample B4-3 originally had the sample description as thick white pipe wrap on the CoC, but the description was changed to **thin** white pipe wrap in the lab report.
1. For sample EB1-9, the sample material is labelled as white insulation only on the CoC; however, the laboratory also analyzed brown backing as a sub sample.
1. For sample B4-1, the sample material is labelled as white linoleum with mastic on the CoC; however, the laboratory analyzed three additional layers called yellow mastic, gray linoleum tile, and again yellow mastic.
1. For sample B4-2, the sample material is labelled as thick white pipe wrap on the CoC; however, the laboratory analyzed another layer named yellow mastic material in addition to thick white pipe wrap.

1. For sample B5-5, the sample material is labelled as window glazing on the CoC; however, the laboratory analyzed another layer named white joint compound in addition to the window glazing.

Notes:

2. No sample conditions are noted on receipt, except for three missing samples, B1-1, B1-2, and B1-3. There were no additional sample receipt details; therefore, it is assumed the samples met method criteria for analysis.
4. Samples B1-1, B1-2, and B1-3 were not included with the sample shipment; therefore, these samples were not analyzed in this report. However, the samples were located and shipped a day later, and are reported in Report No. 23020955 by the same laboratory.
12. The sample collection dates listed on the CoC were 05/24/23, 05/25/23, and 05/26/23, but the only sample collection date in the laboratory report was 05/24/23. No sample collection times were listed in either the laboratory report or the CoC.

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2304-07

Reviewed by: Kayla Phye

Laboratory: Aerobiology Laboratory Associates, Inc. – Woburn, Massachusetts

Report No: 23020955

√ 1. Chain of custody (CoC) documentation is present.

X 2. Sample receipt condition information is present and acceptable.

√ 3. Laboratory conducting the analysis is identified.

√ 4. All samples submitted to the laboratory are accounted for.

√ 5. Requested analytical methods were performed.

√ 6. Analysis dates are provided.

√ 7. Analyte results are provided.

√ 8. Result qualifiers and definitions are provided.

√ 9. Result units are reported.

√ 10. Requested reporting limits are present.

X 11. Method detection limits are present.

X 12. Sample collection date and time are present.

Discrepancies:

12. The laboratory report misidentified the sample collection date as May 30, 2023. Per the CoC, the samples were collected on May 25, 2023.

Notes:

2. No sample conditions are noted on receipt. There were no additional details; therefore, it is assumed the samples met method criteria for analysis.

12. The sample collection date was listed on both the laboratory report and the CoC. No sample collection times were listed in either the laboratory report or the CoC.

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2304-07

Reviewed by: Kayla Phye

Laboratory: Aerobiology Laboratory Associates, Inc. – Boston, Massachusetts

Report No: C314539

√ 1. Chain of custody (CoC) documentation is present.

√ 2. Sample receipt condition information is present and acceptable.

√ 3. Laboratory conducting the analysis is identified.

√ 4. All samples submitted to the laboratory are accounted for.

√ 5. Requested analytical methods were performed.

√ 6. Analysis dates are provided.

√ 7. Analyte results are provided.

√ 8. Result qualifiers and definitions are provided.

√ 9. Result units are reported.

√ 10. Requested reporting limits are present.

X 11. Method detection limits are present.

√ 12. Sample collection date and time are present.

Discrepancies:

None

Notes:

2. The laboratory stated that all samples were received in acceptable condition unless otherwise noted. There were no additional details; therefore, it is assumed the samples met method criteria for analysis.
4. Sample NH-AA-02-20230525-HM was not analyzed due to the loss of sample during preparation.
7. The project manager (PM) requested that all samples be analyzed and reported for CAM 17 metals; this was not an option at the laboratory analyzing these samples. All samples were analyzed for arsenic, barium, cadmium, chromium, lead, selenium, and silver.

12. The sample collection date was listed on both the laboratory report and the CoC. The sample collection times were listed only on the CoC.

ATTACHMENT 3

DATA VALIDATION REPORT
EUROFINS EPK BUILT ENVIRONMENT TESTING, LLC
REPORT NO. 3278101

Stage 1 Data Verification Checklist

Nedlog Property Assessment

68HE0820F0071 / 2071-2304-07

Reviewed by: Kayla Phye

Laboratory: Eurofins EPK Built Environment Testing, LLC – Burlingame, California

Report No: 3278101

√	1.	Chain of custody (CoC) documentation is present.
√	2.	Sample receipt condition information is present and acceptable.
√	3.	Laboratory conducting the analysis is identified.
√	4.	All samples submitted to the laboratory are accounted for.
√	5.	Requested analytical methods were performed.
X	6.	Analysis dates are provided.
√	7.	Analyte results are provided.
√	8.	Result qualifiers and definitions are provided.
√	9.	Result units are reported.
√	10.	Requested reporting limits are present.
X	11.	Method detection limits are present.
X	12.	Sample collection date and time are present.

Discrepancies:

None

Notes:

2. The laboratory stated that all samples were received in acceptable condition unless otherwise noted. There were no additional details; therefore, it is assumed the samples met method criteria for analysis.
6. No analysis dates are provided in the laboratory report.
12. The sample collection date was listed on both the laboratory report and the CoC. No sample collection times were listed in either the laboratory report or the CoC.

August 18, 2023

Mr. Valeriy Bizyayev and Ms. Joyel Dhieux
On-Scene Coordinator
U.S. Environmental Protection Agency, Region 8
Superfund and Emergency Management Division
1595 Wynkoop Street
Denver, CO 80202

Subject: **Data Validation Report**
Nedlog Property Assessment
EPA Contract No.: 68HE0820D0001
Task Order/Technical Direction No.: 68HE0820F0071 / 2071-2304-07
Document Tracking No. 1409e

Dear Mr. Bizyayev and Ms. Dhieux,

Tetra Tech, Inc. (Tetra Tech) is submitting this data validation report for 27 air samples (including 8 air blanks) collected at the Nedlog Property Assessment Site. The samples were collected on May 22 through May 25, 2023 and were analyzed for metals by Aerobiology Laboratory Associates, Inc. The final laboratory data package was received on June 2, 2023.

Analytical data were evaluated in general accordance with EPA Programmatic Quality Assurance Project Plan for U.S. Environmental Protection Agency, Region 8, Superfund & Emergency Management Division, Version 1 (December 2021), and the EPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020).

No rejection of results was required for this data package. The results may be used as qualified based on the findings of this validation effort.

If you have any questions regarding this data validation report, please contact me via the project manager.

Sincerely,

Environmental Chemist

Enclosure
cc: Didi Fung, Tetra Tech Program Manager
Drew Umyn, Tetra Tech Project Manager
Clayton Longest, Tetra Tech Project Document Control Coordinator
TO/TD File

Tetra Tech, Inc.
1560 Broadway, Suite 1400, Denver, CO 80202
Tel 303.312.8800
www.tetratech.com

ATTACHMENT 1

DATA VALIDATION REPORT
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314485

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Site Name	Nedlog Property Assessment		**TO/TD No.**	68HE0820F0071 / 2071-2304-07
Document Tracking No.	1409e – a			
Data Reviewer (name and date)	Kayla Phye, 08/16/2023		**Technical Reviewer (name and date)**	Ellen McEntee, 08/17/2023
Laboratory Report No.	C314485		**Laboratory**	Aerobiology Laboratory Associates, Inc. – Boston, Massachusetts
Analyses	Metals via modified method NIOSH 7300			
Samples and Matrix	Seven air samples, including one field blank sample and one lot blank sample			
Collection Date(s)	05/22/2023			
Field Duplicate Pairs	None			
Field QC Blanks	NH-FB-20230522-HM and NH-LB-20230522-HM			

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA Programmatic Quality Assurance Project Plan for U.S. Environmental Protection Agency, Region 8, Superfund & Emergency Management Division, Version 1 (December 2021), and the EPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection of results was required for this data package. The results may be used as qualified based on the findings of this validation effort.

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Data completeness:

Within Criteria	Exceedance/Notes
N	The laboratory did not provide an electronic data deliverable (EDD) for this data package. START prepared an EDD from the laboratory data package. The laboratory report did not include method detection limits (MDL). Quality control (QC) sample results were not added to the EDD. The laboratory incorrectly named sample NH-**LB-20**230522-HM as NH-**LB20**230522-HM and sample NH-IA-B1A-20230522-HM as NH-IA-B1A-**01-**20230522-HM. The correct sample IDs were used in the EDD. A revised report was not requested.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
N	The method blank (MB) associated with all samples (MBA05312023) had a detection for chromium above the reporting limit (RL). A blank correction was applied by the laboratory for all chromium results; therefore, sample results were not qualified.

Field blanks:

Within Criteria	Exceedance/Notes
N	The cadmium, chromium, selenium, and silver results for field blank sample NH-FB-20230522-HM were above the RL. The chromium, selenium, and silver results for lot blank sample NH-LB-20230522-HM were above the RL. As noted above, chromium was also detected in the method blank; however, the field blank results were approximately three times higher than the method blank result. The following sample results and analytes were qualified as estimated, with possible high bias (flagged J+): • The chromium, selenium, and silver results for samples NH-AA-01-20230522-HM and NH-IA-B1A-20230522-HM. • The selenium and silver results for samples NH-AA-02-20230522-HM, NH-AA-03-20230522-HM, and NH-AA-04-20230522-HM. All other affected samples and analytes are nondetect and therefore, were not qualified.

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
N/A	

MS/MSDs:

Within Criteria	Exceedance/Notes
N/A	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
N/A	

Field duplicates:

Within Criteria	Exceedance/Notes
N/A	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
N/A	

MDLs/RLs:

Within Criteria	Exceedance/Notes
N	The laboratory report and EDD did not include MDLs. The laboratory reported results to the RL instead of the MDL; therefore, no J flags are present in the laboratory report and EDD to indicate concentrations between the MDL and RL. Nondetect sample results are reported as "<RL" in the laboratory report; nondetect sample results are qualified (flagged U) at the RL in the attached validated data table and validated EDD. In the laboratory report, sample results are reported in units of µg/m^3, while the QC sample results are reported in units of mg/L. In the EDD, sample results are reported in units of µg/m^3; QC sample results are not included in the EDD.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
N/A	

Other [none]:

Within Criteria	Exceedance/Notes
N/A	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
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.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314485

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
NH-AA-01-20230522-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.15	U	0.15	ug/m3	0.15	U
NH-AA-01-20230522-HM	NIOSH 7300 mod	7440-39-3	Barium	0.07	U	0.07	ug/m3	0.07	U
NH-AA-01-20230522-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.04	U	0.04	ug/m3	0.04	U
NH-AA-01-20230522-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.164		0.04	ug/m3	0.164	J+
NH-AA-01-20230522-HM	NIOSH 7300 mod	7439-92-1	Lead	0.15	U	0.15	ug/m3	0.15	U
NH-AA-01-20230522-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.273		0.15	ug/m3	0.273	J+
NH-AA-01-20230522-HM	NIOSH 7300 mod	7440-22-4	Silver	0.133		0.07	ug/m3	0.133	J+
NH-AA-02-20230522-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.16	U	0.16	ug/m3	0.16	U
NH-AA-02-20230522-HM	NIOSH 7300 mod	7440-39-3	Barium	0.08	U	0.08	ug/m3	0.08	U
NH-AA-02-20230522-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.04	U	0.04	ug/m3	0.04	U
NH-AA-02-20230522-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.04	U	0.04	ug/m3	0.04	U
NH-AA-02-20230522-HM	NIOSH 7300 mod	7439-92-1	Lead	0.16	U	0.16	ug/m3	0.16	U
NH-AA-02-20230522-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.258		0.16	ug/m3	0.258	J+
NH-AA-02-20230522-HM	NIOSH 7300 mod	7440-22-4	Silver	0.145		0.08	ug/m3	0.145	J+
NH-AA-03-20230522-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.87	U	0.87	ug/m3	0.87	U
NH-AA-03-20230522-HM	NIOSH 7300 mod	7440-39-3	Barium	0.43	U	0.43	ug/m3	0.43	U
NH-AA-03-20230522-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.22	U	0.22	ug/m3	0.22	U
NH-AA-03-20230522-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.22	U	0.22	ug/m3	0.22	U
NH-AA-03-20230522-HM	NIOSH 7300 mod	7439-92-1	Lead	0.87	U	0.87	ug/m3	0.87	U
NH-AA-03-20230522-HM	NIOSH 7300 mod	7782-49-2	Selenium	1.30		0.87	ug/m3	1.30	J+
NH-AA-03-20230522-HM	NIOSH 7300 mod	7440-22-4	Silver	0.779		0.43	ug/m3	0.779	J+
NH-AA-04-20230522-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.21	U	0.21	ug/m3	0.21	U
NH-AA-04-20230522-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-AA-04-20230522-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-04-20230522-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-04-20230522-HM	NIOSH 7300 mod	7439-92-1	Lead	0.21	U	0.21	ug/m3	0.21	U
NH-AA-04-20230522-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.352		0.21	ug/m3	0.352	J+
NH-AA-04-20230522-HM	NIOSH 7300 mod	7440-22-4	Silver	0.186		0.10	ug/m3	0.186	J+

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314485

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
NH-FB-20230522-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.20	U	0.20	ug/m3	0.20	U
NH-FB-20230522-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-FB-20230522-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.051		0.05	ug/m3	0.051	
NH-FB-20230522-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.067		0.05	ug/m3	0.067	
NH-FB-20230522-HM	NIOSH 7300 mod	7439-92-1	Lead	0.20	U	0.20	ug/m3	0.20	U
NH-FB-20230522-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.330		0.20	ug/m3	0.330	
NH-FB-20230522-HM	NIOSH 7300 mod	7440-22-4	Silver	0.220		0.10	ug/m3	0.220	
NH-IA-B1A-20230522-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.37	U	0.37	ug/m3	0.37	U
NH-IA-B1A-20230522-HM	NIOSH 7300 mod	7440-39-3	Barium	0.18	U	0.18	ug/m3	0.18	U
NH-IA-B1A-20230522-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.09	U	0.09	ug/m3	0.09	U
NH-IA-B1A-20230522-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.455		0.09	ug/m3	0.455	J+
NH-IA-B1A-20230522-HM	NIOSH 7300 mod	7439-92-1	Lead	0.37	U	0.37	ug/m3	0.37	U
NH-IA-B1A-20230522-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.532		0.37	ug/m3	0.532	J+
NH-IA-B1A-20230522-HM	NIOSH 7300 mod	7440-22-4	Silver	0.330		0.18	ug/m3	0.330	J+
NH-LB-20230522-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.20	U	0.20	ug/m3	0.20	U
NH-LB-20230522-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-LB-20230522-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-LB-20230522-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.058		0.05	ug/m3	0.058	
NH-LB-20230522-HM	NIOSH 7300 mod	7439-92-1	Lead	0.20	U	0.20	ug/m3	0.20	U
NH-LB-20230522-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.440		0.20	ug/m3	0.440	
NH-LB-20230522-HM	NIOSH 7300 mod	7440-22-4	Silver	0.180		0.10	ug/m3	0.180	

ATTACHMENT 2

DATA VALIDATION REPORT
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314501

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Site Name	Nedlog Property Assessment		**TO/TD No.**	68HE0820F0071 / 2071-2304-07
Document Tracking No.	1409e – b			
Data Reviewer (name and date)	Kayla Phye, 08/16/2023		**Technical Reviewer (name and date)**	Ellen McEntee, 08/17/2023
Laboratory Report No.	C314501		**Laboratory**	Aerobiology Laboratory Associates, Inc. – Boston, Massachusetts
Analyses	Metals via modified method NIOSH 7300			
Samples and Matrix	Seven air samples, including two field blank samples			
Collection Date(s)	05/23/2023			
Field Duplicate Pairs	None			
Field QC Blanks	NH-FB-01-20230523-HM and NH-FB-02-20230523-HM			

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA Programmatic Quality Assurance Project Plan for U.S. Environmental Protection Agency, Region 8, Superfund & Emergency Management Division, Version 1 (December 2021), and the EPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection of results was required for this data package. The results may be used as qualified based on the findings of this validation effort.

Data completeness:

Within Criteria	Exceedance/Notes
N	The laboratory did not provide an electronic data deliverable (EDD) for this data package. START prepared an EDD from the laboratory data package. The laboratory report did not include method detection limits (MDL). Quality control (QC) sample results were not added to the EDD.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
N	The method blank (MB) associated with all samples (MBA05312023) had a detection for chromium above the reporting limit (RL). A blank correction was applied by the laboratory for all chromium results; therefore, sample results were not qualified.

Field blanks:

Within Criteria	Exceedance/Notes
N	The selenium and silver results for field blank sample NH-FB-01-20230523-HM were above the RL. The chromium, selenium, and silver results for field blank sample NH-FB-02-20230523-HM were above the RL. As noted above, chromium was also detected in the method blank; however, the field blank results were approximately three times higher than the method blank result. • All sample results for selenium and silver were qualified as estimated, with possible high bias (flagged J+). • Chromium was nondetect in all samples; therefore, no qualifications were applied for this analyte.

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
N/A	

MS/MSDs:

Within Criteria	Exceedance/Notes
N/A	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
N/A	

Field duplicates:

Within Criteria	Exceedance/Notes
N/A	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
N/A	

MDLs/RLs:

Within Criteria	Exceedance/Notes
N	The laboratory report and EDD did not include MDLs. The laboratory reported results to the RL instead of the MDL; therefore, no J flags are present in the laboratory report and EDD to indicate concentrations between the MDL and RL. Nondetect sample results are reported as "<RL" in the laboratory report; nondetect sample results are qualified (flagged U) at the RL in the attached validated data table and validated EDD. In the laboratory report, sample results are reported in units of µg/m^3, while the QC sample results are reported in units of mg/L. In the EDD, sample results are reported in units of µg/m^3; QC sample results are not included in the EDD.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
N/A	

Other [none]:

Within Criteria	Exceedance/Notes
N/A	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
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.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314501

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
NH-AA-01-20230523-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.18	U	0.18	ug/m3	0.18	U
NH-AA-01-20230523-HM	NIOSH 7300 mod	7440-39-3	Barium	0.09	U	0.09	ug/m3	0.09	U
NH-AA-01-20230523-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-01-20230523-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-01-20230523-HM	NIOSH 7300 mod	7439-92-1	Lead	0.18	U	0.18	ug/m3	0.18	U
NH-AA-01-20230523-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.272		0.18	ug/m3	0.272	J+
NH-AA-01-20230523-HM	NIOSH 7300 mod	7440-22-4	Silver	0.163		0.09	ug/m3	0.163	J+
NH-AA-02-20230523-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.19	U	0.19	ug/m3	0.19	U
NH-AA-02-20230523-HM	NIOSH 7300 mod	7440-39-3	Barium	0.09	U	0.09	ug/m3	0.09	U
NH-AA-02-20230523-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-02-20230523-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-02-20230523-HM	NIOSH 7300 mod	7439-92-1	Lead	0.18	U	0.19	ug/m3	0.18	U
NH-AA-02-20230523-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.214		0.19	ug/m3	0.214	J+
NH-AA-02-20230523-HM	NIOSH 7300 mod	7440-22-4	Silver	0.168		0.09	ug/m3	0.168	J+
NH-AA-03-20230523-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.30	U	0.30	ug/m3	0.30	U
NH-AA-03-20230523-HM	NIOSH 7300 mod	7440-39-3	Barium	0.15	U	0.15	ug/m3	0.15	U
NH-AA-03-20230523-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.08	U	0.08	ug/m3	0.08	U
NH-AA-03-20230523-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.08	U	0.08	ug/m3	0.08	U
NH-AA-03-20230523-HM	NIOSH 7300 mod	7439-92-1	Lead	0.30	U	0.30	ug/m3	0.30	U
NH-AA-03-20230523-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.47		0.30	ug/m3	0.47	J+
NH-AA-03-20230523-HM	NIOSH 7300 mod	7440-22-4	Silver	0.272		0.15	ug/m3	0.272	J+
NH-AA-04-20230523-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.19	U	0.19	ug/m3	0.19	U
NH-AA-04-20230523-HM	NIOSH 7300 mod	7440-39-3	Barium	0.09	U	0.09	ug/m3	0.09	U
NH-AA-04-20230523-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-04-20230523-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-04-20230523-HM	NIOSH 7300 mod	7439-92-1	Lead	0.19	U	0.19	ug/m3	0.19	U
NH-AA-04-20230523-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.294		0.19	ug/m3	0.294	J+
NH-AA-04-20230523-HM	NIOSH 7300 mod	7440-22-4	Silver	0.170		0.09	ug/m3	0.170	J+

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314501

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
NH-FB-01-20230523-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.20	U	0.20	ug/m3	0.20	U
NH-FB-01-20230523-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-FB-01-20230523-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-FB-01-20230523-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.05	U	0.05	ug/m3	0.05	U
NH-FB-01-20230523-HM	NIOSH 7300 mod	7439-92-1	Lead	0.20	U	0.20	ug/m3	0.20	U
NH-FB-01-20230523-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.280		0.20	ug/m3	0.280	
NH-FB-01-20230523-HM	NIOSH 7300 mod	7440-22-4	Silver	0.180		0.10	ug/m3	0.180	
NH-FB-02-20230523-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.20	U	0.20	ug/m3	0.20	U
NH-FB-02-20230523-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-FB-02-20230523-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-FB-02-20230523-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.053		0.05	ug/m3	0.053	
NH-FB-02-20230523-HM	NIOSH 7300 mod	7439-92-1	Lead	0.20	U	0.20	ug/m3	0.20	U
NH-FB-02-20230523-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.310		0.20	ug/m3	0.310	
NH-FB-02-20230523-HM	NIOSH 7300 mod	7440-22-4	Silver	0.180		0.10	ug/m3	0.180	
NH-IA-B1A-20230523-HM	NIOSH 7300 mod	7440-38-2	Arsenic	1.001		0.14	ug/m3	1.001	
NH-IA-B1A-20230523-HM	NIOSH 7300 mod	7440-39-3	Barium	0.07	U	0.07	ug/m3	0.07	U
NH-IA-B1A-20230523-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.04	U	0.04	ug/m3	0.04	U
NH-IA-B1A-20230523-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.04	U	0.04	ug/m3	0.04	U
NH-IA-B1A-20230523-HM	NIOSH 7300 mod	7439-92-1	Lead	0.14	U	0.14	ug/m3	0.14	U
NH-IA-B1A-20230523-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.182		0.14	ug/m3	0.182	J+
NH-IA-B1A-20230523-HM	NIOSH 7300 mod	7440-22-4	Silver	0.126		0.07	ug/m3	0.126	J+

ATTACHMENT 3

DATA VALIDATION REPORT
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314509

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Site Name	Nedlog Property Assessment		**TO/TD No.**	68HE0820F0071 / 2071-2304-07
Document Tracking No.	1409e – c			
Data Reviewer (name and date)	Kayla Phye, 08/17/2023		**Technical Reviewer (name and date)**	Ellen McEntee, 08/17/2023
Laboratory Report No.	C314509		**Laboratory**	Aerobiology Laboratory Associates, Inc. – Boston, Massachusetts
Analyses	Metals via modified method NIOSH 7300			
Samples and Matrix	Seven air samples, including one field blank sample and one lot blank sample			
Collection Date(s)	05/24/2023			
Field Duplicate Pairs	None			
Field QC Blanks	NH-FB-20230524-HM and NH-LB-20230524-HM			

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA Programmatic Quality Assurance Project Plan for U.S. Environmental Protection Agency, Region 8, Superfund & Emergency Management Division, Version 1 (December 2021), and the EPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection of results was required for this data package. The results may be used as qualified based on the findings of this validation effort.

Data completeness:

Within Criteria	Exceedance/Notes
N	The laboratory did not provide an electronic data deliverable (EDD) for this data package. START prepared an EDD from the laboratory data package. The laboratory report did not include method detection limits (MDL). Quality control (QC) sample results were not added to the EDD. The laboratory incorrectly identified sample NH-**LB-20**230524-HM as NH-**LB20**230524-HM. The correct sample ID was used in the EDD. A revised report was not requested.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
N	The chromium and silver results for field blank sample NH-FB-20230524-HM had concentrations of chromium and silver above the reporting limit (RL). The selenium and silver results for lot blank sample NH-LB-20230524-HM were above the RL. • The selenium and silver results for samples NH-AA-01-20230524-HM, NH-AA-03-20230524-HM, NH-AA-04-20230524-HM, and NH-IA-B1A-20230524-HM were qualified as estimated, with possible high bias (flagged J+). • The chromium, selenium, and silver results for sample NH-AA-02-20230524-HM were qualified as estimated, with possible high bias (flagged J+). • All other affected samples and analytes were nondetect and therefore, were not qualified.

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
N/A	

MS/MSDs:

Within Criteria	Exceedance/Notes
N/A	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
N/A	

Field duplicates:

Within Criteria	Exceedance/Notes
N/A	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
N/A	

MDLs/RLs:

Within Criteria	Exceedance/Notes
N	The laboratory report and EDD did not include MDLs. The laboratory reported results to the RL instead of the MDL; therefore, no J flags are present in the laboratory report and EDD to indicate concentrations between the MDL and RL. Nondetect sample results are reported as "<RL" in the laboratory report; nondetect sample results are qualified (flagged U) at the RL in the attached validated data table and validated EDD. In the laboratory report, sample results are reported in units of µg/m^3, while the QC sample results are reported in units of mg/L. In the EDD, sample results are reported in units of µg/m^3; QC sample results are not included in the EDD.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
N/A	

Other [none]:

Within Criteria	Exceedance/Notes
N/A	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
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.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314509

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
NH-AA-01-20230524-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.16	U	0.16	ug/m3	0.16	U
NH-AA-01-20230524-HM	NIOSH 7300 mod	7440-39-3	Barium	0.08	U	0.08	ug/m3	0.08	U
NH-AA-01-20230524-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.04	U	0.04	ug/m3	0.04	U
NH-AA-01-20230524-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.04	U	0.04	ug/m3	0.04	U
NH-AA-01-20230524-HM	NIOSH 7300 mod	7439-92-1	Lead	0.16	U	0.16	ug/m3	0.16	U
NH-AA-01-20230524-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.160		0.16	ug/m3	0.160	J+
NH-AA-01-20230524-HM	NIOSH 7300 mod	7440-22-4	Silver	0.144		0.08	ug/m3	0.144	J+
NH-AA-02-20230524-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.22	U	0.22	ug/m3	0.22	U
NH-AA-02-20230524-HM	NIOSH 7300 mod	7440-39-3	Barium	0.11	U	0.11	ug/m3	0.11	U
NH-AA-02-20230524-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-02-20230524-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.248		0.05	ug/m3	0.248	J+
NH-AA-02-20230524-HM	NIOSH 7300 mod	7439-92-1	Lead	0.22	U	0.22	ug/m3	0.22	U
NH-AA-02-20230524-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.284		0.22	ug/m3	0.284	J+
NH-AA-02-20230524-HM	NIOSH 7300 mod	7440-22-4	Silver	0.196		0.11	ug/m3	0.196	J+
NH-AA-03-20230524-HM	NIOSH 7300 mod	7440-38-2	Arsenic	1.79	U	1.79	ug/m3	1.79	U
NH-AA-03-20230524-HM	NIOSH 7300 mod	7440-39-3	Barium	0.90	U	0.90	ug/m3	0.90	U
NH-AA-03-20230524-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.45	U	0.45	ug/m3	0.45	U
NH-AA-03-20230524-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.45	U	0.45	ug/m3	0.45	U
NH-AA-03-20230524-HM	NIOSH 7300 mod	7439-92-1	Lead	1.79	U	1.79	ug/m3	1.79	U
NH-AA-03-20230524-HM	NIOSH 7300 mod	7782-49-2	Selenium	1.97		1.79	ug/m3	1.97	J+
NH-AA-03-20230524-HM	NIOSH 7300 mod	7440-22-4	Silver	1.525		0.90	ug/m3	1.525	J+
NH-AA-04-20230524-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.18	U	0.18	ug/m3	0.18	U
NH-AA-04-20230524-HM	NIOSH 7300 mod	7440-39-3	Barium	0.09	U	0.09	ug/m3	0.09	U
NH-AA-04-20230524-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-04-20230524-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.05	U	0.05	ug/m3	0.05	U
NH-AA-04-20230524-HM	NIOSH 7300 mod	7439-92-1	Lead	0.18	U	0.18	ug/m3	0.18	U
NH-AA-04-20230524-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.190		0.18	ug/m3	0.190	J+
NH-AA-04-20230524-HM	NIOSH 7300 mod	7440-22-4	Silver	0.163		0.09	ug/m3	0.163	J+

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314509

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
NH-FB-20230524-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.20	U	0.20	ug/m3	0.20	U
NH-FB-20230524-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-FB-20230524-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-FB-20230524-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.051		0.05	ug/m3	0.051	
NH-FB-20230524-HM	NIOSH 7300 mod	7439-92-1	Lead	0.20	U	0.20	ug/m3	0.20	U
NH-FB-20230524-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.20	U	0.20	ug/m3	0.20	U
NH-FB-20230524-HM	NIOSH 7300 mod	7440-22-4	Silver	0.180		0.10	ug/m3	0.180	
NH-IA-B1A-20230524-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.470		0.17	ug/m3	0.470	
NH-IA-B1A-20230524-HM	NIOSH 7300 mod	7440-39-3	Barium	0.08	U	0.08	ug/m3	0.08	U
NH-IA-B1A-20230524-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.04	U	0.04	ug/m3	0.04	U
NH-IA-B1A-20230524-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.04	U	0.04	ug/m3	0.04	U
NH-IA-B1A-20230524-HM	NIOSH 7300 mod	7439-92-1	Lead	0.17	U	0.17	ug/m3	0.17	U
NH-IA-B1A-20230524-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.227		0.17	ug/m3	0.227	J+
NH-IA-B1A-20230524-HM	NIOSH 7300 mod	7440-22-4	Silver	0.151		0.08	ug/m3	0.151	J+
NH-LB-20230524-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.20	U	0.20	ug/m3	0.20	U
NH-LB-20230524-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-LB-20230524-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-LB-20230524-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.05	U	0.05	ug/m3	0.05	U
NH-LB-20230524-HM	NIOSH 7300 mod	7439-92-1	Lead	0.20	U	0.20	ug/m3	0.20	U
NH-LB-20230524-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.260		0.20	ug/m3	0.260	
NH-LB-20230524-HM	NIOSH 7300 mod	7440-22-4	Silver	0.180		0.10	ug/m3	0.180	

ATTACHMENT 4

DATA VALIDATION REPORT
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314539

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Site Name	Nedlog Property Assessment		**TO/TD No.**	68HE0820F0071 / 2071-2304-07
Document Tracking No.	1409e – d			
Data Reviewer (name and date)	Kayla Phye, 08/17/2023		**Technical Reviewer (name and date)**	Ellen McEntee, 08/17/2023
Laboratory Report No.	C314539		**Laboratory**	Aerobiology Laboratory Associates, Inc. – Boston, Massachusetts
Analyses	Metals via modified method NIOSH 7300			
Samples and Matrix	Six air samples, including two field blank samples			
Collection Date(s)	05/25/2023			
Field Duplicate Pairs	None			
Field QC Blanks	NH-FB-01-20230525-HM and NH-FB-02-20230525-HM			

INTRODUCTION

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA Programmatic Quality Assurance Project Plan for U.S. Environmental Protection Agency, Region 8, Superfund & Emergency Management Division, Version 1 (December 2021), and the EPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020).

OVERALL EVALUATION

No rejection of results was required for this data package. The results may be used as qualified based on the findings of this validation effort.

DATA VALIDATION CHECKLIST – STAGE 2A
EPA REGION 8 START CONTRACT

Data completeness:

Within Criteria	Exceedance/Notes
N	The laboratory did not provide an electronic data deliverable (EDD) for this data package. START prepared an EDD from the laboratory data package. The laboratory report did not include method detection limits (MDL). Quality control (QC) sample results were not added to the EDD. Sample NH-AA-02-20230525-HM was not analyzed due to sample loss during preparation. This sample is not included in the total count of samples.

Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
Y	

Method blanks:

Within Criteria	Exceedance/Notes
Y	

Field blanks:

Within Criteria	Exceedance/Notes
N	The chromium, selenium, and silver results in field blank samples NH-FB-01-20230525-HM and NH-FB-02-20230525-HM were above the RL. • Selenium and silver results for samples NH-AA-01-20230525-HM, NH-AA-04-20230525-HM, and NH-IA-B1A-20230525-HM were qualified as estimated, with possible high bias (flagged J+). • Chromium and silver results for sample NH-AA-03-20230525-HM were qualified as estimated, with possible high bias (flagged J+). The selenium result was not qualified for this sample because the result was greater than 10 times the concentration found in the field blank samples. All other affected analytes are nondetect and therefore, were not qualified.

Surrogates and labeled compounds:

Within Criteria	Exceedance/Notes
N/A	

MS/MSDs:

Within Criteria	Exceedance/Notes
N/A	

Laboratory duplicates:

Within Criteria	Exceedance/Notes
N/A	

Field duplicates:

Within Criteria	Exceedance/Notes
N/A	

LCSs/LCSDs:

Within Criteria	Exceedance/Notes
Y	

Sample dilutions:

Within Criteria	Exceedance/Notes
Y	

Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
N/A	

MDLs/RLs:

Within Criteria	Exceedance/Notes
N	The laboratory report and EDD did not include MDLs. The laboratory reported results to the RL instead of the MDL; therefore, no J flags are present in the laboratory report and EDD to indicate concentrations between the MDL and RL. Nondetect sample results are reported as "<RL" in the laboratory report; nondetect sample results are qualified (flagged U) at the RL in the attached validated data table and validated EDD. In the laboratory report, sample results are reported in units of µg/m^3, while the QC sample results are reported in units of mg/L. In the EDD, sample results are reported in units of µg/m^3; QC sample results are not included in the EDD.

Tentatively identified compounds:

Within Criteria	Exceedance/Notes
N/A	

Other [none]:

Within Criteria	Exceedance/Notes
N/A	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
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.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314539

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
NH-AA-01-20230525-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.14	U	0.14	ug/m3	0.14	U
NH-AA-01-20230525-HM	NIOSH 7300 mod	7440-39-3	Barium	0.07	U	0.07	ug/m3	0.07	U
NH-AA-01-20230525-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.04	U	0.04	ug/m3	0.04	U
NH-AA-01-20230525-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.04	U	0.04	ug/m3	0.04	U
NH-AA-01-20230525-HM	NIOSH 7300 mod	7439-92-1	Lead	0.14	U	0.14	ug/m3	0.14	U
NH-AA-01-20230525-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.161		0.14	ug/m3	0.161	J+
NH-AA-01-20230525-HM	NIOSH 7300 mod	7440-22-4	Silver	0.126		0.07	ug/m3	0.126	J+
NH-AA-03-20230525-HM	NIOSH 7300 mod	7440-38-2	Arsenic	1.70	U	1.70	ug/m3	1.70	U
NH-AA-03-20230525-HM	NIOSH 7300 mod	7440-39-3	Barium	0.85	U	0.85	ug/m3	0.85	U
NH-AA-03-20230525-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.43	U	0.43	ug/m3	0.43	U
NH-AA-03-20230525-HM	NIOSH 7300 mod	7440-47-3	Chromium	1.01		0.43	ug/m3	1.01	J+
NH-AA-03-20230525-HM	NIOSH 7300 mod	7439-92-1	Lead	2.47		1.70	ug/m3	2.47	
NH-AA-03-20230525-HM	NIOSH 7300 mod	7782-49-2	Selenium	3.15		1.70	ug/m3	3.15	
NH-AA-03-20230525-HM	NIOSH 7300 mod	7440-22-4	Silver	1.533		0.85	ug/m3	1.533	J+
NH-AA-04-20230525-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.14	U	0.14	ug/m3	0.14	U
NH-AA-04-20230525-HM	NIOSH 7300 mod	7440-39-3	Barium	0.07	U	0.07	ug/m3	0.07	U
NH-AA-04-20230525-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.03	U	0.03	ug/m3	0.03	U
NH-AA-04-20230525-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.03	U	0.03	ug/m3	0.03	U
NH-AA-04-20230525-HM	NIOSH 7300 mod	7439-92-1	Lead	0.14	U	0.14	ug/m3	0.14	U
NH-AA-04-20230525-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.179		0.14	ug/m3	0.179	J+
NH-AA-04-20230525-HM	NIOSH 7300 mod	7440-22-4	Silver	0.117		0.07	ug/m3	0.117	J+
NH-FB-01-20230525-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.20	U	0.20	ug/m3	0.20	U
NH-FB-01-20230525-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-FB-01-20230525-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.05	U	0.05	ug/m3	0.05	U
NH-FB-01-20230525-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.249		0.05	ug/m3	0.249	
NH-FB-01-20230525-HM	NIOSH 7300 mod	7439-92-1	Lead	0.20	U	0.20	ug/m3	0.20	U
NH-FB-01-20230525-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.260		0.20	ug/m3	0.260	
NH-FB-01-20230525-HM	NIOSH 7300 mod	7440-22-4	Silver	0.170		0.10	ug/m3	0.170	

NEDLOG PROPERTY ASSESSMENT AIR ANALYTICAL RESULTS SUMMARY
AEROBIOLOGY LABORATORY ASSOCIATES, INC. REPORT NO. C314539

Sample ID	Method	CAS No.	Analyte	Lab Result	Lab Qual	RL	Units	VAL_Result	VAL_Qual
NH-FB-02-20230525-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.200	U	0.20	ug/m3	0.200	U
NH-FB-02-20230525-HM	NIOSH 7300 mod	7440-39-3	Barium	0.10	U	0.10	ug/m3	0.10	U
NH-FB-02-20230525-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.050	U	0.05	ug/m3	0.050	U
NH-FB-02-20230525-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.252		0.05	ug/m3	0.252	
NH-FB-02-20230525-HM	NIOSH 7300 mod	7439-92-1	Lead	0.200	U	0.20	ug/m3	0.200	U
NH-FB-02-20230525-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.230		0.20	ug/m3	0.230	
NH-FB-02-20230525-HM	NIOSH 7300 mod	7440-22-4	Silver	0.180		0.10	ug/m3	0.180	
NH-IA-B1A-20230525-HM	NIOSH 7300 mod	7440-38-2	Arsenic	0.245		0.14	ug/m3	0.245	
NH-IA-B1A-20230525-HM	NIOSH 7300 mod	7440-39-3	Barium	0.07	U	0.07	ug/m3	0.07	U
NH-IA-B1A-20230525-HM	NIOSH 7300 mod	7440-43-9	Cadmium	0.04	U	0.04	ug/m3	0.04	U
NH-IA-B1A-20230525-HM	NIOSH 7300 mod	7440-47-3	Chromium	0.04	U	0.04	ug/m3	0.04	U
NH-IA-B1A-20230525-HM	NIOSH 7300 mod	7439-92-1	Lead	0.154		0.14	ug/m3	0.154	
NH-IA-B1A-20230525-HM	NIOSH 7300 mod	7782-49-2	Selenium	0.203		0.14	ug/m3	0.203	J+
NH-IA-B1A-20230525-HM	NIOSH 7300 mod	7440-22-4	Silver	0.126		0.07	ug/m3	0.126	J+

ENCLOSURE 5. ANALYTICAL DATA PACKAGES

ANALYTICAL REPORT

Report Date: June 07, 2023

Lauren Foster
Tetra Tech
1560 Broadway Suite 1400
Denver, CO 80202

E-mail: lauren.foster@tetratech.com

Workorder: **34-2315188**
Client Project ID: Nedlog Property Assessment
Purchase Order: NA
Project Manager: Patrick Noteboom

Analytical Results

Sample ID: **NH-IA-BM5-20230525-HG** Collected: 05/25/2023
Lab ID: 2315188001 Sampling Location: Nedlog Property Asse Received: 05/31/2023
Method: NIOSH 6009 Mod. **Media:** SKC 226-17-1A, Hopcalite Tube **Instrument:** AACV02
Dilution: 1 **Sampling Parameter:** Air Volume 62 L **Analyzed:** 06/07/2023 (307578)

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Mercury	**0.15**	**0.0024**	**0.00030**	0.010

Sample ID: **NH-FB-01-20230525-HG** Collected: 05/25/2023
Lab ID: 2315188002 Sampling Location: Nedlog Property Asse Received: 05/31/2023
Method: NIOSH 6009 Mod. **Media:** SKC 226-17-1A, Hopcalite Tube **Instrument:** AACV02
Dilution: 1 **Sampling Parameter:** Air Volume 0 L **Analyzed:** 06/07/2023 (307578)

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Mercury	<0.010	NA	NA	0.010

Sample ID: **NH-FB-02-20230525-HG** Collected: 05/25/2023
Lab ID: 2315188003 Sampling Location: Nedlog Property Asse Received: 05/31/2023
Method: NIOSH 6009 Mod. **Media:** SKC 226-17-1A, Hopcalite Tube **Instrument:** AACV02
Dilution: 1 **Sampling Parameter:** Air Volume 0 L **Analyzed:** 06/07/2023 (307578)

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Mercury	<0.010	NA	NA	0.010

Sample ID: **NH-LB-01-20230525-HG** Collected: 05/25/2023
Lab ID: 2315188004 Sampling Location: Nedlog Property Asse Received: 05/31/2023
Method: NIOSH 6009 Mod. **Media:** SKC 226-17-1A, Hopcalite Tube **Instrument:** AACV02
Dilution: 1 **Sampling Parameter:** Air Volume 0 L **Analyzed:** 06/07/2023 (307578)

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Mercury	<0.010	NA	NA	0.010

ANALYTICAL REPORT

Workorder: **34-2315188**
Client Project ID: Nedlog Property Assessment
Purchase Order: NA
Project Manager: Patrick Noteboom

Analytical Results

Sample ID: **NH-LB-02-20230525-HG** Collected: 05/25/2023
Lab ID: 2315188005 Sampling Location: Nedlog Property Asse Received: 05/31/2023

Method: NIOSH 6009 Mod. **Media:** SKC 226-17-1A, Hopcalite Tube **Instrument:** AACV02
Dilution: 1 **Sampling Parameter:** Air Volume 0 L **Analyzed:** 06/07/2023 (307578)

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Mercury	<0.010	NA	NA	0.010

Sample ID: **NH-LB-03-20230525-HG** Collected: 05/25/2023
Lab ID: 2315188006 Sampling Location: Nedlog Property Asse Received: 05/31/2023

Method: NIOSH 6009 Mod. **Media:** SKC 226-17-1A, Hopcalite Tube **Instrument:** AACV02
Dilution: 1 **Sampling Parameter:** Air Volume 0 L **Analyzed:** 06/07/2023 (307578)

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Mercury	<0.010	NA	NA	0.010

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method (Analysis Batch)	Analyst	Peer Review
NIOSH 6009 Mod. (307578)	/S/ Emilee Johnson 06/07/2023 14:45	/S/ Shaina Wiest 06/07/2023 15:43

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsglobal.com/slt

ANALYTICAL REPORT

Workorder: **34-2315188**
Client Project ID: Nedlog Property Assessment
Purchase Order: NA
Project Manager: Patrick Noteboom

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
The following was provided by the client: Sample ID, Collection Date, Sampling Location, Media Type, Sampling Parameter.
Collection Date, Media Type, and Sampling Parameter can potentially affect the validity of the results.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Industrial Hygiene	AIHA (ISO 17025 & AIHA IHLAP)	101574	http://www.aihaaccreditedlabs.org
	DOECAP-AP	L22-62	http://www.pjlabs.com
	Washington	C596	https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Laboratory-Accreditation
Dietary Supplements	PJLA (ISO 17025)	L22-61	http://www.pjlabs.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
NA = Not Applicable.
** No result could be reported, see sample comments for details.
< Means this testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

AEROBIOLOGY LABORATORY ASSOCIATES, INCORPORATED
A Pace Analytical® Laboratory

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: boston@aerobiology.net

Laboratory Report

Contact: Lauren Foster
Client: Tetra Tech Region 8 START
Address: 1560 Broadway, Suite 1400
Denver, CO 80202

Batch # C 314485
Date received: 5/24/2023
Date analyzed: 5/31/2023
Date of report: 5/31/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result*	Reporting Limit	Comments
C 726040	FB	5/22/23	NH-FB-20230522-HM	0.220	0.10	Ag
		5/22/23	NH-FB-20230522-HM	<RL	0.20	As
		5/22/23	NH-FB-20230522-HM	<RL	0.10	Ba
		5/22/23	NH-FB-20230522-HM	0.051	0.05	Cd
		5/22/23	NH-FB-20230522-HM	0.067	0.05	Cr
		5/22/23	NH-FB-20230522-HM	<RL	0.20	Pb
		5/22/23	NH-FB-20230522-HM	0.330	0.20	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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All results apply only to the samples tested and as received and are accurate to no more than three significant figures.
Unless otherwise indicated, all the quality control criteria for the method above have been met.
BRL - Below Repoting Limit Note on units: mg/Kg is the same as ppm by weight.
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Blanks are reported in total micrograms and they are used to correct sample results.

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Denver, CO 80202

Batch # C 314485
Date received: 5/24/2023
Date analyzed: 5/31/2023
Date of report: 5/31/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in µg/m^3, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726041	LB	5/22/23	NH-LB20230522-HM	0.180	0.10	Ag
		5/22/23	NH-LB20230522-HM	<RL	0.20	As
		5/22/23	NH-LB20230522-HM	<RL	0.10	Ba
		5/22/23	NH-LB20230522-HM	<RL	0.05	Cd
		5/22/23	NH-LB20230522-HM	0.058	0.05	Cr
		5/22/23	NH-LB20230522-HM	<RL	0.20	Pb
		5/22/23	NH-LB20230522-HM	0.440	0.20	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Date of report: 5/31/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726042	01	5/22/23	NH-AA-01-20230522-HM	0.133	0.07	Ag
		5/22/23	NH-AA-01-20230522-HM	<RL	0.15	As
		5/22/23	NH-AA-01-20230522-HM	<RL	0.07	Ba
		5/22/23	NH-AA-01-20230522-HM	<RL	0.04	Cd
		5/22/23	NH-AA-01-20230522-HM	0.164	0.04	Cr
		5/22/23	NH-AA-01-20230522-HM	<RL	0.15	Pb
		5/22/23	NH-AA-01-20230522-HM	0.273	0.15	Se

Qualification - Cr: Interference checks were outside control limits for Cr, possible Fe contamination.

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Denver, CO 80202

Batch # C 314485
Date received: 5/24/2023
Date analyzed: 5/31/2023
Date of report: 5/31/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726043	02	5/22/23	NH-AA-02-20230522-HM	0.145	0.08	Ag
		5/22/23	NH-AA-02-20230522-HM	<RL	0.16	As
		5/22/23	NH-AA-02-20230522-HM	<RL	0.08	Ba
		5/22/23	NH-AA-02-20230522-HM	<RL	0.04	Cd
		5/22/23	NH-AA-02-20230522-HM	<RL	0.04	Cr
		5/22/23	NH-AA-02-20230522-HM	<RL	0.16	Pb
		5/22/23	NH-AA-02-20230522-HM	0.258	0.16	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Laboratory Report

Contact: Lauren Foster
Client: Tetra Tech Region 8 START
Address: 1560 Broadway, Suite 1400
Denver, CO 80202

Batch # C 314485
Date received: 5/24/2023
Date analyzed: 5/31/2023
Date of report: 5/31/2023

Project # 0
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in µg/m^3, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result*	Reporting Limit	Comments
C 726044	03	5/22/23	NH-AA-03-20230522-HM	0.779	0.43	Ag
		5/22/23	NH-AA-03-20230522-HM	<RL	0.87	As
		5/22/23	NH-AA-03-20230522-HM	<RL	0.43	Ba
		5/22/23	NH-AA-03-20230522-HM	<RL	0.22	Cd
		5/22/23	NH-AA-03-20230522-HM	<RL	0.22	Cr
		5/22/23	NH-AA-03-20230522-HM	<RL	0.87	Pb
		5/22/23	NH-AA-03-20230522-HM	1.30	0.87	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Date received: 5/24/2023
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Date of report: 5/31/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in µg/m^3, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726045	04	5/22/23	NH-AA-04-20230522-HM	0.186	0.10	Ag
		5/22/23	NH-AA-04-20230522-HM	<RL	0.21	As
		5/22/23	NH-AA-04-20230522-HM	<RL	0.10	Ba
		5/22/23	NH-AA-04-20230522-HM	<RL	0.05	Cd
		5/22/23	NH-AA-04-20230522-HM	<RL	0.05	Cr
		5/22/23	NH-AA-04-20230522-HM	<RL	0.21	Pb
		5/22/23	NH-AA-04-20230522-HM	0.352	0.21	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Denver, CO 80202

Batch # C 314485
Date received: 5/24/2023
Date analyzed: 5/31/2023
Date of report: 5/31/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726046	IA	5/22/23	NH-IA-B1A-01-20230522-HM	0.330	0.18	Ag
		5/22/23	NH-IA-B1A-01-20230522-HM	<RL	0.37	As
		5/22/23	NH-IA-B1A-01-20230522-HM	<RL	0.18	Ba
		5/22/23	NH-IA-B1A-01-20230522-HM	<RL	0.09	Cd
		5/22/23	NH-IA-B1A-01-20230522-HM	0.455	0.09	Cr
		5/22/23	NH-IA-B1A-01-20230522-HM	<RL	0.37	Pb
		5/22/23	NH-IA-B1A-01-20230522-HM	0.532	0.37	Se

Qualification - Cr: Interference checks were outside control limits for Cr, possible Fe contamination.

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

Unless otherwise indicated, all samples were received in acceptable condition.
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C 314485

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A Pace Laboratory

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Tetra Tech Region 8 START	Billing Information: Rindy Mortensen 1560 Broadway Suite 1400 Denver CO 80202
Address: 1560 Broadway Suite 1400 Denver CO 80202	
Report To: Lauren Foster & Maura McAleese	Email To: Lauren & Maura firstname.lastname@tetratech.com
Copy To: r8start.labreports@tetratechinc.onmicrosoft	Site Collection Info/Address:
Customer Project Name/Number: In process	State: County/City: / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Phone: Email: first.lastname@tetratech.com	Site/Facility ID #: 103X903S20F0071230407	Compliance Monitoring? [ ] Yes [X] No
Collected By (print): MM/ LF/ CB / DR	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required:	Immediately Packed on Ice: [ ] Yes [X] N/A
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [X] Hold: Hold for 30 days after report	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] NA Analysis: ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Total Time	Total Volume	# of Ctns	Container Type: Plastic (P) Glass (G) Cassette (C)	Lead and Arsenic by NIOSH 7300 SUB OUT TO BOSTON									Lab Profile/Line:
NH-FB-20230522-HM	AR	G	5/22/2023	10:00	0 min	0L	1	C	X									7260 40
NH-LB-20230522-HM	AR	G	5/22/2023	10:00	0 min	0L	1	C	X									41
NH-AA-01-20230522-HM	AR	G	5/22/2023	10:17	451 min	1354L	1	C	X									42
NH-AA-02-20230522-HM	AR	G	5/22/2023	11:17	412 min	1240L	1	C	X									43
NH-AA-03-20230522-HM	AR	G	5/22/2023	12:02	76 min	231.2L	1	C	X									44
NH-AA-04-20230522-HM	AR	G	5/22/2023	13:34	321 min	966.2L	1	C	X									45
NH-IA-B1A-20230522-HM	AR	G	5/22/2023	15:52	181 min	545.1L	1	C	X									46

Lab Profile/Line:

```
Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present   Y N NA
Collector Signature Present  Y N NA
Bottles Intact               Y N NA
Correct Bottles              Y N NA
Sufficient Volume            Y N NA
Samples Received on Ice      Y N NA
VOA - Headspace Acceptable   Y N NA
USDA Regulated Soils         Y N NA
Samples in Holding Time      Y N NA
Residual Chlorine Present    Y N NA
Cl Strips: ____
Sample pH Acceptable         Y N NA
pH Strips: ____
Sulfide Present              Y N NA
Lead Acetate Strips: ____

LAB USE ONLY:
Lab Sample # / Comments:
```

Customer Remarks / Special Conditions / Possible Hazards: Results are determining site PPE - please contact Maura & Lauren ASAP of any issues/delays

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Lauren Foster/TetraTech	05/23/2023 0830	Tetratech	05/23/2023 0630
Relinquished by/Company: (Signature)	Date/Time: 5/23/23 9:16a	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time: 5/24/23 10:00	Received by/Company: (Signature) Paula Leavitt Lola	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

AEROBIOLOGY LABORATORY ASSOCIATES, INCORPORATED
A Pace Analytical® Laboratory

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: boston@aerobiology.net

Laboratory Report

Contact: Lauren Foster
Client: Tetra Tech Region 8 START
Address: 1560 Broadway, Suite 1400
Denver, CO 80202

Batch # C 314501
Date received: 5/25/2023
Date analyzed: 5/31/2023
Date of report: 6/1/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result*	Reporting Limit	Comments
C 726118	FB-01	5/23/23	NH-FB-01-20230523-HM	0.180	0.10	Ag
		5/23/23	NH-FB-01-20230523-HM	<RL	0.20	As
		5/23/23	NH-FB-01-20230523-HM	<RL	0.10	Ba
		5/23/23	NH-FB-01-20230523-HM	<RL	0.05	Cd
		5/23/23	NH-FB-01-20230523-HM	<RL	0.05	Cr
		5/23/23	NH-FB-01-20230523-HM	<RL	0.20	Pb
		5/23/23	NH-FB-01-20230523-HM	0.280	0.20	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Unless otherwise indicated, all the quality control criteria for the method above have been met.

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Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726119	FB-02	5/23/23	NH-FB-02-20230523-HM	0.180	0.10	Ag
		5/23/23	NH-FB-02-20230523-HM	<RL	0.20	As
		5/23/23	NH-FB-02-20230523-HM	<RL	0.10	Ba
		5/23/23	NH-FB-02-20230523-HM	<RL	0.05	Cd
		5/23/23	NH-FB-02-20230523-HM	0.053	0.05	Cr
		5/23/23	NH-FB-02-20230523-HM	<RL	0.20	Pb
		5/23/23	NH-FB-02-20230523-HM	0.310	0.20	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726120	01	5/23/23	NH-AA-01-20230523-HM	0.163	0.09	Ag
		5/23/23	NH-AA-01-20230523-HM	<RL	0.18	As
		5/23/23	NH-AA-01-20230523-HM	<RL	0.09	Ba
		5/23/23	NH-AA-01-20230523-HM	<RL	0.05	Cd
		5/23/23	NH-AA-01-20230523-HM	<RL	0.05	Cr
		5/23/23	NH-AA-01-20230523-HM	<RL	0.18	Pb
		5/23/23	NH-AA-01-20230523-HM	0.272	0.18	Se

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Aimee Cormier, Lab Director

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Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726121	02	5/23/23	NH-AA-02-20230523-HM	0.168	0.09	Ag
		5/23/23	NH-AA-02-20230523-HM	<RL	0.19	As
		5/23/23	NH-AA-02-20230523-HM	<RL	0.09	Ba
		5/23/23	NH-AA-02-20230523-HM	<RL	0.05	Cd
		5/23/23	NH-AA-02-20230523-HM	<RL	0.05	Cr
		5/23/23	NH-AA-02-20230523-HM	<RL	0.19	Pb
		5/23/23	NH-AA-02-20230523-HM	0.214	0.19	Se

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Aimee Cormier, Lab Director

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Date of report: 6/1/2023

Project # 0
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result*	Reporting Limit	Comments
C 726122	03	5/23/23	NH-AA-03-20230523-HM	0.272	0.15	Ag
		5/23/23	NH-AA-03-20230523-HM	<RL	0.30	As
		5/23/23	NH-AA-03-20230523-HM	<RL	0.15	Ba
		5/23/23	NH-AA-03-20230523-HM	<RL	0.08	Cd
		5/23/23	NH-AA-03-20230523-HM	<RL	0.08	Cr
		5/23/23	NH-AA-03-20230523-HM	<RL	0.30	Pb
		5/23/23	NH-AA-03-20230523-HM	0.47	0.30	Se

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Aimee Cormier, Lab Director

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Date of report: 6/1/2023

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P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726123	04	5/23/23	NH-AA-04-20230523-HM	0.170	0.09	Ag
		5/23/23	NH-AA-04-20230523-HM	<RL	0.19	As
		5/23/23	NH-AA-04-20230523-HM	<RL	0.09	Ba
		5/23/23	NH-AA-04-20230523-HM	<RL	0.05	Cd
		5/23/23	NH-AA-04-20230523-HM	<RL	0.05	Cr
		5/23/23	NH-AA-04-20230523-HM	<RL	0.19	Pb
		5/23/23	NH-AA-04-20230523-HM	0.294	0.19	Se

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Aimee Cormier, Lab Director

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P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726124	IA	5/23/23	NH-IA-B1A-20230523-HM	0.126	0.07	Ag
		5/23/23	NH-IA-B1A-20230523-HM	1.001	0.14	As
		5/23/23	NH-IA-B1A-20230523-HM	<RL	0.07	Ba
		5/23/23	NH-IA-B1A-20230523-HM	<RL	0.04	Cd
		5/23/23	NH-IA-B1A-20230523-HM	<RL	0.04	Cr
		5/23/23	NH-IA-B1A-20230523-HM	<RL	0.14	Pb
		5/23/23	NH-IA-B1A-20230523-HM	0.182	0.14	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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C314501

Aerobiology Laboratory Associates, Incorporated
A Pace Laboratory

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Tetra Tech Region 8 START	Billing Information: Rindy Mortensen 1560 Broadway Suite 1400 Denver CO 80202
Address: 1560 Broadway Suite 1400 Denver CO 80202	
Report To: Lauren Foster & Maura McAleese	Email To: Lauren & Maura firstname.lastname@tetratech.com
Copy To: r8start.labreports@tetratechinc.onmicrosoft	Site Collection Info/Address:
Customer Project Name/Number: In process	State: / County/City: / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Phone: Email: first.lastname@tetratech.com	Site/Facility ID #: 103X903520F0071230407	Compliance Monitoring? [ ] Yes [X] No
Collected By (print): MM/ LF/ CB / DR	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required:	Immediately Packed on Ice: [ ] Yes [X] N/A
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [X] Hold: **Hold for 30 days after report**	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] NA Analysis: ____

Container Preservative Type **

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Total Time	Total Volume	# of Ctns	Container Type: Plastic (P) Glass (G) Cassette (C)	Analyses: Lead and Arsenic by NIOSH 7300 SUB OUT TO BOSTON	Lab Profile/Line:
NH-FB-01-20230523-HM	AR	G	5/23/2023	09:00	0 min	0 L	1	C	X	726118
NH-FB-02-20230523-HM	AR	G	5/23/2023	09:05	0 min	0 L	1	C	X	19
NH-AA-01-20230523-HM	AR	G	5/23/2023	09:06	362 min	1104 L	1	C	X	20
NH-AA-02-20230523-HM	AR	G	5/23/2023	09:51	349 min	1074 L	1	C	X	21
NH-AA-03-20230523-HM	AR	G	5/23/2023	10:43	216 min	661.6 L	1	C	X	22
NH-AA-04-20230523-HM	AR	G	5/23/2023	11:05	349 min	1056 L	1	C	X	23
NH-IA-B1A-20230523-HM	AR	G	5/23/2023	09:23	471 min	1428 L	1	C	X	24

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: ____
Sample pH Acceptable Y N NA
pH Strips: ____
Sulfide Present Y N NA
Lead Acetate Strips: ____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: Results are determining site PPE - please contact Maura & Lauren ASAP of any issues/delays

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature]	05/24/23 0552	[signature]	5/24/23 552
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
		AW	5/24/2023
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
		Pamela Leavitt-Cole	5/25/23 11:45

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Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

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Laboratory Report

Contact: Lauren Foster
Client: Tetra Tech Region 8 START
Address: 1560 Broadway, Suite 1400
Denver, CO 80202

Batch # C 314509
Date received: 5/26/2023
Date analyzed: 6/1/2023
Date of report: 6/2/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result*	Reporting Limit	Comments
C 726163	FB	5/24/23	NH-FB-20230524-HM	0.180	0.10	Ag
		5/24/23	NH-FB-20230524-HM	<RL	0.20	As
		5/24/23	NH-FB-20230524-HM	<RL	0.10	Ba
		5/24/23	NH-FB-20230524-HM	<RL	0.05	Cd
		5/24/23	NH-FB-20230524-HM	0.051	0.05	Cr
		5/24/23	NH-FB-20230524-HM	<RL	0.20	Pb
		5/24/23	NH-FB-20230524-HM	<RL	0.20	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726164	LB	5/24/23	NH-LB20230524-HM	0.180	0.10	**Ag**
		5/24/23	NH-LB20230524-HM	<RL	0.20	**As**
		5/24/23	NH-LB20230524-HM	<RL	0.10	**Ba**
		5/24/23	NH-LB20230524-HM	<RL	0.05	**Cd**
		5/24/23	NH-LB20230524-HM	<RL	0.05	**Cr**
		5/24/23	NH-LB20230524-HM	<RL	0.20	**Pb**
		5/24/23	NH-LB20230524-HM	0.260	0.20	**Se**

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Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726165	01	5/24/23	NH-AA-01-20230524-HM	0.144	0.08	**Ag**
		5/24/23	NH-AA-01-20230524-HM	<RL	0.16	**As**
		5/24/23	NH-AA-01-20230524-HM	<RL	0.08	**Ba**
		5/24/23	NH-AA-01-20230524-HM	<RL	0.04	**Cd**
		5/24/23	NH-AA-01-20230524-HM	<RL	0.04	**Cr**
		5/24/23	NH-AA-01-20230524-HM	<RL	0.16	**Pb**
		5/24/23	NH-AA-01-20230524-HM	0.160	0.16	**Se**

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726166	02	5/24/23	NH-AA-02-20230524-HM	0.196	0.11	**Ag**
		5/24/23	NH-AA-02-20230524-HM	<RL	0.22	**As**
		5/24/23	NH-AA-02-20230524-HM	<RL	0.11	**Ba**
		5/24/23	NH-AA-02-20230524-HM	<RL	0.05	**Cd**
		5/24/23	NH-AA-02-20230524-HM	0.248	0.05	**Cr**
		5/24/23	NH-AA-02-20230524-HM	<RL	0.22	**Pb**
		5/24/23	NH-AA-02-20230524-HM	0.284	0.22	**Se**

Qualification - Cr: Interference checks were outside control limits for Cr, possible Fe contamination.

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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AEROBIOLOGY LABORATORY ASSOCIATES, INCORPORATED
A Pace Analytical® Laboratory

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: boston@aerobiology.net

Laboratory Report

Contact: Lauren Foster
Client: Tetra Tech Region 8 START
Address: 1560 Broadway, Suite 1400
Denver, CO 80202

Batch # C 314509
Date received: 5/26/2023
Date analyzed: 6/1/2023
Date of report: 6/2/2023

Project # 0
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result*	Reporting Limit	Comments
C 726167	03	5/24/23	NH-AA-03-20230524-HM	1.525	0.90	Ag
		5/24/23	NH-AA-03-20230524-HM	<RL	1.79	As
		5/24/23	NH-AA-03-20230524-HM	<RL	0.90	Ba
		5/24/23	NH-AA-03-20230524-HM	<RL	0.45	Cd
		5/24/23	NH-AA-03-20230524-HM	<RL	0.45	Cr
		5/24/23	NH-AA-03-20230524-HM	<RL	1.79	Pb
		5/24/23	NH-AA-03-20230524-HM	1.97	1.79	Se

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726168	04	5/24/23	NH-AA-04-20230524-HM	0.163	0.09	**Ag**
		5/24/23	NH-AA-04-20230524-HM	<RL	0.18	**As**
		5/24/23	NH-AA-04-20230524-HM	<RL	0.09	**Ba**
		5/24/23	NH-AA-04-20230524-HM	<RL	0.05	**Cd**
		5/24/23	NH-AA-04-20230524-HM	<RL	0.05	**Cr**
		5/24/23	NH-AA-04-20230524-HM	<RL	0.18	**Pb**
		5/24/23	NH-AA-04-20230524-HM	0.190	0.18	**Se**

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726169	IA	5/24/23	NH-IA-B1A-20230524-HM	0.151	0.08	**Ag**
		5/24/23	NH-IA-B1A-20230524-HM	0.470	0.17	**As**
		5/24/23	NH-IA-B1A-20230524-HM	<RL	0.08	**Ba**
		5/24/23	NH-IA-B1A-20230524-HM	<RL	0.04	**Cd**
		5/24/23	NH-IA-B1A-20230524-HM	<RL	0.04	**Cr**
		5/24/23	NH-IA-B1A-20230524-HM	<RL	0.17	**Pb**
		5/24/23	NH-IA-B1A-20230524-HM	0.227	0.17	**Se**

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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C314509

Aerobiology Laboratory Associates, Incorporated
A Pace Laboratory

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

Company: Tetra Tech Region 8 START	Billing Information: Rindy Mortensen 1560 Broadway Suite 1400 Denver CO 80202
Address: 1560 Broadway Suite 1400 Denver CO 80202	
Report To: Lauren Foster & Maura McAleese	Email To: Lauren & Maura firstname.lastname@tetratech.com
Copy To: r8start.labreports@tetratechinc.onmicrosoft	Site Collection Info/Address:
Customer Project Name/Number: In process	State: County/City: / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Phone: Email: first.lastname@tetratech.com	Site/Facility ID #: 103X903520F0071230407	Compliance Monitoring? [ ] Yes [X] No
Collected By (print): MM/ LF/ CB / DR	Purchase Order # : Quote #:	DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: STANDARD	Immediately Packed on Ice: [ ] Yes [X] N/A
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [X] Hold: **Hold for 30 days after report**	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day	Field Filtered (if applicable): [ ] Yes [X] NA Analysis: ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: ____
Sample pH Acceptable Y N NA
pH Strips: ____
Sulfide Present Y N NA
Lead Acetate Strips: ____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Total Time	Total Volume	# of Ctns	Container Type: Plastic (P) Glass (G) Cassette (C)	CAM 17 by NIOSH 7300 SUB OUT TO BOSTON	Lab Sample # / Comments
NH-FB-20230524-HM	AR	G	5/24/2023	09:00	0 min	0 L	1	C	X	726163
NH-LB-20230524-HM	AR	G	5/24/2023	09:05	0 min	0 L	1	C	X	64
NH-AA-01-20230524-HM	AR	G	5/24/2023	09:08	415 min	1248 L	1	C	X	65
NH-AA-02-20230524-HM	AR	G	5/24/2023	11:04	305 min	916.4 L	1	C	X	66
NH-AA-03-20230524-HM	AR	G	5/24/2023	10:45	37 min	111.5 L	1	C	X	67
NH-AA-04-20230524-HM	AR	G	5/24/2023	10:30	365 min	1103 L	1	C	X	68
NH-IA-B1A-20230524-HM	AR	G	5/24/2023	10:35	394 min	1191 L	1	C	X	69

Customer Remarks / Special Conditions / Possible Hazards:
Results are determining site PPE - please contact Maura & Lauren ASAP of any issues/delays

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: ____
Cooler 1 Temp Upon Receipt: ___oC
Cooler 1 Therm Corr. Factor: ___oC
Cooler 1 Corrected Temp: ___oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
TetraTech	5/25/23 06:5		5/25/23 06:0
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
TT		SW	5/25/2023
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) aero	Date/Time:
		5-26-23 9:40	

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

AEROBIOLOGY LABORATORY ASSOCIATES, INCORPORATED
A Pace Analytical® Laboratory

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: boston@aerobiology.net

Laboratory Report

Contact: Lauren Foster
Client: Tetra Tech Region 8 START
Address: 1560 Broadway, Suite 1400
Denver, CO 80202

Batch # C 314539
Date received: 5/31/2023
Date analyzed: 6/1/2023
Date of report: 6/2/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result*	Reporting Limit	Comments
C 726390	FB-01	5/25/23	NH-FB-01-20230525-HM	0.170	0.10	**Ag**
		5/25/23	NH-FB-01-20230525-HM	<RL	0.20	**As**
		5/25/23	NH-FB-01-20230525-HM	<RL	0.10	**Ba**
		5/25/23	NH-FB-01-20230525-HM	<RL	0.05	**Cd**
		5/25/23	NH-FB-01-20230525-HM	0.249	0.05	**Cr**
		5/25/23	NH-FB-01-20230525-HM	<RL	0.20	**Pb**
		5/25/23	NH-FB-01-20230525-HM	0.260	0.20	**Se**

Qualification - Cr: Interference checks were outside control limits for Cr, possible Fe contamination.

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726391	FB-02	5/25/23	NH-FB-02-20230525-HM	0.180	0.10	**Ag**
		5/25/23	NH-FB-02-20230525-HM	<RL	0.20	**As**
		5/25/23	NH-FB-02-20230525-HM	<RL	0.10	**Ba**
		5/25/23	NH-FB-02-20230525-HM	<RL	0.05	**Cd**
		5/25/23	NH-FB-02-20230525-HM	0.252	0.05	**Cr**
		5/25/23	NH-FB-02-20230525-HM	<RL	0.20	**Pb**
		5/25/23	NH-FB-02-20230525-HM	0.230	0.20	**Se**

Qualification - Cr: Interference checks were outside control limits for Cr, possible Fe contamination.

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726392	01	5/25/23	NH-AA-01-20230525-HM	0.126	0.07	**Ag**
		5/25/23	NH-AA-01-20230525-HM	<RL	0.14	**As**
		5/25/23	NH-AA-01-20230525-HM	<RL	0.07	**Ba**
		5/25/23	NH-AA-01-20230525-HM	<RL	0.04	**Cd**
		5/25/23	NH-AA-01-20230525-HM	<RL	0.04	**Cr**
		5/25/23	NH-AA-01-20230525-HM	<RL	0.14	**Pb**
		5/25/23	NH-AA-01-20230525-HM	0.161	0.14	**Se**

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726393	02	5/25/23	NH-AA-02-20230525-HM		0.08	Ag
		5/25/23	NH-AA-02-20230525-HM		0.15	As
		5/25/23	NH-AA-02-20230525-HM		0.08	Ba
		5/25/23	NH-AA-02-20230525-HM		0.04	Cd
		5/25/23	NH-AA-02-20230525-HM		0.04	Cr
		5/25/23	NH-AA-02-20230525-HM		0.15	Pb
		5/25/23	NH-AA-02-20230525-HM		0.15	Se

Sample was not analyzed due to loss of sample during preparation, no quantification of sample could be made due to loss.

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Laboratory Report

Contact: Lauren Foster
Client: Tetra Tech Region 8 START
Address: 1560 Broadway, Suite 1400
Denver, CO 80202

Batch # C 314501
Date received: 5/31/2023
Date analyzed: 6/1/2023
Date of report: 6/2/2023

Project # 0
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in µg/m^3, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result*	Reporting Limit	Comments
C 726394	03	5/25/23	NH-AA-03-20230525-HM	1.533	0.85	**Ag**
		5/25/23	NH-AA-03-20230525-HM	<RL	1.70	**As**
		5/25/23	NH-AA-03-20230525-HM	<RL	0.85	**Ba**
		5/25/23	NH-AA-03-20230525-HM	<RL	0.43	**Cd**
		5/25/23	NH-AA-03-20230525-HM	1.01	0.43	**Cr**
		5/25/23	NH-AA-03-20230525-HM	2.47	1.70	**Pb**
		5/25/23	NH-AA-03-20230525-HM	3.15	1.70	**Se**

Qualification - Cr: Interference checks were outside control limits for Cr, possible Fe contamination.

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Date of report: 6/2/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726395	04	5/25/23	NH-AA-04-20230525-HM	0.117	0.07	**Ag**
		5/25/23	NH-AA-04-20230525-HM	<RL	0.14	**As**
		5/25/23	NH-AA-04-20230525-HM	<RL	0.07	**Ba**
		5/25/23	NH-AA-04-20230525-HM	<RL	0.03	**Cd**
		5/25/23	NH-AA-04-20230525-HM	<RL	0.03	**Cr**
		5/25/23	NH-AA-04-20230525-HM	<RL	0.14	**Pb**
		5/25/23	NH-AA-04-20230525-HM	0.179	0.14	**Se**

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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Date of report: 6/2/2023

Project # N/A
P.O. # N/A
Project Site: 103X903520F0071230407

Metals Analysis In Air Using NIOSH 7300 mod
Results in $\mu g/m^3$, using customer-supplied data

Lab ID	Client ID	Sample date	Description	Result	Reporting Limit	Comments
C 726396	IA	5/25/23	NH-IA-B1A-20230525-HM	0.126	0.07	**Ag**
		5/25/23	NH-IA-B1A-20230525-HM	0.245	0.14	**As**
		5/25/23	NH-IA-B1A-20230525-HM	<RL	0.07	**Ba**
		5/25/23	NH-IA-B1A-20230525-HM	<RL	0.04	**Cd**
		5/25/23	NH-IA-B1A-20230525-HM	<RL	0.04	**Cr**
		5/25/23	NH-IA-B1A-20230525-HM	0.154	0.14	**Pb**
		5/25/23	NH-IA-B1A-20230525-HM	0.203	0.14	**Se**

Sydney Strong, Technical Manager Chemistry
Aimee Cormier, Lab Director

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BRL - Below Repoting Limit Blanks are reported in total micrograms; they are not used to correct sample result:
RL-Reporting Limit; Defind as the lowest concentration the laboratory can accurately quantitate.
The Report shall not be reproduced except in full without the written approval of the laboratory.
Blanks are reported in total micrograms and they are used to correct sample results.

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Aerobiology Laboratory Associates, Inc. — A Pace Laboratory

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL BOLD OUTLINED AREAS are for LAB USE ONLY

C314539

Company: Tetra Tech Region 8 START	Billing Information: Rindy Mortensen 1560 Broadway Suite 1400 Denver CO 80202
Address: 1560 Broadway Suite 1400 Denver CO 80202	
Report To: Lauren Foster & Maura McAleese	Email To: Lauren & Maura firstname.lastname@tetratech.com
Copy To: r8start.labreports@tetratechinc.onmicrosoft	Site Collection Info/Address:
Customer Project Name/Number: In process	State: County/City: / Time Zone Collected: [ ]PT [X]MT [ ]CT [ ]ET
Phone: Email: first.lastname@tetratech.com	Site/Facility ID #: 103X903520F0071230407 — Compliance Monitoring? [ ] Yes [X] No
Collected By (print): MM/ LF/ CB / DR	Purchase Order # : Quote #: — DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: STANDARD — Immediately Packed on Ice: [ ] Yes [X] N/A
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: _____ [X] Hold: **Hold for 30 days after report**	Rush: (Expedite Charges Apply) [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day — Field Filtered (if applicable): [ ] Yes [X] NA — Analysis: _____

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Total Time	Total Volume	# of Ctns	Container Type: Plastic (P) Glass (G) Cassette (C)	CAM 17 by NIOSH 7300 SUB OUT TO BOSTON	Lab Sample # / Comments
NH-FB-01-20230525-HM	AR	G	5/25/2023	08:30	0 min	0 L	1	C	X	7260390
NH-FB-02-20230525-HM	AR	G	5/25/2023	08:35	0 min	0 L	1	C	X	91
NH-AA-01-20230525-HM	AR	G	5/25/2023	10:16	467 min	1425 L	1	C	X	92
NH-AA-02-20230525-HM	AR	G	5/25/2023	10:35	435 min	1331 L	1	C	X	93
NH-AA-03-20230525-HM	AR	G	5/25/2023	09:56	39 min	117.4 L	1	C	X	94
NH-AA-04-20230525-HM	AR	G	5/25/2023	09:31	471 min	1450 L	1	C	X	95
NH-IA-B1A-20230525-HM	AR	G	5/25/2023	10:30	468 min	1427 L	1	C	X	96

Customer Remarks / Special Conditions / Possible Hazards: Results are determining site PPE - please contact Maura & Lauren ASAP of any issues/delays

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: ____oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	MTJL LAB USE ONLY
[signature] Tetratech	5/30/2023 1100	[signature] Tetratech	5/30/2023 1100	Table #:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) NK	Date/Time: 5/30/23	Acctnum: Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) Dorea Jennard aerobiology	Date/Time: 5-31-23 10:35	PM: PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

17th

13 INORGANIC ANALYSIS TRACKING SHEET

CLIENT
Tetra Tech

ANALYSIS

PREP TYPE

BATCH	SAMPLE ID's	QUANTITY	DATE REC.	DATE DUE	Analysis	COMMENTS
8814452	739040 739046	7	5/24/23	5/30/23	Anions	

Microwave
Nitric / Water

Digestion
Hot Plate

Double
Yes

Special

Thermometer 981089-10 (in)

CHECK LIST

COC ACCOMPANIES SAMPLES	YES		NO
PROJECT INFO ON COC	YES		NO
REQUIRED ANALYSIS ON COC	YES	5/24/23	NO
SAMPLES MATCH THE COC	YES		NO
SAMPLES INTACT	YES		NO
Login (data entry)	by		on 5/30/23
Prep started	by		on
Instrument (AA) (ICP) (FIMS)	by		on 5/30/23
Logout (data entry)	by		on
QC Data	by		on 5/30/23
Supervisor/Chemist review	by KP		on 5-31-23

18th

10 INORGANIC ANALYSIS TRACKING SHEET

CLIENT
Type: COC

ANALYSIS

PREP TYPE

BATCH	SAMPLE ID's	QUANTITY	DATE REC.	DATE DUE	Analyst	COMMENTS
[illegible]	[illegible]	7	[illegible]	[illegible]	[illegible]	

Air

Microwave
Metals / Prep

Digested
HF HZ
Sample [illegible]

Special

CHECK LIST

COC ACCOMPANIES SAMPLES	YES	NO
PROJECT INFO ON COC	YES	NO
REQUIRED ANALYSIS ON COC	YES	NO
SAMPLES MATCH THE COC	YES	NO
SAMPLES INTACT	YES	NO

Login (data entry)	by [illegible]	on [illegible]
Prep started	by [illegible]	on [illegible]
Instrument (AA) (ICP) (FIRS)	by [illegible]	on [illegible]
Logged (data entry)	by [illegible]	on [illegible]
QC Data	by [illegible]	on [illegible]
Report (fax) (phoned) (emailed)	by [illegible]	on [illegible]

18th

18 INORGANIC ANALYSIS TRACKING SHEET

CLIENT
[illegible]

ANALYSIS

PREP TYPE

BATCH	SAMPLE IDs	QUANTITY	DATE REC.	DATE DUE	Analyst	COMMENTS
C024509	[illegible]	/	[illegible]	[illegible]	DCHA	

AG

Mercury
Metals / Mercury

CS
5/31/23

Metals
[illegible]
Thermometer [illegible]

Special

CHECK LIST

COC ACCOMPANIES SAMPLES	YES		NO
PROJECT INFO ON COC	YES		NO
REQUIRED ANALYSIS ON COC	YES	CS 5/31/23	NO
SAMPLES MATCH THE COC	YES		NO
SAMPLES INTACT	YES		NO
Login (data entry)	by CS		on 5/31/23
Prep started	by [illegible]		on ↓
Instrument (AA) (ICP) (FIMS)	by [illegible]		on [illegible]
Logout (data entry)	by [illegible]		on [illegible]
QC Data	by [illegible]		on [illegible]
Report(faxed)(phoned)(emailed)	by [illegible]		on

2010

10 INORGANIC ANALYSIS TRACKING SHEET

CLIENT
Tetra Tech

ANALYSIS

PROJECT TYPE

MATRIX	SAMPLE ID's	QUANTITY	DATE REC.	DATE DUE	Analyte	COMMENTS
20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Microwave (Metals) / Kjeldahl

Hotplate (21) +2
Thermometer [illegible]

Special

CHECK LIST

COC ACCOMPANIES SAMPLES	YES		NO
PROJECT INFO ON COC	YES		NO
REQUESTED ANALYSIS ON COC	YES	[illegible]	NO
SAMPLES MATCH THE COC	YES		NO
SAMPLES INTACT	YES		NO
Login (data entry)	by [illegible]	on [illegible]	
Prep started	by	on [illegible]	
Instrument (AA/ICP/FIA/Flame)	by	on [illegible]	
Logout (data entry)	by [illegible]	on [illegible]	
QC Data	by [illegible]	on [illegible]	
Report (summary/spreadsheet/email)	by [illegible]	on [illegible]	

Aerobiology Laboratory Associates, Incorporated
A Pace Analytical® Laboratory

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: boston@aerobiology.net

Quality Control

NIOSH 7300mod

Batch: C314485, C314501 **Analyzed:** 5/31/2023

ID	Element	Result (mg/L)	Reporting Limit (mg/L)	
MBA05312023	Ag	0.0180	0.020	<RL
	As	0.0040	0.020	<RL
	Ba	0.0040	0.020	<RL
	Cd	0.0029	0.010	<RL
	Cr	0.0197	0.010	Blank Correction Applied
	Pb	0.0010	0.020	<RL
	Se	0.0350	0.030	<RL

ID	Element	Result (mg/L)	Target (mg/L)	%Recovery (75-125)
LCS05312023	Ag	4.084	5.000	81.7
	As	7.686	10.00	76.9
	Ba	8.290	10.00	82.9
	Cd	8.043	10.00	80.4
	Cr	8.620	10.00	86.2
	Pb	7.875	10.00	78.8
	Se	7.667	10.00	76.7

Source: VHG-44QCS1Z-100 Lot:1281632-1 exp 01/26/2024

ID	Element	Result (mg/L)	Target (mg/L)	%Recovery (75-125)	%RPD (<25%)
LCSDUP05312023	Ag	4.076	5.000	81.5	3.3
	As	7.810	10.00	78.1	1.6
	Ba	8.351	10.00	83.5	4.2
	Cd	8.073	10.00	80.7	4.5
	Cr	8.617	10.00	86.2	4.6
	Pb	8.314	10.00	83.1	5.4
	Se	7.979	10.00	79.8	4.0

Source: VHG-44QCS1Z-100 Lot:1281632-1 exp 01/26/2024

Aerobiology Laboratory Associates, Incorporated
A Pace Analytical® Laboratory

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: boston@aerobiology.net

Quality Control

NIOSH 7300mod

Batch: C314509, C314539 **Analyzed:** 6/1/2023

ID	Element	Result (mg/L)	Reporting Limit (mg/L)	
MBA06012023	Ag	0.0180	0.020	<RL
	As	0.0040	0.020	<RL
	Ba	0.0040	0.020	<RL
	Cd	0.0026	0.010	<RL
	Cr	0.0046	0.010	<RL
	Pb	0.0060	0.020	<RL
	Se	0.0160	0.030	<RL

ID	Element	Result (mg/L)	Target (mg/L)	%Recovery (75-125)
LCS06012023	Ag	0.405	0.500	81.0
	As	0.772	1.00	77.2
	Ba	0.828	1.00	82.8
	Cd	0.811	1.00	81.1
	Cr	0.845	1.00	84.5
	Pb	0.815	1.00	81.5
	Se	0.810	1.00	81.0

Source: VHG-44QCS1Z-100 Lot:1281632-1 exp 01/26/2024

ID	Element	Result (mg/L)	Target (mg/L)	%Recovery (75-125)	%RPD (<25%)
LCSDUP06012023	Ag	0.405	0.500	81.0	0.0
	As	0.765	1.00	76.5	0.9
	Ba	0.824	1.00	82.4	0.5
	Cd	0.807	1.00	80.7	0.6
	Cr	0.840	1.00	84.0	0.6
	Pb	0.812	1.00	81.2	0.4
	Se	0.797	1.00	79.7	1.6

Source: VHG-44QCS1Z-100 Lot:1281632-1 exp 01/26/2024

Aerobiology Laboratory Associates, Incorporated
A Pace Analytical® Laboratory

780 Simms St.
Suite 104
Golden, CO, 80401
303.232.3746
www.aerobiology.net

Client Name:	Tetra Tech	Date Collected:	5/22/2023
Street Address:	1560 Broadway Suite 1400	Date Received:	5/23/2023
City, State ZIP:	Denver, CO 80202	Date Analyzed:	5/23/2023
Attention:	Lauren Foster & Maura McAleese	Date Reported:	5/23/2023
Client Project Name:	103X903520F0071230407	Project ID:	23019910

Test Requested: **3004, Fiber Counting in Air**
Method: NIOSH 7400, Issue 2: Asbestos and Other Fibers by PCM

Client ID	Lab ID	Sample Date	Location	Volume (L)	Fibers	Fields	Density (fibers/mm²)	Concentration (fibers/cc)	LOD (fibers/cc)	Comments
NH-FB-20230522-AB	23019910-1	5/22/2023		0	0	100	0.0	-	-	
NH-LB-20230522-AB	23019910-2	5/22/2023		0	0	100	0.0	-	-	
NH-AA-01-20230522-AH	23019910-3	5/22/2023		2162	3.5	100	4.5	**0.001**	0.001	
NH-AA-02-20230522-AH	23019910-4	5/22/2023		3226	2.5	100	3.2	**0.000**	0.001	
NH-AA-03-20230522-AL	23019910-5	5/22/2023		1160	8	100	10.2	**0.003**	0.002	
NH-AA-04-20230522-AH	23019910-6	5/22/2023		2213	1.5	100	1.9	**0.000**	0.001	
NH-IA-B1A-20230522-AL	23019910-7	5/22/2023		554.1	3	100	3.8	**0.003**	0.005	

Limit of detection (**LOD**) is 7 fibers/mm². The laboratory is not responsible for data reported in values of fibers/cc because this data is dependent on the volume reported by non-laboratory personnel. Sample results are blank corrected when blanks are provided with the samples. Samples noted as overloaded, damaged, received in poor condition, or otherwise unsatisfactory cannot be analyzed. The above report may not be reproduced, except in full, without written permission by Aerobiology Laboratory Associates, Inc. Aerobiology Laboratory Associates participates in the AIHA IHPAT Proficiency Analytical Testing Program, participant number 192683.

Shannon Whitmore
Laboratory Analyst

Shannon Whitmore
Asbestos Lab Supervisor

Original Issue Date: 05/14/12
Revision Date: 11/12/19
Revision 5

Aerobiology Laboratory Associates, Incorporated
A Pace Analytical® Laboratory

780 Simms St.
Suite 104
Golden, CO, 80401
303.232.3746
www.aerobiology.net

Client Name:	Tetra Tech	Date Collected:	5/23/2023
Street address:	1560 Broadway Suite 1400	Date Received:	5/24/2023
City, State ZIP:	Denver, CO 80202	Date Analyzed:	5/24/2023
Attention:	Lauren Foster & Maura McAleese	Date Reported:	5/24/2023
Client Project Name:	103X903520F0071230407	Project ID:	23020119

Test Requested: **3004, Fiber Counting in Air**
Method: NIOSH 7400, Issue 2: Asbestos and Other Fibers by PCM

Client ID	Lab ID	Sample Date	Location	Volume (L)	Fibers	Fields	Density (fibers/mm²)	Concentration (fibers/cc)	LOD (fibers/cc)	Comments
NH-FB-01-20230523-AB	23020119-1	5/23/2023		0	0	0	0.0	-	-	
NH-FB-02-20230523-AB	23020119-2	5/23/2023		0	0	0	0.0	-	-	
NH-AA-01-20230523-AL	23020119-3	5/23/2023		1174	1174	5	6.4	**0.002**	0.002	
NH-AA-02-20230523-AL	23020119-4	5/23/2023		1089	1089	2	2.5	**0.001**	0.002	
NH-AA-03-20230523-AL	23020119-5	5/23/2023		1023	1023	4	5.1	**0.002**	0.003	
NH-AA-04-20230523-AL	23020119-6	5/23/2023		1057	1057	2	2.5	**0.001**	0.003	
NH-IA-B1A-20230523-AL	23020119-7	5/23/2023		1434	1434	6	7.6	**0.002**	0.002	

Limit of detection (**LOD**) is 7 fibers/mm². The laboratory is not responsible for data reported in values of fibers/cc because this data is dependent on the volume reported by non-laboratory personnel. Sample results are blank corrected when blanks are provided with the samples. Samples noted as overloaded, damaged, received in poor condition, or otherwise unsatisfactory cannot be analyzed. The above report may not be reproduced, except in full, without written permission by Aerobiology Laboratory Associates, Inc. Aerobiology Laboratory Associates participates in the AIHA IHPAT Proficiency Analytical Testing Program, participant number 192683.

Shannon Whitmore
Laboratory Analyst

Shannon Whitmore
Asbestos Lab Supervisor

Aerobiology Laboratory Associates, Incorporated
A Pace Analytical® Laboratory

780 Simms St.
Suite 104
Golden, CO, 80401
303.232.3746
www.aerobiology.net

Client Name:	Tetra Tech	Date Collected:	5/24/2023
Street address:	1560 Broadway Suite 1400	Date Received:	5/25/2023
City, State ZIP:	Denver, CO 80202	Date Analyzed:	5/25/2023
Attention:	Lauren Foster & Maura McAleese	Date Reported:	5/25/2023
Client Project Name:	103X903520F0071230407	Project ID:	23020319

Test Requested: **3004, Fiber Counting in Air**
Method: NIOSH 7400, Issue 2: Asbestos and Other Fibers by PCM

Client ID	Lab ID	Sample Date	Location	Volume (L)	Fibers	Fields	Density (fibers/mm²)	Concentration (fibers/cc)	LOD (fibers/cc)	Comments
NH-FB-20230524-AB	23020319-1	5/24/2023		0	0	100	0.0	-	-	
NH-LB-20230524-AB	23020319-2	5/24/2023		0	0	100	0.0	-	-	
NH-AA-01-20230524-AH	23020319-3	5/24/2023		4111	7.5	100	9.6	**0.001**	0.001	
NH-AA-01-20230524-AH	23020319-4	5/24/2023		3032	6.5	100	8.3	**0.001**	0.001	
NH-AA-03-20230524-AL	23020319-5	5/24/2023		1042	2	100	2.5	**0.001**	0.003	
NH-AA-04-20230524-AL	23020319-6	5/24/2023		1106	1	100	1.3	**0.000**	0.002	
NH-IA-B1A-20230524-AL	23020319-7	5/24/2023		1183	4.5	100	5.7	**0.002**	0.002	

Limit of detection (**LOD**) is 7 fibers/mm². The laboratory is not responsible for data reported in values of fibers/cc because this data is dependent on the volume reported by non-laboratory personnel. Sample results are blank corrected when blanks are provided with the samples. Samples noted as overloaded, damaged, received in poor condition, or otherwise unsatisfactory cannot be analyzed. The above report may not be reproduced, except in full, without written permission by Aerobiology Laboratory Associates, Inc. Aerobiology Laboratory Associates participates in the AIHA IHPAT Proficiency Analytical Testing Program, participant number 192683.

Shannon Whitmore
Laboratory Analyst

Shannon Whitmore
Asbestos Lab Supervisor

Original Issue Date: 05/14/12
Revision Date: 11/12/19
Revision 5

eurofins | Built Environment Testing

Report for:

Tetra Tech START/EPA
Tetra Tech: START/EPA
3101 Zinfandel Dr. Bldg B, Ste 200
Rancho Cordova, CA 95670

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: 103X903520F0071230407; Nedlog Removal Assement
EML ID: 3278101

Approved by:

Technical Manager
Murali Putty

Dates of Analysis:
Asbestos-CARB 435 (400 pt ct): 06-12-2023

Service SOPs: Asbestos-CARB 435 (400 pt ct) (EM-AS-S-1265)
NVLAP Lab Code 200728-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EPK Built Environment Testing, LLC
111 Anza Boulevard, Suite 122, Burlingame, CA 94010
(800) 651-4802 www.eurofinsus.com/Built

Client: Tetra Tech: START/EPA
C/O: Tetra Tech START/EPA
Re: 103X903520F0071230407; Nedlog Removal Assement

Date of Sampling: 05-24-2023
Date of Receipt: 06-01-2023
Date of Report: 06-12-2023

ASBESTOS POINT COUNT REPORT: CARB METHOD 435

Location:	NH-SO-DA01-C5-20230523 Soil from demolition area		
Total Points Counted:	400		
Lab ID-Version‡:	15907287-1		
Sample Layers	**Asbestos Type**	**Asbestos Points Counted**	**Asbestos Concentration (%)**
Brown Soil	-	-	ND
Layer Totals:		-	-

Comments: No asbestos was detected and no points were counted.

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

June 15, 2023

Analytical Report for Service Request No: K2306131

Lauren Foster
Tetra Tech, Inc.
1560 Broadway, Suite 1400
Denver, CO 80202

RE: Nedlog Property Assessment / 103x903520F0071230407

Dear Lauren,

Enclosed are the results of the sample(s) submitted to our laboratory May 31, 2023
For your reference, these analyses have been assigned our service request number **K2306131.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3260. You may also contact me via email at Luke.Rahn@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Luke Rahn
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Inc.
Project: Nedlog Property Assessment
Sample Matrix: Solid

Service Request: K2306131
Date Received: 05/31/2023

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Four solid samples were received for analysis at ALS Environmental on 05/31/2023. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

Method 6020B, 06/13/2023:The matrix spike recovery of Silver for sample NH-WR-B1A1-C3-20230523 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

Approved by Sydney A Wolf Date 06/15/2023

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

Lab PM: Luke Bahr

ALS Environmental
Address: 1317 South 13th Avenue, City, State
Phone: 800-77-7222 Fax: 503-693-7555

Work Order No:

Project Manager:	Laura Fischer-Lowery	Bill to:	Riley Mortensen
Client Name:	Project 0 START Twin Tow	Company:	
Address:	Interstate Highway Route 1450	Address:	
City, State, Zip:	Denver, CO 80202	City, State ZIP:	
Email:	[redacted]	Email:	[redacted]
Project Name:	Stanley Property Acquisition		
Project Number:	[redacted]		
P.O. Number:	1720		
Sampler's Name:	D. Rose / M. McAlexander		

REQUESTED ANALYSIS

TAT: Routine

SAMPLE RECEIPT

Temperature (°C): Temp Blank Present:

Received Intact:	Yes	No	N/A
Cooler Custody Seals:	Yes	No	N/A
Sample Custody Seals:	Yes	No	N/A

Total Containers:

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Solids	5/24/2023	[illegible]		1	X			
[illegible]	Solids	5/24/2023	[illegible]		1	X			
[illegible]	Solids	5/24/2023	[illegible]		1	X			
[illegible]	Solids	5/24/2023	[illegible]		1	X			

Comments

"*" Please call for availability

Due Date:

Dissolved Metal: [illegible]

Additional Methods Available Upon Request

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Maureen McAlexander	[illegible]	5/26/23 [illegible]			

PM

Cooler Receipt and Preservation Form

Client _____ Service Request #21 _____

Received _____ Opened _____ By: _____ Unloaded: _____ By: _____

1. Sample was received via: USPS FedEx UPS DHL PDX Courier Hand Delivered
2. Sample was received in: Cooler Box Envelope Other N/A
3. Were custody seals on coolers? N/A Y N If yes, how many and where? _____
   If present, were custody seals intact? N/A Y N If present, were they signed and dated? N/A Y N

Temp Blank	Sample Temp	IR Gun	Cooler ID / N/A	Out of temp indicate with "X"	PM notified if out of temp	Tracking Number N/A	Filed

4. Was a temperature blank present in cooler? N/A Y N If yes, enter the temperature in the appropriate column above.
   Note: Acceptable temperature is a representative sample bottle to rolled within the cooler never in the column "Sample Temp".
5. Were samples received within the control quarantine temperature range? N/A Y N
   If no, were they received on ice and were they immediately placed in a cooler? Were samples within the PM N/A Y N

Why/How were samples received: Person Randomly Observed Other

6. Packing material: Bubble Wrap Cell Packs Wet Ice Dry Ice Sleeves _____
7. Were custody papers properly filled out (ink, signed, etc.)? N/A Y N
8. Were custody papers in good condition (unbroken)? N/A Y N
9. Were all sample labels complete (ID, date, time, preservative, etc.)? N/A Y N
10. Did all sample labels and tags agree with custody papers? N/A Y N
11. Were samples in the appropriate containers and volume for the tests indicated? N/A Y N
12. Were the pH-preserved bottles (see SOG) checked to be at the appropriate pH? Indicate in the table below. N/A Y N
13. Were VOA vials free of visible bubbles? Indicate in the table below. N/A Y N
14. Was [illegible] in compliance? N/A Y N
15. Were samples received within the holding time? If no, notify the client below and notify the PM N/A Y N
16. Were filled sample containers/bottles filled correctly to the 100 ml mark? N/A Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Reagent pH	Bottle Count Bottle Type	Head-space Grade	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

Metals

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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project:	Nedlog Property Assessment/103x903520F0071230407	**Date Collected:**	05/23/23 14:00
Sample Matrix:	Solid	**Date Received:**	05/31/23 09:40
Sample Name:	NH-WR-B1A1-C3-20230523	**Basis:**	NA
Lab Code:	K2306131-001		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020B	**10100**	mg/L	5.0	0.5	5000	06/14/23 15:38	06/06/23	
Barium	6020B	**0.03 J**	mg/L	0.10	0.0002	10	06/13/23 17:15	06/06/23	
Cadmium	6020B	**0.00073**	mg/L	0.00040	0.00008	10	06/13/23 17:15	06/06/23	
Chromium	6020B	**0.05 J**	mg/L	0.10	0.0003	10	06/13/23 17:15	06/06/23	
Lead	6020B	**0.0009 J**	mg/L	0.10	0.00006	10	06/13/23 17:15	06/06/23	
Mercury	7470A	**0.0003 J**	mg/L	0.0010	0.0001	1	06/08/23 08:49	06/07/23	
Selenium	6020B	**0.018 J**	mg/L	0.020	0.002	10	06/13/23 17:15	06/06/23	
Silver	6020B	ND U	mg/L	0.00040	0.00009	10	06/13/23 17:15	06/06/23	

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Analytical Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project:	Nedlog Property Assessment/103x903520F0071230407	**Date Collected:**	05/23/23 14:05
Sample Matrix:	Solid	**Date Received:**	05/31/23 09:40
Sample Name:	NH-WR-B1A2-C3-20230523	**Basis:**	NA
Lab Code:	K2306131-002		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020B	**5720**	mg/L	5.0	0.5	5000	06/14/23 15:46	06/06/23	
Barium	6020B	**0.02 J**	mg/L	0.10	0.0002	10	06/13/23 17:10	06/06/23	
Cadmium	6020B	**0.00480**	mg/L	0.00040	0.00008	10	06/13/23 17:10	06/06/23	
Chromium	6020B	**0.37**	mg/L	0.10	0.0003	10	06/13/23 17:10	06/06/23	
Lead	6020B	**0.0005 J**	mg/L	0.10	0.00006	10	06/13/23 17:10	06/06/23	
Mercury	7470A	**0.0023**	mg/L	0.0010	0.0001	1	06/08/23 08:50	06/07/23	
Selenium	6020B	**0.123**	mg/L	0.020	0.002	10	06/13/23 17:10	06/06/23	
Silver	6020B	ND U	mg/L	0.00040	0.00009	10	06/13/23 17:10	06/06/23	

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Analytical Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project:	Nedlog Property Assessment/103x903520F0071230407	**Date Collected:**	05/23/23 14:10
Sample Matrix:	Solid	**Date Received:**	05/31/23 09:40
Sample Name:	NH-WR-B1A3-C3-20230523	**Basis:**	NA
Lab Code:	K2306131-003		

TCLP Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020B	**880**	mg/L	5.0	0.5	5000	06/14/23 15:47	06/06/23	
Barium	6020B	**0.04 J**	mg/L	0.10	0.0002	10	06/13/23 17:11	06/06/23	
Cadmium	6020B	**0.0416**	mg/L	0.00040	0.00008	10	06/13/23 17:11	06/06/23	
Chromium	6020B	**0.38**	mg/L	0.10	0.0003	10	06/13/23 17:11	06/06/23	
Lead	6020B	**0.008 J**	mg/L	0.10	0.00006	10	06/13/23 17:11	06/06/23	
Mercury	7470A	**0.0033**	mg/L	0.0010	0.0001	1	06/08/23 08:56	06/07/23	
Selenium	6020B	**0.505**	mg/L	0.020	0.002	10	06/13/23 17:11	06/06/23	
Silver	6020B	ND U	mg/L	0.00040	0.00009	10	06/13/23 17:11	06/06/23	

ALS Group USA, Corp.
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Analytical Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project:	Nedlog Property Assessment/103x903520F0071230407	**Date Collected:**	05/23/23 14:20
Sample Matrix:	Solid	**Date Received:**	05/31/23 09:40
Sample Name:	NH-WR-B1A4-C3-20230523	**Basis:**	NA
Lab Code:	K2306131-004		

TCLP Metals

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020B	**10800**		mg/L	5.0	0.5	5000	06/14/23 15:49	06/06/23	
Barium	6020B	**0.08**	**J**	mg/L	0.10	0.0002	10	06/13/23 17:13	06/06/23	
Cadmium	6020B	**0.0649**		mg/L	0.00040	0.00008	10	06/13/23 17:13	06/06/23	
Chromium	6020B	**0.02**	**J**	mg/L	0.10	0.0003	10	06/13/23 17:13	06/06/23	
Lead	6020B	**0.002**	**J**	mg/L	0.10	0.00006	10	06/13/23 17:13	06/06/23	
Mercury	7470A	**0.0008**	**J**	mg/L	0.0010	0.0001	1	06/08/23 08:58	06/07/23	
Selenium	6020B	**0.726**		mg/L	0.020	0.002	10	06/13/23 17:13	06/06/23	
Silver	6020B	ND	U	mg/L	0.00040	0.00009	10	06/13/23 17:13	06/06/23	

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Analytical Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project:	Nedlog Property Assessment/103x903520F0071230407	**Date Collected:**	NA
Sample Matrix:	Solid	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	KQ2310043-01		

TCLP Metals

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020B	**0.003**	**J**	mg/L	0.010	0.0009	10	06/14/23 14:59	06/06/23	
Barium	6020B	**0.02**	**J**	mg/L	0.10	0.0002	10	06/13/23 17:08	06/06/23	
Cadmium	6020B	ND	U	mg/L	0.00040	0.00008	10	06/13/23 17:08	06/06/23	
Chromium	6020B	**0.003**	**J**	mg/L	0.10	0.0003	10	06/13/23 17:08	06/06/23	
Lead	6020B	**0.0003**	**J**	mg/L	0.10	0.00006	10	06/13/23 17:08	06/06/23	
Mercury	7470A	ND	U	mg/L	0.0010	0.0001	1	06/08/23 08:34	06/07/23	
Selenium	6020B	ND	U	mg/L	0.020	0.002	10	06/13/23 17:08	06/06/23	
Silver	6020B	ND	U	mg/L	0.00040	0.00009	10	06/13/23 17:08	06/06/23	

ALS Group USA, Corp.
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QA/QC Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project	Nedlog Property Assessment/103x903520F0071230407	**Date Collected:**	05/23/23
Sample Matrix:	Solid	**Date Received:**	05/31/23
		Date Analyzed:	06/13/23 - 06/14/23

Replicate Sample Summary
TCLP Metals

Sample Name:	NH-WR-B1A1-C3-20230523	**Units:**	mg/L
Lab Code:	K2306131-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ2310045-02 Result	Average	RPD	RPD Limit
Arsenic	6020B	5.0	0.5	10100	9420	9760	7	20
Barium	6020B	0.10	0.0002	0.03 J	0.02 J	0.03	40 #	20
Cadmium	6020B	0.00040	0.00008	0.00073	0.00065	0.00069	12	20
Chromium	6020B	0.10	0.0003	0.05 J	0.05 J	0.05	<1	20
Lead	6020B	0.10	0.00006	0.0009 J	0.0009 J	0.0009	<1	20
Selenium	6020B	0.020	0.002	0.018 J	0.016 J	0.017	12	20
Silver	6020B	0.00040	0.00009	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project:	Nedlog Property Assessment/103x903520F0071230407	**Date Collected:**	05/23/23
Sample Matrix:	Solid	**Date Received:**	05/31/23
		Date Analyzed:	06/13/23 - 06/14/23
		Date Extracted:	06/6/23

Matrix Spike Summary
TCLP Metals

Sample Name:	NH-WR-B1A1-C3-20230523	**Units:**	mg/L
Lab Code:	K2306131-001	**Basis:**	NA
Analysis Method:	6020B		
Prep Method:	EPA 3020A		

Matrix Spike
KQ2310045-03

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	10100	9950	5.0	-3767 #	75-125
Barium	0.03 J	10.0	10.0	100	75-125
Cadmium	0.00073	0.920	1.00	92	75-125
Chromium	0.05 J	4.82	5.00	95	75-125
Lead	0.0009 J	4.72	5.00	94	75-125
Selenium	0.018 J	0.887	1.00	87	75-125
Silver	ND U	0.121	1.00	12 N	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project:	Nedlog Property Assessment/103x903520F0071230407	**Date Analyzed:**	06/13/23 - 06/14/23
Sample Matrix:	Solid		

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ2310045-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020B	4.61	5.00	92	80-120
Barium	6020B	9.46	10.0	95	80-120
Cadmium	6020B	0.877	1.00	88	80-120
Chromium	6020B	4.48	5.00	90	80-120
Lead	6020B	4.43	5.00	89	80-120
Selenium	6020B	0.894	1.00	89	80-120
Silver	6020B	0.860	1.00	86	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Tetra Tech, Inc.	**Service Request:**	K2306131
Project:	Nedlog Property Assessment/103x903520F0071230407	**Date Analyzed:**	06/08/23
Sample Matrix:	Solid		

Lab Control Sample Summary
TCLP Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ2310073-01

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	0.0042	0.0050	85	80-120

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407
Sample Matrix: Solid

Metals

Prep Method: EPA 3020A **Extraction Lot:** 421067
Analytical Method: 6020B **Extraction Date:** 06/06/23 13:10

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
NH-WR-B1A1-C3-20230523	K2306131-001	5/23/23	5/31/23	25.000 mL	25 mL	
NH-WR-B1A2-C3-20230523	K2306131-002	5/23/23	5/31/23	25.000 mL	25 mL	
NH-WR-B1A3-C3-20230523	K2306131-003	5/23/23	5/31/23	25.000 mL	25 mL	
NH-WR-B1A4-C3-20230523	K2306131-004	5/23/23	5/31/23	25.000 mL	25 mL	
Method Blank	KQ2310043-01MB	NA	NA	25.000 mL	25 mL	
Lab Control Sample	KQ2310045-01LCS	NA	NA	25.000 mL	25 mL	
Duplicate	KQ2310045-02DUP	5/23/23	5/31/23	25.000 mL	25 mL	
Matrix Spike	KQ2310045-03MS	5/23/23	5/31/23	25.000 mL	25 mL	

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407
Sample Matrix: Solid

Metals

Prep Method: Method **Extraction Lot:** 421086
Analytical Method: 7470A **Extraction Date:** 06/07/23 09:12

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
NH-WR-B1A1-C3-20230523	K2306131-001	5/23/23	5/31/23	20 mL	20 mL	
NH-WR-B1A2-C3-20230523	K2306131-002	5/23/23	5/31/23	20 mL	20 mL	
NH-WR-B1A3-C3-20230523	K2306131-003	5/23/23	5/31/23	20 mL	20 mL	
NH-WR-B1A4-C3-20230523	K2306131-004	5/23/23	5/31/23	20 mL	20 mL	
Method Blank	KQ2310043-01MB	NA	NA	20 mL	20 mL	
Lab Control Sample	KQ2310073-01LCS	NA	NA	20 mL	20 mL	

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits
ICV 06/08/23 08:24						
Mercury	7470A	806815	4.9	5.0	97	90-110
CCV 06/08/23 08:29						
Mercury	7470A	806815	5.0	5.0	99	90-110
CCV 06/08/23 08:52						
Mercury	7470A	806815	5.0	5.0	99	90-110
CCV 06/08/23 09:04						
Mercury	7470A	806815	5.0	5.0	99	90-110
ICV 06/13/23 16:45						
Barium	6020B	807376	97	100	97	90-110
Cadmium	6020B	807376	12.3	12.5	99	90-110
Chromium	6020B	807376	9	10	95	90-110
Lead	6020B	807376	25	25	99	90-110
Selenium	6020B	807376	24.9	25.0	100	90-110
Silver	6020B	807376	12.3	12.5	98	90-110
CCV 06/13/23 16:47						
Barium	6020B	807376	25	25	99	90-110
Cadmium	6020B	807376	24.8	25.0	99	90-110
Chromium	6020B	807376	25	25	100	90-110
Lead	6020B	807376	25	25	100	90-110
Selenium	6020B	807376	25.2	25.0	101	90-110
Silver	6020B	807376	12.2	12.5	98	90-110
CCV 06/13/23 17:42						
Barium	6020B	807376	25	25	100	90-110
Cadmium	6020B	807376	24.4	25.0	98	90-110
Chromium	6020B	807376	25	25	98	90-110
Lead	6020B	807376	25	25	99	90-110
Selenium	6020B	807376	24.5	25.0	98	90-110
Silver	6020B	807376	12.0	12.5	96	90-110
ICV 06/14/23 14:33						
Arsenic	6020B	807506	24.0	25.0	96	90-110
CCV 06/14/23 14:34						
Arsenic	6020B	807506	24.5	25.0	98	90-110
CCV 06/14/23 15:23						
Arsenic	6020B	807506	25.5	25.0	102	90-110
CCV 06/14/23 15:50						
Arsenic	6020B	807506	25.3	25.0	101	90-110

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

INITIAL AND CONTINUING CALIBRATION BLANKS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Result	C
ICB 06/08/23 08:26				
Mercury	7470A	806815	0.1	U
CCB 06/08/23 08:31				
Mercury	7470A	806815	0.1	U
CCB 06/08/23 08:54				
Mercury	7470A	806815	0.1	U
CCB 06/08/23 09:06				
Mercury	7470A	806815	0.1	U
ICB 06/13/23 16:49				
Barium	6020B	807376	0.03	J
Cadmium	6020B	807376	0.010	J
Chromium	6020B	807376	0.03	U
Lead	6020B	807376	0.009	J
Selenium	6020B	807376	0.2	U
Silver	6020B	807376	0.009	U
CCB 06/13/23 16:50				
Barium	6020B	807376	0.02	U
Cadmium	6020B	807376	0.008	U
Chromium	6020B	807376	0.03	U
Lead	6020B	807376	0.006	U
Selenium	6020B	807376	0.2	U
Silver	6020B	807376	0.009	U
CCB 06/13/23 17:46				
Barium	6020B	807376	0.02	U
Cadmium	6020B	807376	0.008	U
Chromium	6020B	807376	0.03	U
Lead	6020B	807376	0.01	J
Selenium	6020B	807376	0.2	U
Silver	6020B	807376	0.009	U
ICB 06/14/23 14:36				
Arsenic	6020B	807506	0.09	U
CCB 06/14/23 14:37				
Arsenic	6020B	807506	0.09	U
CCB 06/14/23 15:25				
Arsenic	6020B	807506	0.1	J
CCB 06/14/23 15:52				
Arsenic	6020B	807506	0.2	J

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

LOW LEVEL INITIAL AND LOW LEVEL CONTINUING CALIBRATION VERIFICATION

Concentration Units: ug/L

Sample ID	Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
LLICV								
	Mercury	7470A	806815	0.19	0.2	96	50-199	06/08/23 08:27
LLICV								
	Cadmium	6020B	807376	0.020	0.02	99	80-120	06/13/23 16:52
	Chromium	6020B	807376	0.22	0.2	111	80-120	06/13/23 16:52
	Lead	6020B	807376	0.020	0.02	102	80-120	06/13/23 16:52
	Selenium	6020B	807376	0.99	1.0	99	80-120	06/13/23 16:52
	Silver	6020B	807376	0.020	0.02	99	80-120	06/13/23 16:52
LLICV								
	Barium	6020B	807376	0.094	0.1	94	80-120	06/13/23 16:55
LLICV								
	Arsenic	6020B	807506	0.51	0.5	103	80-120	06/14/23 14:39

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Barium	6020B	807376	0.08	-	-	-	06/13/23 16:57
Cadmium	6020B	807376	0.011	-	-	-	06/13/23 16:57
Chromium	6020B	807376	0.3	-	-	-	06/13/23 16:57
Lead	6020B	807376	0.1	-	-	-	06/13/23 16:57
Selenium	6020B	807376	0.4	-	-	-	06/13/23 16:57
Silver	6020B	807376	0.007	-	-	-	06/13/23 16:57

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSAB **Concentration Units:** ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Barium	6020B	807376	0.10	-	-	-	06/13/23 16:59
Cadmium	6020B	807376	23.8	25.0	95	80-120	06/13/23 16:59
Chromium	6020B	807376	49	50	98	80-120	06/13/23 16:59
Lead	6020B	807376	0.1	-	-	-	06/13/23 16:59
Selenium	6020B	807376	24.3	25.0	97	80-120	06/13/23 16:59
Silver	6020B	807376	11.8	12.5	94	80-120	06/13/23 16:59

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSA **Concentration Units:** ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Arsenic	6020B	807506	0.1	-	-	-	06/14/23 14:52

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP INTERFERENCE CHECK SAMPLE

Sample ID ICSAB **Concentration Units:** ug/L

Analyte	Method	Analysis Batch:	Result	True Value	% Rec	% Rec. Limits	Analysis Date
Arsenic	6020B	807506	24.0	25.0	96	80-120	06/14/23 14:53

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

POST SPIKE SAMPLE RECOVERY

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Post Spike Result	True Value	% Rec	% Rec. Limits	Analysis Date
K2306131-001A								
Barium	6020B	807376	3 J	50	50	98	80-120	06/13/23 17:21
Cadmium	6020B	807376	0.08 U	46.6	50.0	93	80-120	06/13/23 17:21
Chromium	6020B	807376	5 J	50	50	95	80-120	06/13/23 17:21
Lead	6020B	807376	0.09 J	50	50	93	80-120	06/13/23 17:21
Selenium	6020B	807376	2 J	45	50	87	80-120	06/13/23 17:21
Silver	6020B	807376	0.09 U	4.59	5.00	92	80-120	06/13/23 17:21
K2306131-001A								
Arsenic	6020B	807506	2000	2100	100	95 #	80-120	06/14/23 15:43

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP SERIAL DILUTIONS

Concentration Units: ug/L

Sample ID / Analyte	Method	Analysis Batch:	Initial Sample Result	Serial Dillution Result	% Diff	% Diff. Limit	Analysis Date
K2306131-003SDL							
Mercury	7470A	806815	3.3	3.6 J	9	10	06/08/23 09:02
K2306131-001SDL							
Barium	6020B	807376	30 J	30 J	7	10	06/13/23 17:19
Cadmium	6020B	807376	0.7	0.7 J	7	10	06/13/23 17:19
Chromium	6020B	807376	50 J	50 J	8	10	06/13/23 17:19
Lead	6020B	807376	0.9 J	1 J	8	10	06/13/23 17:19
Selenium	6020B	807376	20 J	20 J	9	10	06/13/23 17:19
Silver	6020B	807376	0.09 U	-0.0830 U	-319	10	06/13/23 17:19
K2306131-001SDL							
Arsenic	6020B	807506	10100000	10200000	1	10	06/14/23 15:41

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

Detection Limits

Instrument: K-ICP-MS-07 **Matrix:** Solid

Analyte	Mass	Units	MRL	MDL	Method
Arsenic	75	ug/L	1	0.09	6020B

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

Detection Limits

Instrument: K-ICP-MS-06 **Matrix:** Solid

Analyte	Mass	Units	MRL	MDL	Method
Barium	138	ug/L	10	0.02	6020B
Cadmium	111	ug/L	0.04	0.008	6020B
Chromium	52	ug/L	10	0.03	6020B
Lead	208	ug/L	10	0.006	6020B
Selenium	78	ug/L	2	0.2	6020B
Silver	107	ug/L	0.04	0.009	6020B

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

Detection Limits

Instrument: K-CVAA-03 **Matrix:** Solid

Analyte	Wavelength (nm)	Units	MRL	MDL	Method
Mercury	253	ug/L	1.0	0.1	7470A

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP Linear Range (Quarterly)

Instrument: K-ICP-MS-07

Analyte	Concentration (ug/L)	Method
Arsenic 75	4500	6020B

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP Linear Range (Quarterly)

Instrument: K-ICP-MS-06

Analyte	Concentration (ug/L)	Method
Barium 138	9000	6020B
Cadmium 111	9000	6020B
Chromium 52	9000	6020B
Lead 208	4500	6020B
Selenium 78	9000	6020B
Silver 107	450	6020B

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP Linear Range (Quarterly)

Instrument: K-CVAA-03

Analyte	Concentration (ug/L)	Method
Mercury	10	7470A

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

Analysis Run Log

Instrument ID: **K-CVAA-03** **Analytical BatchID:** **806815**

Sample	Dilution Factor	Date/Time	Hg
ZZZZZZ	1	06/08/23 08:14	
ZZZZZZ	1	06/08/23 08:16	
ZZZZZZ	1	06/08/23 08:18	
ZZZZZZ	1	06/08/23 08:19	
ZZZZZZ	1	06/08/23 08:21	
ZZZZZZ	1	06/08/23 08:22	
ICV1	1	06/08/23 08:24	X
ICB1	1	06/08/23 08:26	X
LLICV1	1	06/08/23 08:27	X
CCV1	1	06/08/23 08:29	X
CCB1	1	06/08/23 08:31	X
KQ2310043-01MB	1	06/08/23 08:34	X
KQ2310073-01LCS	1	06/08/23 08:37	X
ZZZZZZ	1	06/08/23 08:39	
ZZZZZZ	1	06/08/23 08:41	
ZZZZZZ	1	06/08/23 08:42	
ZZZZZZ	1	06/08/23 08:44	
ZZZZZZ	1	06/08/23 08:45	
ZZZZZZ	1	06/08/23 08:47	
K2306131-001	1	06/08/23 08:49	X
K2306131-002	1	06/08/23 08:50	X
CCV2	1	06/08/23 08:52	X
CCB2	1	06/08/23 08:54	X
K2306131-003	1	06/08/23 08:56	X
K2306131-004	1	06/08/23 08:58	X
ZZZZZZ	1	06/08/23 08:59	
K2306131-003SDL	5	06/08/23 09:02	X
CCV3	1	06/08/23 09:04	X
CCB3	1	06/08/23 09:06	X

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

Analysis Run Log

Instrument ID: **K-ICP-MS-06** **Analytical BatchID:** **807376**

Sample	Dilution Factor	Date/Time	Ba	Cd	Cr	Pb	Se	Ag
ZZZZZZ	1	06/13/23 16:41						
ZZZZZZ	1	06/13/23 16:43						
ICV	1	06/13/23 16:45	X	X	X	X	X	X
CCV	1	06/13/23 16:47	X	X	X	X	X	X
ICB	1	06/13/23 16:49	X	X	X	X	X	X
CCB	1	06/13/23 16:50	X	X	X	X	X	X
LLICVW	1	06/13/23 16:52		X	X	X	X	X
LLICVW 2X	1	06/13/23 16:55	X					
ICSA	1	06/13/23 16:57	X	X	X	X	X	X
ICSAB	1	06/13/23 16:59	X	X	X	X	X	X
ZZZZZZ	1	06/13/23 17:01						
KQ2310043-01MB	10	06/13/23 17:08	X	X	X	X	X	X
K2306131-002	10	06/13/23 17:10	X	X	X	X	X	X
K2306131-003	10	06/13/23 17:11	X	X	X	X	X	X
K2306131-004	10	06/13/23 17:13	X	X	X	X	X	X
K2306131-001	10	06/13/23 17:15	X	X	X	X	X	X
K2306131-001DUP	10	06/13/23 17:17	X	X	X	X	X	X
K2306131-001SDL	50	06/13/23 17:19	X	X	X	X	X	X
K2306131-001PS	10	06/13/23 17:21	X	X	X	X	X	X
K2306131-001MS	10	06/13/23 17:22	X	X	X	X	X	X
KQ2310045-01LCS	10	06/13/23 17:24	X	X	X	X	X	X
CCV	1	06/13/23 17:42	X	X	X	X	X	X
CCB	1	06/13/23 17:46	X	X	X	X	X	X
ZZZZZZ	1	06/13/23 17:58						

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

Analysis Run Log

Instrument ID: **K-ICP-MS-07** **Analytical BatchID:** **807506**

Sample	Dilution Factor	Date/Time	As
ZZZZZZ	1	06/14/23 14:30	
ZZZZZZ	1	06/14/23 14:31	
ICV	1	06/14/23 14:33	X
CCV	1	06/14/23 14:34	X
ICB	1	06/14/23 14:36	X
CCB	1	06/14/23 14:37	X
LLICVW	1	06/14/23 14:39	X
ICSA	1	06/14/23 14:52	X
ICSAB	1	06/14/23 14:53	X
ZZZZZZ	1	06/14/23 14:55	
KQ2310043-01MB	10	06/14/23 14:59	X
KQ2310045-01LCS	10	06/14/23 15:00	X
ZZZZZZ	2000	06/14/23 15:01	
ZZZZZZ	2000	06/14/23 15:03	
K2306131-001SDL	10000	06/14/23 15:04	X
K2306131-001PS	2000	06/14/23 15:06	X
ZZZZZZ	2000	06/14/23 15:07	
ZZZZZZ	2000	06/14/23 15:09	
ZZZZZZ	2000	06/14/23 15:10	
ZZZZZZ	2000	06/14/23 15:12	
CCV	1	06/14/23 15:23	X
CCB	1	06/14/23 15:25	X
K2306131-001	5000	06/14/23 15:38	X
K2306131-001DUP	5000	06/14/23 15:40	X
K2306131-001SDL	25000	06/14/23 15:41	X
K2306131-001PS	5000	06/14/23 15:43	X
K2306131-001MS	5000	06/14/23 15:44	X
K2306131-002	5000	06/14/23 15:46	X
K2306131-003	5000	06/14/23 15:47	X
K2306131-004	5000	06/14/23 15:49	X
CCV	1	06/14/23 15:50	X
CCB	1	06/14/23 15:52	X
ZZZZZZ	1	06/14/23 16:01	

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: **K-ICP-MS-07** **Analytical BatchID:** **807506**

Sample	Date/Time	Ge72He	Lu175He	Th232He
ZZZZZZ	06/14/23 14:30			
ZZZZZZ	06/14/23 14:31			
ICV	06/14/23 14:33	100	100	99
CCV	06/14/23 14:34	101	100	101
ICB	06/14/23 14:36	99	101	100
CCB	06/14/23 14:37	99	101	99
LLICVW	06/14/23 14:39	98	100	99
ICSA	06/14/23 14:52	96	98	100
ICSAB	06/14/23 14:53	96	97	99
ZZZZZZ	06/14/23 14:55			
KQ2310043-01MB	06/14/23 14:59	96	98	98
KQ2310045-01LCS	06/14/23 15:00	97	99	97
ZZZZZZ	06/14/23 15:01			
ZZZZZZ	06/14/23 15:03			
ZZZZZZ	06/14/23 15:04			
ZZZZZZ	06/14/23 15:06			
ZZZZZZ	06/14/23 15:07			
ZZZZZZ	06/14/23 15:09			
ZZZZZZ	06/14/23 15:10			
ZZZZZZ	06/14/23 15:12			
CCV	06/14/23 15:23	98	99	99
CCB	06/14/23 15:25	99	99	96
K2306131-001	06/14/23 15:38	99	101	101
K2306131-001DUP	06/14/23 15:40	101	102	99
K2306131-001SDL	06/14/23 15:41	99	101	99
K2306131-001PS	06/14/23 15:43	101	103	102
K2306131-001MS	06/14/23 15:44	100	101	98
K2306131-002	06/14/23 15:46	101	101	96
K2306131-003	06/14/23 15:47	102	101	99
K2306131-004	06/14/23 15:49	102	102	97
CCV	06/14/23 15:50	100	101	98
CCB	06/14/23 15:52	101	102	99
ZZZZZZ	06/14/23 16:01			

Client: Tetra Tech, Inc. **Service Request:** K2306131
Project: Nedlog Property Assessment/103x903520F0071230407

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Instrument ID: **K-ICP-MS-06** **Analytical BatchID:** **807376**

Sample	Date/Time	Ge72H2	Ge72He	In115He	Lu175He
ZZZZZZ	06/13/23 16:41				
ZZZZZZ	06/13/23 16:43				
ICV	06/13/23 16:45	99	98	97	99
CCV	06/13/23 16:47	97	97	96	97
ICB	06/13/23 16:49	96	100	97	98
CCB	06/13/23 16:50	97	97	96	96
LLICVW	06/13/23 16:52	96	97	96	96
LLICVW 2X	06/13/23 16:55	97	96	96	97
ICSA	06/13/23 16:57	90	92	89	95
ICSAB	06/13/23 16:59	92	91	91	96
ZZZZZZ	06/13/23 17:01				
KQ2310043-01MB	06/13/23 17:08	93	94	93	94
K2306131-002	06/13/23 17:10	95	96	94	98
K2306131-003	06/13/23 17:11	99	101	95	98
K2306131-004	06/13/23 17:13	96	97	94	99
K2306131-001	06/13/23 17:15	100	101	97	99
K2306131-001DUP	06/13/23 17:17	100	103	97	100
K2306131-001SDL	06/13/23 17:19	101	103	99	100
K2306131-001PS	06/13/23 17:21	100	101	96	98
K2306131-001MS	06/13/23 17:22	100	102	98	100
KQ2310045-01LCS	06/13/23 17:24	105	105	100	102
CCV	06/13/23 17:42	98	97	96	95
CCB	06/13/23 17:46	97	99	96	97
ZZZZZZ	06/13/23 17:58				

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Worksheet

Prep Date:
Prep Method:
Prep Technician:

Additional Comments:

Preparation Equipment:

Generator: _____

Reviewed By: _____ Date: _____

ICP-MS Spike Solution:

Lot# [illegible]

Expires 4/30/04

Analyte	Stock Concentration
Ag	500 µg/mL
Al	500 µg/mL
As	500 µg/mL
Ba	1000 µg/mL
Cd	500 µg/mL
Cr	500 µg/mL
Se	500 µg/mL
Cu	500 µg/mL
Ni	500 µg/mL
Zn	1000 µg/mL

Additional spikes

Element	Source	Lot #	Vols of	Type	Exp. date	Source and date
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

This solution is stable until: [illegible]

Preservation Information Worksheet

Comments: [illegible]

Received By: _____ Specify: _____

Witnessed By: _____

Analyst: _____ Accepted By: _____

Date: _____ Signature: _____ Date: _____

Extraction Solvent Temp (deg): [illegible]

Tumbler #: [illegible] Thermometer: [illegible]

Hot Plate Temp [illegible]

Tubing Solution [illegible]

Solvent Solution [illegible]

Other [illegible] HCl/H2O [illegible]

Extraction Normal Time [illegible]

Date: [illegible]

Disposable Extraction Vessel Type [illegible]

Extraction Finished Date: [illegible]

Date: [illegible]

Samples aliquoted, spiked & preserved ☑ Initials/Date [illegible]

Tumbler Solution Speed (98 - 12 rpm) [illegible]

Room Temperature at the Beginning of Extraction (Temp Range 21° C - 25°C) 23

Analyst [illegible] Date [illegible] Reviewer [illegible] Date [illegible]

Pre-Prep Information Spreadsheet

Prep Batch: [illegible]

Container Lot No: [illegible]

Prep Due Date: [illegible]

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

Relinquished By: [illegible] Date/Time: [illegible] Checked By: [illegible] Date/Time: [illegible]

Pre-Prep Information Worksheet

Prep Batch # [illegible]

Container Lot No: [illegible]

Prep Disc Date: [illegible]

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

Relinquished By: [illegible] Weight [illegible] Received By: [illegible] Date/Time [illegible]

Service Request# K2306131
Calibration: 061323BICPMS06
ALS LIMS Run# 807376
Pipette IDs: 18010244, 19070885, 18006318
Cal Std: MS31-79-A
ICV Std: MS31-78-C
LLICV Std: MS31-78-D
I.S. Solution: MS31-68-B
Tune Std: MS31-66-D
ICSA: MS31-78-E
ICSAB: MS31-78-F

ICP-MS Data Review Form

		Yes	No	NA
1.	Appropriate standardization completed	X		
2.	ICV in control (+/- 10%)	X		
3.	CCVs in control (+/- 10%)	X		
4.	ICB/CCB's below MRL	X		
5.	LLICV standard analyzed and in control	X		
6.	ICS standards within 20% of true value	X		
6.	All analytes within instrument linear range	X		
7.	Adequate rinse out time allowed	X		
8.	Internal standards in control	X		
9.	Interferences checked	X		
10	Was the run terminated? If so, why.		X	

See Benchsheet exception report for sample batch QC information.
Comments: NR As, MRL=10ppb for Ba, Cr, Pb.

Prep Batches: 421067

Primary Review by [illegible] Date [illegible]

Secondary Review by [illegible] Date [illegible]

Data Review Form

Instrument ID#: K-ICP-MS-06
DataFile Name: K:\ICP\KIP\DATA\K-ICP-MS-06 (Agilent 7810)\061323R.csv
RUNNO: 807376

K2306131 [illegible]

K2306131-001MS - Metals TCLP -

MS Recovery

6020-Metals TCLP - 107 Ag [Hg] - Recovery 12 Limits: 75 - [illegible] 125

Primary Approver: [illegible]

Secondary Approver: [illegible]

Page 1 of 1

Sample

	Rjct	Data File	Acq. Date-Time	Type	Sample Name	Comment	Vial
1	☐	001SMPL	2023-06-13 4:27:50 P	Sampl	PRIMER		2
2	☐	002SMPL	2023-06-13 4:29:42 P	Sampl	RINSE		[illegible]
3	☐	003CALB	2023-06-13 4:41:25 P	CalBlk	Blank		[illegible]
4	☐	004CALS	2023-06-13 4:43:29 P	CalStd	25ppb		[illegible]
5	☐	005_ICV.d	2023-06-13 4:45:[illegible] P	ICV	ICV		2101
6	☐	006_CCV	2023-06-13 4:47:[illegible] P	CCV	CCV		2
7	☐	007_ICB	2023-06-13 4:49:05 P	ICB	ICB		[illegible]
8	☐	008_CCB	2023-06-13 4:50:57 P	CCB	CCB		[illegible]
9	☐	009LLCV.d	2023-06-13 4:52:01 P	LLCV	LLICVW		2104
10	☐	010_QC1.d	2023-06-13 4:55:57 P	QC1	LLICVW 2X		2105
11	☐	011ICSA.d	2023-06-13 4:57:45 P	ICSA	ICSA		2103
12	☐	012ICSB.d	2023-06-13 4:59:41 P	ICSB	ICSAB		2104
13	☐	013SMPL	2023-06-13 5:01:[illegible] P	Samp	MCS[illegible]		2105
14	☐	014_PB.d	2023-06-13 5:05:10 P	PB	K2306131-001	E 10X	1402
15	☐	015SMPL	2023-06-13 5:10:0[illegible] P	Samp	K2306131-002	E 10X	1403
16	☐	016SMPL	2023-06-13 5:11:56 P	Samp	K2306131-003	E 10X	1404
17	☐	017SMPL	2023-06-13 5:13:44 P	Samp	K2306131-004	E 10X	1405
18	☐	018_ASP.d	2023-06-13 5:15:34 P	ASpl	K2306131-001	E 10X	1406
19	☐	019_Dup.d	2023-06-13 5:17:24 P	Dup	K2306131-002	E 10X	1407
20	☐	020SMPL	2023-06-13 5:19:15 P	Samp	K2306131-001	L 50X	1408
21	☐	021_PDS.d	2023-06-13 5:21:[illegible] P	PDS	K2306131-001A	E 10X +50	1409
22	☐	022_SPK.d	2023-06-13 5:2[illegible] P	Spike	K2023 0043-03	E 10X	1410
23	☐	023_LCS.d	2023-06-13 5:24:[illegible] P	LCS	K2023 0043-01	E 10X	1411
24	☐	024_CCV	2023-06-13 5:42:10 P	CCV	CCV		2
25	☐	025_CCB	2023-06-13 5:46:34 P	CCB	CCB		[illegible]
26	☐	026SMPL	2023-06-13 6:38:27 P	Sampl	LRBTD	[illegible]ppb	1412

Analyte

	Name	Mass	ISTD	Tune Mode	Units	Rep Rate
1	Cr	[illegible]	72	He	ug/l	3
2	Cr	53	72	He	ug/l	3
3	As	75	72	He	ug/l	3
4	Se	77	72	H2	ug/l	3
5	Se	78	72	H2	ug/l	3
6	Mo	95	115	He	ug/l	3
7	Mo	98	115	He	ug/l	3

Anchor

	Major	Hand	S.D.	Pure Acid	Units	Replenic
8	Ag	107	1.5	Fe	mg/l	3
9	Ag	107	1.5	Fe	mg/l	3
10	Cd	111	1.5	Fe	mg/l	3
11	Zn	131	1.5	Fe	mg/l	3
12	[illegible]	208	1.5	Fe	mg/l	3
13	[illegible]	207	1.5	Fe	mg/l	3
14	[illegible]	208	1.5	Fe	mg/l	3
15	Ge	73		Fe		3
16	Ge	72		Fe		3
17	Ge	72		Fe		3
18	[illegible]	115		Fe		3
19	Lu	[illegible]		Fe		3
20	[illegible]	232		Fe		3

US EPA Tune Check Report

Operator Name	[illegible]
Instrument Used	[illegible]
Acq. Date-Time	[illegible]
Injection Comment	—
Instrument Name	[illegible]

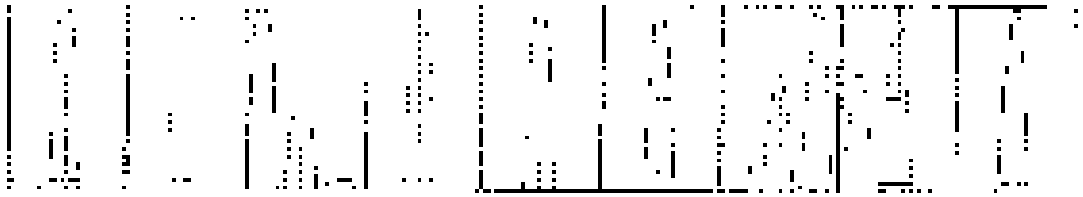
[illegible]

[illegible]

Mass	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]



[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

US EPA Tune Check Report

Mass	[illegible]	Axis	Axis (Required)	[illegible]	W-5%	W-5% (Flag)	W-5% (Required)
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
115	[illegible]	[illegible]	[illegible] - 115.10		[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible] - 140.10		[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]

[illegible]	[illegible]
Acquisition Time [sec]	[illegible]
Status	[illegible]

Tune Parameters

Plasma Parameters

Plasma Mode	—	Nebulizer Gas	0.98 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	[illegible] L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	[illegible] mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	[illegible] V	Omega Lens	9.6 V	Deflect	[illegible] V
Extract 2	[illegible] V	Cell Entrance	[illegible] V	Plate Bias	[illegible] V
Omega Bias	[illegible] V	Cell Exit	[illegible] V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	[illegible] V
He Flow	[illegible] mL/min	OctP Bias	[illegible] V		
H2 Flow	[illegible] mL/min	OctP RF	[illegible] V		

QP Parameters

Mass Gain	[illegible]	Axis Gain	1.0002	QP Bias	[illegible] V
Mass Offset	[illegible]	Axis Offset	[illegible]		

Hardware Settings

Torch

Torch H	[illegible] mm	Torch V	[illegible] mm

EM

Discriminator	[illegible] mV	Analog HV	[illegible] V	Pulse HV	[illegible] V

Calibration Block Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Name	Mass	ISTD	Tune Mode	CPS	CPS RSD
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ag	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sc	45	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
In	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Calibration Standard Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Sample Type	[illegible]
[illegible]	—
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Name	Mass	RSD	Tune Mode	CPS	CPS RSD
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	75	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cr	52	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mo	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Sc	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
In	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Initial Calibration Verification (ICV) Report

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
Mo	95	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
Mo	[illegible]	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	100.15	
Ag	107	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
Ag	[illegible]	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Continuing Calibration Verification (CCV) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]	[illegible]	ISTD	Tune Mode	Conc.	Units	Conc. RSD	[illegible]	% Rec	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Initial Calibration Blank (ICB) Report

[illegible]

Name	Mass	[illegible]	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	49.0	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	55	[illegible]	[illegible]	-0.00127	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
Mo	95	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
Ag	107	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Sc	45	[illegible]	49129	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
In	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	0.6	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Agilent Technologies

Continuing Calibration Blank (CCB) Report

Sample Name	[illegible]
File Name	[illegible]
Data File Name	[illegible]
Acq Time	[illegible]
Sample Type	CCB
Level	[illegible]
QC Limit Table	[illegible]
QC Status	[illegible]
QC Failure Table	

Name	Mass	ISTD	Tune Mode	Conc.	Units	[illegible]	RSD	[illegible]
[illegible]	27	[illegible]	[illegible]	[illegible]	ug/l	4932.5	117	
[illegible]	78	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
V	51	[illegible]	He	[illegible]	ug/l	2235.5	123	
Cr	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	
As	75	72	He	[illegible]	ug/l	[illegible]	[illegible]	
Mn	55	[illegible]	He	[illegible]	ug/l	[illegible]	12	
Mo	95	115	He	[illegible]	ug/l	[illegible]	18	
[illegible]	[illegible]	115	He	[illegible]	ug/l	[illegible]	27	
Ag	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	
Cd	111	115	He	[illegible]	ug/l	[illegible]	4	
Ba	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	35	
Tl	205	209	He	[illegible]	ug/l	[illegible]	[illegible]	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	Rec (%)	[illegible]
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
Sc	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
In	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
Lu	175	He	[illegible]	[illegible]	[illegible]	[illegible]	
Bi	209	He	[illegible]	[illegible]	[illegible]	[illegible]	

Low Level Initial Calibration Verification (LLICV) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	

Name	Mass	ISTD	Tune	Conc.	Unit	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	52	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	75	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ppb	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

Low Level Continuing Calibration Verification (LLCCV) Report

[illegible]	[illegible]
File Name	[illegible]
Data Path / File	[illegible]
Acq. Time	[illegible]
Sample Type	[illegible]
Comment	
[illegible] File Name	[illegible]
Sample QC Pass/Fail	Pass
ISTD QC Pass/Fail	Pass
Overall	[illegible] [illegible]

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	[illegible]	[illegible]	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.6	200	[illegible]	
[illegible]	52	72	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	75	72	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
Ag	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	1.0	[illegible]	[illegible]	
Ba	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
Pb	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	

QC ISTD Table

Name	Mass	Tune Mode	CPS	RSD (%)	Ref CPS	Rec (%)	QC Flag
[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	[illegible]	[illegible]	1.0	[illegible]	[illegible]	
In	[illegible]	He	[illegible]	0.5	[illegible]	[illegible]	
Lu	175	He	[illegible]	[illegible]	[illegible]	[illegible]	
Bi	209	He	[illegible]	0.5	[illegible]	[illegible]	

Interference Check Solution A (ICS-A) Report

[illegible]

Name	Mass	ISTD	Tune Mode	Conc.	Unit	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

Name	Mass	Tune Mode	CPS	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ge	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Interference Check Solution AB (ICS-AB) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]

Name	Mass	ISTD	Tune Mode	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

[illegible]

Name	Mass	ISTD	Tune	Conc.	Units	[illegible]	RSD	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ag	107	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Cd	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

Name	Mass	[illegible]	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Prep Blank (PB) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Sample Type	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	

Name	Mass	ISTD	[illegible]	Conc.	[illegible]	[illegible]	[illegible]	QC Flag
[illegible]	[illegible]	72	H2	[illegible]	ug/l	N/A	[illegible]	
[illegible]	[illegible]	[illegible]	H2	[illegible]	ug/l	1902	2	
[illegible]	[illegible]	72	He	[illegible]	ug/l	[illegible]	[illegible]	PB Failed
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	PB Failed
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	PB Failed
[illegible]	[illegible]	115	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	42	
Ag	107	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l		[illegible]	
Cd	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	PB Failed
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	PB Failed
[illegible]	[illegible]	175	He	[illegible]	ug/l	[illegible]	[illegible]	PB Failed
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	PB Failed

ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref. CPS	[illegible]	QC Range
[illegible]	[illegible]	H2	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	175	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]

[illegible]	Mass	ISTD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
Cr	52	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
Ag	[illegible]	115	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	0.00147	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
In	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Tb	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	Conc.	[illegible]	Conc. RSD	CPS	QC Flag
[illegible]	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
As	75	[illegible]	[illegible]	12.50824	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Cr	52	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	157427495	[illegible]
Mo	95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Mo	98	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	
Ag	107	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ag	109	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Sc	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	[illegible]	44467	2.4	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	3501512	[illegible]	[illegible]	[illegible]	

Reference Sample Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
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[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible] [illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Duplicate Sample Report

[illegible]

Sample Report

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[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]	Mass	STD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
[illegible]	[illegible]	[illegible]	He	[illegible]	ug	7.1	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	52	72	He	[illegible]	ug	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	75	72	He	[illegible]	ug	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	He	[illegible]	ug	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
Cd	[illegible]	115	He	[illegible]	ug	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
Pb	[illegible]	[illegible]	He	[illegible]	ug	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

Post Digestion Spike Sample (PDS) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
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[illegible]	[illegible]
[illegible]	[illegible] [illegible]
[illegible]	[illegible] [illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	% Rec	Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	50	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	50	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	50	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	50	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	50	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	50	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Matrix Spike Sample (MS) Report

[illegible]	[illegible]
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[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]

[illegible]	Mass	Tune	CPS	Unit	[illegible]	Conc	[illegible]	% Rec	Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Spike Failure
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Spike Failure
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Spike Failure
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Spike Failure
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Spike Failure
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Laboratory Control Sample (LCS) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible] [illegible]

QC Analyte Table

Name	Mass	[illegible]	[illegible]	Conc.	Units	[illegible]	CPS	Exp. Value	% Rec	QC Flag
[illegible]	27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	500	[illegible]	[illegible]
[illegible]	95	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	500	[illegible]	
[illegible]	207	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	500	[illegible]	

ISTD Table

Name	Mass	[illegible]	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Continuing Calibration Verification (CCV) Report

Sample Name [illegible]

File Name [illegible]

[illegible] [illegible]

[illegible] [illegible]

Sample Type [illegible]

Comment

[illegible] [illegible]

Operator [illegible]
[illegible]

[illegible] Table

Name	Mass	ISTD	Tune Mode	Conc	Units	Conc RSD	CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/L	3.6	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	
Cr	52	72	He	24.52075	µg/L	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	
As	75	72	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/L	5.3	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	
Ag	107	[illegible]	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	
Cd	111	[illegible]	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	
Pb	208	[illegible]	He	[illegible]	µg/L	[illegible]	[illegible]	[illegible]	

ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Ge	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
Sc	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
In	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

Continuing Calibration Blank (CCB) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	CCB
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	75	72	He	[illegible]	ug/l	[illegible]	2	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	75	72	He	[illegible]	ug/l	[illegible]	[illegible]	CCB Failed
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	115	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	115	He	[illegible]	ug/l	[illegible]	[illegible]	
Ag	[illegible]	115	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	115	He	[illegible]	ug/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	[illegible]	[illegible]	
Pb	208	175	He	[illegible]	ug/l	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Lu	175	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

[illegible]

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	52	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	55	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Sc	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	115	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Service Request # K2306131 Reruns & Dilutions for As
Instrument ID # K-ICP-MS-07
Calibration: 031423AICPMS07
ALS LIMS Run # 607506
Pipette IDs: 18010244, 19070685, 16006318
Cal Std: MS31-79-J ICSA Std: MS31-78-J
ICV Std: MS31-78-H ICSAB Std: MS31-78-K
LLICV Std: MS31-78-I
I.S. Solution: MS31-68-B
Tune Std: MS31-66-F

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV in control (+/- 10%)	X		
3. CCVs in control (+/- 10%)	X		
4. ICB/CCB's below MRL	X		
5. LLICV standard analyzed and in control	X		
6. ICS standards within 20% of true value	X		
6. All analytes within instrument linear range	X		
7. Adequate rinse out time allowed	X		
8. Internal standards in control	X		
9. Interferences checked	X		
10. Was the run terminated? If so, why.		X	

See Batchsheet exception report for sample batch QC information
Comments: Report As only.

Prep batches: 421067

Primary Review by [illegible] Date [illegible]

Secondary Review by [illegible] Date [illegible]

R:\ICPMS\Document Control\K-ICPMS-07 Review Sheet.doc

Data Review Form

Instrument ID#: K-ICP-MS-07
Data File Name: R:\ICP\WIP\DATA\K-ICP-MS-07 (Agilent 7850)\061423A.csv
RUNNO 807506

K2306131

No exceptions to report.

Primary Approver:
Secondary Approver

Page 1 of 1

Sample						
	Type	Date/Time	Acq Date-Time	Type	Sample Name	Comment	Vials
1		0015VP_	6/14/2023 2:26:16 PM	Sample	Prime		2
2		0015VP_	6/14/2023 2:28:36 PM	Sample	Prime		1
3		0016VP_	6/14/2023 2:30:09 PM	Blank	Blank		1
4		0016VP_d	6/14/2023 2:31:41 PM	Blank	Blank		2
5		CCV_ICV_d	6/14/2023 2:43:11 PM	ICV	ICV		2101
6		CCV_CCV_d	6/14/2023 2:44:42 PM	CCV	CCV		2
7		CCV_ICS_d	6/14/2023 2:46:12 PM	ICS	ICS		1
8		CCV_CCS_d	6/14/2023 2:47:44 PM	CCS	CCS		1
9		0018VP_d	6/14/2023 2:49:14 PM	LLCVW	LLCVW		2100
10		0018VP_d	6/14/2023 2:50:45 PM	KBLK	KBLK		2106
11		0018VP_d	6/14/2023 2:52:16 PM	CSW2	CSW2		2 26
12		0019VP_	6/14/2023 2:53:47 PM	Sample	MeBTD		1 5
13		019_FB_d	6/14/2023 2:55:17 PM	FB	KQ23_2045_C1	[illegible]	1101
14		019_CS_d	6/14/2023 2:56:48 PM	CS	KQ23_2045_C1	[illegible]	1102
15		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16		016_D_p_d	6/14/2023 3:00:18 PM	Dup	KQ23_2045_C1	[illegible]	1104
17		017SMPL_	6/14/2023 3:01:15 PM	Sample	K230513_C01	[illegible]	1105
18		018_PDS_d	6/14/2023 3:02:46 PM	PDS	K230513_C01A	[illegible]	1106
19		019SMPL_	6/14/2023 3:04:16 PM	Sample	K230513_C45_03	[illegible]	1107
20		020SMPL_	6/14/2023 3:05:47 PM	Sample	K230513_002	[illegible]	1108
21		021SMPL_	6/14/2023 3:07:19 PM	Sample	K230513_003	[illegible]	1109
22		022SMPL_	6/14/2023 3:08:49 PM	Sample	K230513_004	[illegible]	1110
23		023_CCV_d	6/14/2023 3:10:19 PM	CCV	CCV		2
24		024_CCV_d	6/14/2023 3:11:52 PM	CCV	CCV		1
25		025_ABS_d	6/14/2023 3:13:23 PM	ABS	K230513_00	[illegible]	11 1
26		026_Dup_d	6/14/2023 3:14:53 PM	Dup	K230513_02	[illegible]	11 2
27		027SMPL_	6/14/2023 3:16:26 PM	Sample	K230513_001	[illegible]	20
28		028_FB_d	6/14/2023 3:17:56 PM	FB	K230513_001A	[illegible]	202
29		029SMPL_	6/14/2023 3:19:27 PM	Sample	K230513_003	[illegible]	203
30		030SMPL_	6/14/2023 3:20:58 PM	Sample	K230513_002	[illegible]	204
31		031SMPL_	6/14/2023 3:22:28 PM	Sample	K230513_003	[illegible]	1205
32		032SMPL_	6/14/2023 3:23:59 PM	Sample	K230513_004	[illegible]	1206

Sample

ID	Run	Data File	Acq. Date-Time	Type	L	Sample Name	Comment	Vial
33	[illegible]	[illegible]	6/14/2025 8:50:45 PM	CCV	[illegible]	[illegible]		2
34	[illegible]	[illegible]	6/14/2025 8:52:[illegible] PM	CCB	[illegible]	[illegible]		[illegible]
35	[illegible]	[illegible]	6/14/2025 [illegible]:45 PM	Sample	[illegible]	[illegible]	[illegible]	[illegible]

Analyte

	Name	Mass	ISTD	Tune Mode	Units	Replicates
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	T	203	174	He	ug/l	4
3	T	205	174	He	ug/l	4
4	[illegible]	206	175	He	ug/l	3
5	[illegible]	207	175	He	ug/l	3
6	[illegible]	208	175	He	ug/l	3
7	B	208	232	He	ug/l	3
8	L	238	232	He	ug/l	3
9	[illegible]	48		He		3
10	[illegible]	72		He		3
11	[illegible]	115		He		3
12	[illegible]	175		He	ug/l	3
13	[illegible]	232		He	ug/l	3

US EPA Tune Check Report

Operator Name	[illegible]
Prep Data Batch	[illegible]
Acq. Date-Time	[illegible]
Report Comment	---
Instrument Name	[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	

US EPA Tune Check Report

Mass	Peak Height	Area	Peak Resolution	Peak Shape	Peak Height	Peak Shape	Area Percent
69	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
131	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
414	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
502	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
503	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]
504	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]

Integration Events (peak)	[illegible]
Peak Detection Threshold	[illegible]
Y Axis	[illegible]

[illegible]

Electron Parameters

[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		

Lens Voltages

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		

Cell Parameters

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]		

Gas Parameters

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		

Hardware Info

Tech

[illegible]	[illegible]	[illegible]	[illegible]

EM

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] [illegible]

[illegible]

Name	Mean	STD	Time Stamp	CPS	CPS %SE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Calibration Standard Report

Sample Name	[illegible]
Data File	[illegible]
Data File Path	[illegible]
Acq. Date	[illegible]
Sample Type	[illegible]
Comment	
ISTD Ref File	[illegible]
Operator	[illegible]
[illegible]	[illegible]

Name	Mass	ISTD	Tune Mode	CPS	CPS RSD
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Sc	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
In	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Lu	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Initial Calibration Verification (ICV) Report

Sample Name	[illegible]
File Name	[illegible]
Data Path Name	[illegible]
Acq Time	[illegible]
Sample Type	[illegible]
Comment	—
[illegible]	[illegible]
Operator	[illegible]
QC Analyte Table	

Element	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
As	75	72	He	[illegible]	ug/l	1.6	[illegible]	[illegible]	
Tl	203	175	He	[illegible]	ug/l	1.2	[illegible]	[illegible]	
Tl	205	175	He	[illegible]	ug/l	1.2	[illegible]	[illegible]	
[illegible]	[illegible]	175	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/l	2	[illegible]	[illegible]	

ISTD Table

Element	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Continuing Calibration Verification (CCV) Report

[illegible]

Name	Name	CCV	Tune Value	Conc	Units	Conc CCD	CPS	% Dev	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Value	CCV	CPS CCD	Rel CPS	% Dev	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Initial Calibration Blank (ICB) Report

[illegible]

[illegible]

Continuing Calibration Blank (CCB) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	—
[illegible]	[illegible]
[illegible]	[illegible] [illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Low Level Initial Calibration Verification (LLICV) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Comment	
[illegible]	[illegible]
[illegible]	[illegible] [illegible]
[illegible]	

Name	Mass	ISTD	Tune	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

Name	Mass	Tune Mode	CPS	CPS RSD	[illegible]	[illegible]	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]	[illegible]	

Interference Check Solution A (ICS-A) Report

Sample Name	[illegible]
File Name	[illegible]
Data File Path	[illegible]
Acq. Time	[illegible]
Sample Type	[illegible]
Comment	
[illegible]	[illegible]
Operator	[illegible] [illegible]

QC Analyte Data

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	QC Value	QC%	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

ISTD Data

Element	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	Rec(%)	QC Range
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
In	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Lu	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Interference Check Solution AB (ICS-AB) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible] [illegible]

[illegible]

[illegible]	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	[illegible]	CPS	QC Flag
[illegible]	75	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

Sample Name	[illegible]
[illegible]	[illegible]
Data File Name	[illegible]
[illegible]	[illegible]
Sample Type	[illegible]
Comment	
[illegible]	[illegible]
Operator	[illegible] [illegible]
[illegible]	

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
As	75	72	He	[illegible]	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/l	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

ISTD Data

Element	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Sc	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
In	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

Internal Standard	Name	RT	Area	Conc.	Units	Conc. RSD	RT	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Laboratory Control Sample (LCS) Report

Sample Name	[illegible]
File Name	[illegible]
Method File Name	[illegible]
Acq. Time	[illegible]
Sample Type	[illegible]
Comment	[illegible]
[illegible]	[illegible]
Operator	[illegible]
QC Analysis Result	[illegible]

Element	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	Exp. Value	% Rec	QC Flag
As	75	72	He	[illegible]	ug/L	[illegible]	[illegible]	500	88.2	
Tl	205	175	[illegible]	[illegible]	ug/L	[illegible]	[illegible]	<0.000	[illegible]	
Tl	205	175	[illegible]	[illegible]	ug/L	[illegible]	[illegible]	<0.000	[illegible]	
Pb	208	175	[illegible]	[illegible]	ug/L	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/L	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ug/L	[illegible]	[illegible]	[illegible]	97.5	
[illegible]	[illegible]	209	[illegible]	<0.0007	ug/L	N/A	[illegible]	<0.000	0	
U	238	209	[illegible]	<0.000	ug/L	N/A	[illegible]	<0.000	0	

ISTD Table

Element	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Sc	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
In	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
Lu	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]

Duplicate Sample Report

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Post Digestion Spike Sample (PDS) Report

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	CPS	Spk Amt	% Rec	Flag
[illegible]	[illegible]	--	[illegible]	ug/l	[illegible]	[illegible]	400	[illegible]	[illegible]
Tl	[illegible]	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	400	[illegible]	
Tl	205	[illegible]	101.2059	ug/l	[illegible]	[illegible]	400	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Pb	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.5	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	CPS	CPS RSD	[illegible]	% Rec	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	0.5	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	0.9	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

Sample Name	[illegible]
Data File	[illegible]
Data File Path	[illegible]
Acq. Time	[illegible]
Sample Type	[illegible]
Comment	[illegible]
ISTD Ref File	[illegible]
Operator	[illegible]

QC Analysis Data

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
As	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

ISTD Data

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Sc	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
In	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

Sample Report

[illegible]

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
[illegible]	75	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
Tl	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	-0.0011	µg/l	N/A	[illegible]	
U	238	209	He	<0.0042	µg/l	N/A	[illegible]	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Sc	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
In	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

Continuing Calibration Verification (CCV) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	% Rec	QC Flag
[illegible]	75	72	He	23.4828	µg/l	0.3	2394.42	[illegible]	
Tl	203	175	[illegible]	25.6680	µg/l	[illegible]	[illegible]	[illegible]	
Tl	205	175	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	175	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/l	[illegible]	5712.00	101.48	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/l	[illegible]	[illegible]	100.04	
[illegible]	[illegible]	[illegible]	He	[illegible]	µg/l	2.4	[illegible]	103.15	
[illegible]	[illegible]	[illegible]	He	25.5782	µg/l	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Range
[illegible]	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	72	He	[illegible]	1.5	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	96.72	
[illegible]	175	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	209	He	[illegible]	[illegible]	[illegible]	[illegible]	

Continuing Calibration Blank (CCB) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	
[illegible]	[illegible]
[illegible]	[illegible] [illegible]
[illegible]	

Element	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	QC Flag
As	75	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
Tl	205	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	N/A	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	N/A	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	ug/l	N/A	[illegible]	
[illegible]	[illegible]	232	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	
U	[illegible]	232	[illegible]	[illegible]	ug/l	[illegible]	[illegible]	

[illegible]

Element	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
[illegible]	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

Reference Sample Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	QC Flag
[illegible]	75	72	He	[illegible]	[illegible]	0.6	[illegible]	
	[illegible]	175	He	[illegible]	[illegible]	[illegible]	[illegible]	
	[illegible]	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	1.1	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Duplicate Sample Report

[illegible]

[illegible]

Sample Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Sample Type	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible] [illegible]
[illegible]	

[illegible]	[illegible]	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
As	75	72	He	[illegible]	ug/l	[illegible]	[illegible]	
Tl	203	175	He	[illegible]	ug/l	[illegible]	[illegible]	
Tl	205	175	He	[illegible]	ug/l	[illegible]	[illegible]	
Pb	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	CPS	CPS RSD	[illegible]	[illegible]	QC Flag
Sc	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
In	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
Lu	175	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

Post Digestion Spike Sample (PDS) Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
Sample Type	[illegible]
Comment	[illegible]
[illegible]	[illegible]
[illegible]	[illegible] [illegible]
[illegible]	[illegible] [illegible]
[illegible]	

Name	Mass	Tune	Conc.	Unit	Conc. RSD	CPS	Spike Amt	%Rec	Flag
[illegible]	75	He	[illegible]	µg/l	[illegible]	[illegible]	100	[illegible]	
[illegible]	202	He	[illegible]	µg/l	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	205	He	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	208	He	[illegible]	µg/l	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	207	He	[illegible]	µg/l	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	µg/l	[illegible]	[illegible]	[illegible]	[illegible]	

ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	%Rec	QC Flag
Sc	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
Ge	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
In	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

[illegible]

[illegible]

Sample Report

Data File	[illegible]
Date	[illegible]
Sample Name	[illegible]
Acq. Time	[illegible]
Sample Type	[illegible]
Comment	[illegible]
Dilution Factor	[illegible]
Operator	[illegible] [illegible]
[illegible]	

Element	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
[illegible]	[illegible]	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

Element	Mass	Tune Mode	CPS	CPS RSD	Ref Value	Rec(%)	QC Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Sample Report

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible] [illegible]
[illegible]	

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	QC Flag
Al	27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	N/A	[illegible]	
[illegible]	[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
Mn	[illegible]	[illegible]	He	[illegible]	µg/l	N/A	[illegible]	
[illegible]	[illegible]	[illegible]	He	0.0342	µg/l	N/A	36.67	
U	238	[illegible]	He	-0.0341	µg/l	N/A	6.67	

ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	QC Flag
Sc	45	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	72	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	115	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	He	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	209	He	[illegible]	[illegible]	[illegible]	[illegible]	

Continuing Calibration Verification (CCV) Report

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Continuing Calibration Blank (CCB) Report

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	75	72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Tl	[illegible]	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Tl	[illegible]	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	175	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	0.2	[illegible]	[illegible]	
[illegible]	175	[illegible]	[illegible]	1.1	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

[illegible]

[illegible]

Name	Mass	RTD	Type	Conc	Units	Conc RSD	CTS	CS Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	µg/l	[illegible]	[illegible]	

[illegible]

[illegible]	[illegible]	[illegible]	CTS	[illegible]	[illegible]	[illegible]	CS Flag
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

CVAA Mercury Water Data Review Form

K22/2101

Element:	Hg		
Analysis Lot #:	020223B 003		
Standard #:	9258-5		
Cal STD/QCV Source:	TQ3-55-Y		
Reference Lot:	FG-77 050305/HC3F873831		
Blank Tubes in A:	[illegible]		
KMnO4	HG1-85-5	Expiration Date	09/22/21
K2S2O8	HG1-82-W	Expiration Date	05/2021
NH2OH•HCl/NaCl	HG1-64-[illegible]	Expiration Date	02/02/21
SnCl2/HCl	HG3-95-R	Expiration Date	06/2104

Service Request Numbers

K2338262, K2202101, K2308278, TQ-[illegible]

	Yes	No	N/A
1) Appropriate Mercury Method considered	X		
2) ICV within 10% of [illegible]	X		
3) CCV within control limits	X		
4) CCBs and LOW CCBs	X		
5) CCV/CCB/LOW CCB run every 10 samples	X		
6) All required standards within calibration range	X		
7) Calculations correct	X		

Comments

Data reviewed against service requests to ensure all requested analyses were performed AL (Initials)

Primary Reviewed By [illegible] Date: 6/18/21

Secondary Reviewed By [illegible] Date: [illegible]

Data Review Form

Instrument ID#: K-CVAA-03
Data File Name: R:\LPW\PMDATA\K-CVAA-03 [illegible] HG3.csv
RUNNO: 805515

K2308083

No exceptions to report.

K2308131

No exceptions to report.

K2308229

No exceptions to report.

Primary Approver: [illegible] 6/8/23
Secondary Approver: [illegible] [illegible]

CVAA Hg ANALYTICAL WORKSHEET

Page [illegible]

Method: [illegible]

Cal. Curve: [illegible] Equipt: [illegible]

Bot. Spike Solution: [illegible] Group: [illegible]

Analysis Run: [illegible]

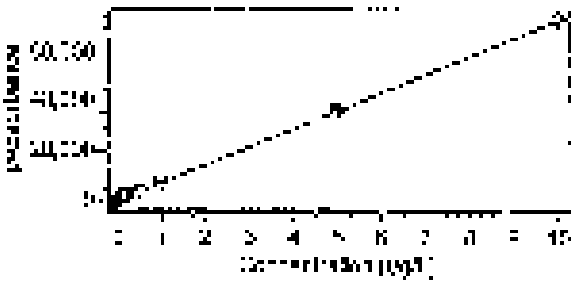
Pos.	SAMPLE NUMBER	Measured (µg/L)	Dilution Factor	Recovery (CCV, CRV, LCS, Std)	Qualifiers	Comments
1	[illegible]	[illegible]	[illegible]	[illegible]		
2	[illegible]	[illegible]		[illegible]		
3	[illegible]	[illegible]	[illegible]	[illegible]		
4	[illegible]	[illegible]	[illegible]	[illegible]		
5	[illegible]	[illegible]		[illegible]		
6	[illegible]	[illegible]	[illegible]	[illegible]		
7	[illegible]	[illegible]	[illegible]	[illegible]		
8	[illegible]	[illegible]				
9	[illegible]	[illegible]	[illegible]	[illegible]		
10	[illegible]	[illegible]	[illegible]	[illegible]		
11	[illegible]	[illegible]				
12	[illegible]	[illegible]				
13	[illegible]	[illegible]		[illegible]		
14	[illegible]	[illegible]				
15	[illegible]	[illegible]				
16	[illegible]	[illegible]				
17	[illegible]	[illegible]		[illegible]		
18	[illegible]	[illegible]		[illegible]		
19	[illegible]	[illegible]				
20	[illegible]	[illegible]				
21	[illegible]	[illegible]				
22	[illegible]	[illegible]		[illegible]		
23	[illegible]	[illegible]				
24	[illegible]	[illegible]				
25	[illegible]	[illegible]				
26	[illegible]	[illegible]				
27	[illegible]	[illegible]			[illegible]	[illegible]
28	[illegible]	[illegible]		[illegible]		
29	[illegible]	[illegible]				
30						
31						
32						

Comments:

```
Report Generated By Teledyne Leeman QuickTrace
Analyst:          [illegible]
Worksheet File:   C:\Users\[illegible]
Creation Date:    [illegible]
Comments:
```

Results

```
Sample Name                         Type        Conc (ug/L)     µAbs  %RSD  Residual  Flags   Wt (g)   Vol (mL)
        Alq Vol   Dil Vol    DF     Spike Wt  % Recovery
------------------------------------------------------------------------------------------------------------------
Calibration Blank                   BLK            0.000        [illegible]    0.00
                          1.0000                 N/A
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
Standard #1 (0.2 ug/L)              STD            0.200        [illegible]  [illegible]  [illegible]
                          1.0000                 N/A
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
Standard #2 (0.5 ug/L)              STD            0.500        [illegible]  [illegible]  [illegible]
                          1.0000                 N/A
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
Standard #3 (1 ug/L)                STD            1.000        [illegible]  [illegible]  [illegible]
                          1.0000                 N/A
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
Standard #4 (5 ug/L)                STD            5.000        [illegible]  [illegible]  [illegible]
                          1.0000                 N/A
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
Standard #5 (10 ug/L)               STD           10.000        [illegible]  [illegible]  [illegible]
                          1.0000                 N/A
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
Calibration
   Equation      [illegible]
   R2            [illegible]
   SEE           [illegible]
   Flags
```



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ICV                                 ICV          [illegible]    [illegible]  [illegible]
                          1.0000               [illegible]
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
ICB                                 ICB          [illegible]    [illegible]  [illegible]
                          1.0000                 N/A
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
[illegible]                         [illegible]  [illegible]    [illegible]  [illegible]
                          1.0000               [illegible]
        Replicates     [illegible]   [illegible]   [illegible]   [illegible]
------------------------------------------------------------------------------------------------------------------
```

Preparation Information Worksheet

Prep Batch: [illegible]
Prep Method: [illegible]

Prep Workflow: [illegible]
Prep Method: [illegible]

Status: Proposed
Prep Date/Time: [illegible]

	Lab Sample	Client ID	Extracted Amt	pH/Matrix	Amt. Ext.	Final Vol	Sample Description
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

Spiking Solution

Name: [illegible] Lot: [illegible] Expiration: [illegible] Exp. Date: [illegible]

[illegible] Lot: [illegible]

Preparation Materials

[illegible]

Preparation Steps

Step: [illegible]
Status: [illegible]
Date/Time: [illegible]
By: [illegible]
Comment: [illegible]

Preparation Equipment

[illegible]

Preparation Information Reachsheet

Prep Run#: [illegible]
Team: [illegible]

Prep Workstation: [illegible]
Prep Method: [illegible]

Status: Prepped
Prep Date-Time: [illegible]

Comments: [illegible]

Technician: [illegible] Date: [illegible]

Preparation Information Worksheet

Prep Date: [illegible] Prep Start Time: [illegible] Status: Draft

Tester: [illegible] Prep Method: [illegible] Prep Date/Time: [illegible]

Transfer copy of [illegible]

#	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

Comments: [illegible]

[illegible]

Weight: [illegible] Sample ID: [illegible]

Witness By: [illegible]

Notes: [illegible] Verified By: [illegible]

Aerobiology Laboratory Associates, Inc.
22 Cummings Park
Woburn, MA 01801
(781) 935-3212
www.aerobiology.net

Client:
Tetra Tech
1560 Broadway Suite 1400
Denver, CO 80202
Attn: Annie Eiseman & Maura Mcaleese

Certificate of Analysis

Project Name: NH

Proiect ID: 23020737

Date Collected: 05/24/23
Date Received: 05/30/23
Date Analyzed: 06/02/23
Date Reported: 06/05/23
Job ID: 103X903520F0071230407

Test Requested**: Asbestos Bulk Analysis, Polarized Light Microscopy (PLM):** EPA 600/R-93/116: Method for Asbestos in Bulk Building Materials, EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method for Asbestos in Bulk Insulation Samples

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos		Non-Asbestos		
Client	Lab Sample Number				Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
EB1-1	23020737-001-A	Gray Shingle	N	100	ND		20	80	FBG
EB1-2	23020737-002-A	Black Roofing Paper	**N**	100	**CHRY**	**30**	**25**	**45**	**CELL**
EB1-3	23020737-003-A	White Pipe Wrap	N	100	ND		90	10	CELL, SYN
EB1-4	23020737-004-A	Brown Particle Board	N	100	ND		90	10	CELL
EB1-5	**23020737-005-A**	**Black Roofing Material w/ White Cloth (inseperable)**	**N**	**100**	**CHRY**	**20**	**15**	**65**	**CELL**
EB1-6	**23020737-006-A**	**Black Tar**	**N**	**100**	**CHRY**	**20**		**80**	
EB1-7	**23020737-007-A**	**Black Roofing Material w/ White Cloth (inseperable)**	**N**	**100**	**CHRY**	**20**	**15**	**65**	**CELL**
EB1-8	23020737-008-A	Black Gasket	N	100	ND		20	80	CELL
EB1-9	23020737-009-A	White Insulation	N	70	ND		92	8	MW, CELL
	23020737-009-B	Brown Backing	N	30	ND		95	5	MW, CELL

Brian Shea
Analyst

Thomas Pickett
Manager-Asbestos

A Amosite
AC Actinolite
AN Anthophyllite
CHRY Chrysotile
CR Crocidolite
TR Tremolite
Trace Less Than 1%
ND None Detected

Q Quartz
C Carbonates
G Gypsum
M Mica
T Tar
P Perlite
B Binder
D Diatoms

CELL Cellulose
MW Mineral Wool
FBG Fiberglass
SYN Synthetic
WO Wollastonite
FT Fibrous Talc
AH Animal Hair
NAC Non-Asbestiform AC
NTR Non-Asbestiform TR

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos		Non-Asbestos		
Client	Lab Sample Number				Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
EB1-10	23020737-010-A	Gray Shingle	N	100	ND		12	88	FBG, CELL
EB1-11	23020737-011-A	Black Pipe Insulation	N	100	ND		30	70	CELL
EB1-12	23020737-012-A	White Insulation	N	100	ND		90	10	MW, CELL
EB1-13	23020737-013-A	Blue Shingle	N	100	ND		25	75	FBG, CELL
B1-1	23020737-014-A	Yellow Pipe Wrap/Insulation *No Sample Present*							
B1-2	23020737-015-A	White Material *No Sample Present*							
B1-3	23020737-016-A	Gray Cement Block Filler *No Sample Present*							
B1-4	23020737-017-A	White Pipe Insulation	N	100	ND		85	15	CELL, SYN
B1-5	23020737-018-A	Red Fire Brick	N	100	ND			100	
B1-6	23020737-019-A	Black Fill Material	N	100	ND			100	

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Trace Less Than 1%
ND None Detected

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C Carbonates
G Gypsum
M Mica
T Tar
P Perlite
B Binder
D Diatoms

CELL Cellulose
MW Mineral Wool
FBG Fiberglass
SYN Synthetic
WO Wollastonite
FT Fibrous Talc
AH Animal Hair
NAC Non-Asbestiform AC
NTR Non-Asbestiform TR

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos		Non-Asbestos		
Client	Lab Sample Number				Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
B1-7	**23020737-020-A**	**Tan Insulation**	**N**	**100**	**CHRY**	**5**	**10**	**85**	**CELL**
B1-8	23020737-021-A	Tan Plaster	N	40	ND		5	95	MW
	23020737-021-B	Red Brick	N	60	ND			100	
B1-9	23020737-022-A	Yellow Insulation	N	100	ND			100	CELL
EB2-1	23020737-023-A	Multi-color Particle Board w/ Black Tar (inseperable)	N	100	ND		85	15	FBG, CELL
EB2-2	23020737-024-A	Black Roofing Paper w/ Tar (inseperable)	N	100	ND		10	90	CELL
EB2-3	23020737-025-A	Gray Ash	N	100	ND			100	CELL
EB2-4	**23020737-026-A**	**Black Tar w/ White Cloth (inseperable)**	**N**	**100**	**CHRY**	**20**	**15**	**65**	**CELL**
EB2-5	23020737-027-A	Black Roofing Paper w/ Tar (inseperable)	N	100	ND		15	85	CELL
EB2-6	23020737-028-A	Black Gasket	N	100	ND			100	

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ND None Detected

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C Carbonates
G Gypsum
M Mica
T Tar
P Perlite
B Binder
D Diatoms

CELL Cellulose
MW Mineral Wool
FBG Fiberglass
SYN Synthetic
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FT Fibrous Talc
AH Animal Hair
NAC Non-Asbestiform AC
NTR Non-Asbestiform TR

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Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos		Non-Asbestos		
Client	Lab Sample Number				Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
EB2-7	23020737-029-A	Gray Grout	N	100	ND			100	
EB2-1	23020737-030-A	Black Insulation Paper	N	100	ND		20	80	CELL
B2-2	23020737-031-A	White Plaster	N	100	ND		5	95	CELL
B2-3	23020737-032-A	Red Gasket	N	100	ND			100	
B2-4	23020737-033-A	White Gasket	N	100	ND		5	95	CELL
B2-5	23020737-034-A	Tan Window Glazing	N	100	ND			100	
B2-6	**23020737-035-A**	**White Pipe Wrap**	**N**	**100**	**CHRY**	**75**	**5**	**20**	**CELL**
B2-7	23020737-036-A	White Insulation Paper	N	100	ND		90	10	CELL
B2-8	**23020737-037-A**	**White Pipe Wrap**	**N**	**100**	**CHRY**	**60**	**30**	**10**	**CELL**
EB4-1	23020737-038-A	White Caulking	N	100	ND			100	

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ND None Detected

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C Carbonates
G Gypsum
M Mica
T Tar
P Perlite
B Binder
D Diatoms

CELL Cellulose
MW Mineral Wool
FBG Fiberglass
SYN Synthetic
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FT Fibrous Talc
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NAC Non-Asbestiform AC
NTR Non-Asbestiform TR

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Sample Identification					Asbestos		Non-Asbestos		
Client	Lab Sample Number	Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
EB4-2	23020737-039-A	White Wire Insulation	N	100	ND		70	30	CELL
EB4-3	23020737-040-A	Black Cement Block Filler	N	100	ND		15	85	CELL
EB4-4	23020737-041-A	White Window Glazing	N	100	ND		5	95	CELL
B4-1	23020737-042-A	White Linoleum	N	45	ND			100	
	23020737-042-B	Yellow Mastic	N	5	ND		10	90	CELL
	23020737-042-C	**Gray Linoleum Tile**	**N**	**45**	**CHRY**	**20**	**2**	**78**	**CELL**
	23020737-042-D	**Yellow Mastic**	**N**	**5**	**CHRY**	**TRACE**	**5**	**95**	**CELL**
B4-2	**23020737-043-A**	**Thick White Pipe Wrap**	**N**	**90**	**CHRY**	**80**		**20**	
	23020737-043-B	**Yellow Mastic**	**N**	**10**	**CHRY**	**2**	**5**	**93**	**CELL**
B4-3	**23020737-044-A**	**Thick White Pipe Wrap**	**N**	**100**	**CHRY**	**80**		**20**	

Brian Shea
Analyst

Thomas Pickett
Manager-Asbestos

A Amosite
AC Actinolite
AN Anthophyllite
CHRY Chrysotile
CR Crocidolite
TR Tremolite
Trace Less Than 1%
ND None Detected

Q Quartz
C Carbonates
G Gypsum
M Mica
T Tar
P Perlite
B Binder
D Diatoms

CELL Cellulose
MW Mineral Wool
FBG Fiberglass
SYN Synthetic
WO Wollastonite
FT Fibrous Talc
AH Animal Hair
NAC Non-Asbestiform AC
NTR Non-Asbestiform TR

Aerobiology Laboratory Associates, Inc.
22 Cummings Park
Woburn, MA 01801
(781) 935-3212
www.aerobiology.net

Client:
Tetra Tech
1560 Broadway Suite 1400
Denver, CO 80202
Attn: Annie Eiseman & Maura Mcaleese

Certificate of Analysis

Project Name: NH

Proiect ID: 23020737

Date Collected: 05/24/23
Date Received: 05/30/23
Date Analyzed: 06/02/23
Date Reported: 06/05/23
Job ID: 103X903520F0071230407

Test Requested**: Asbestos Bulk Analysis, Polarized Light Microscopy (PLM):** EPA 600/R-93/116: Method for Asbestos in Bulk Building Materials, EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method for Asbestos in Bulk Insulation Samples

Sample Identification		Physical Description of Sample/Layer	Homo-geneous (Y/N)	Layer Percentage	Asbestos		Non-Asbestos		
Client	Lab Sample Number				Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
EB5-1	23020737-045-A	Green Shingle	N	100	ND		7	93	FBG, CELL
EB5-2	**23020737-046-A**	**Black Tank Coating**	**N**	**100**	**CHRY/CROC**	**15/20**	**5**	**60**	**CELL**
EB5-3	23020737-047-A	Black Gasket	N	100	ND			100	
EB5-4	23020737-048-A	Gray Caulking	N	100	ND			100	
B5-1	23020737-049-A	Yellow Insulation	N	100	ND		90	10	FBG
B5-2	23020737-050-A	Silver Wrap	N	100	ND		45	55	FBG, CELL
B5-3	23020737-051-A	White Ceiling Tile	N	100	ND		80	20	CELL
B5-4	23020737-052-A	White Plaster	N	100	ND		35	65	CELL
B5-5	23020737-053-A	Gray Window Glazing	N	90	ND		2	98	CELL
	23020737-053-B	**White Joint Compound**	**N**	**10**	**CHRY**	**2**		**98**	

Brian Shea
Analyst

Thomas Pickett
Manager-Asbestos

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AC Actinolite
AN Anthophyllite
CHRY Chrysotile
CR Crocidolite
TR Tremolite
Trace Less Than 1%
ND None Detected

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Client	Lab Sample Number				Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
Pit-1	**23020737-054-A**	**Black shingle**	**N**	**100**	**CHRY**	**45**		**55**	
Pit-2	23020737-055-A	Multi-color Insulation	N	100	ND		80	20	SYN
Pit-3	**23020737-056-A**	**Black Roofing Paper and Tar**	**N**	**100**	**CHRY**	**45**		**55**	
EB1-14	23020737-057-A	Black Gasket	N	100	ND		20	80	SYN

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General Notes

* **ND** indicates no asbestos was detected; the method detection limit is 1%.

* **Trace** or "<1" indicates asbestos was identified in the sample, but the concentration is less than 1%.

* All regulated asbestos minerals (i.e. chrysotile, amosite, crocidolite, anthophyllite, tremolite, and actinolite) were sought in every layer of each sample, but only those asbestos minerals detected are listed. Amosite is the common name for the asbestiform variety of the minerals cummingtonite and grunerite. Crocidolite is the common name used for the asbestiform variety of the mineral riebeckite.

* Tile, vinyl, foam, plastic, and fine powder samples may contain asbestos fibers of such small diameter (< 0.25 microns in diameter) that these fibers cannot be detected by PLM. For such samples, more sensitive analytical methods (e.g. TEM, SEM, and XRD) are recommended if greater certainty about asbestos content is required. Semi-quantitative bulk TEM floor tile analysis is accepted under NESHAP regulations.

* These results are submitted pursuant to Aerobiology Laboratory Associates, Inc.'s current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.

* Unless notified in writing to return the samples covered by this report, Aerobiology Laboratory Associates, Inc. will store the samples for a minimum period of thirty (30) days before discarding. A shipping and handling charge will be assessed for the return of any samples.

* Aerobiology does not guarantee the results of tape lifts, microvacs, wipe, and/or debris samples. Accurate analysis cannot be performed due to particle size, media used, and/or amount of material given. Analysis of these materials should be performed by a TEM. A result of ND does not indicate that the sample area does not contain asbestos. It means the analyst could not identify asbestos in the specific sample for the reasons listed above.

Notes Required by NVLAP

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* This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

* This test report relates only to the items tested or calibrated.

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Woburn, MA 01801
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Client:
Tetra Tech R8 START
1560 Broudway, Suite 1400
Denver, CO 80202
Attn: Maura McAleese

Certificate of Analysis

Project Name: Nedlog Removal Asessment

Proiect ID: 23020955

Date Collected: 05/30/23
Date Received: 05/31/23
Date Analyzed: 05/31/23
Date Reported: 06/01/23
Job ID: 103x903520F0071230407

Test Requested**: Asbestos Bulk Analysis, Polarized Light Microscopy (PLM):** EPA 600/R-93/116: Method for Asbestos in Bulk Building Materials, EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method for Asbestos in Bulk Insulation Samples

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Client	Lab Sample Number				Asbestos Detected	Asbestos Percentage	Non-Asbestos Fiber Percentage	Non-Fibrous Material Percentage	Matrix Material Composition
B1-1	23020955-001-A	Yellow Pipe Wrap	N	100	ND		90	10	FBG, MW
B1-2	23020955-002-A	White Fibrous Material	N	100	ND		100	0	SYN
B1-3	23020955-003-A	Gray Cement Block Filler	N	100	ND			100	

Dan Pine
Analyst

Thomas Pickett
Manager-Asbestos

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Certificate of Analysis

Project Name: Nedlog Removal Asessment

Project ID: 23020955

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