

**Brownfield Assessment and Cleanup
Old BIA School
Chevak, Alaska
ADEC File No. 2409.57.001**

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ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AK	Alaska Method
AST	Aboveground Storage Tank
BIA	Bureau of Indian Affairs
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CSM	Conceptual Site Model
DBAC	DEC Brownfield Assessment and Cleanup
DQOs	Data Quality Objectives
DRO	Diesel Range Organics
EHS-Alaska	EHS-Alaska, Inc.
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
GPS	Global Positioning System
GRO	Gasoline Range Organics
HBM	Hazardous Building Material
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
mg/kg	Milligrams Per Kilogram
MS/MSD	Matrix Spike/Matrix Spike Duplicate
PAHs	Polynuclear Aromatic Hydrocarbons
PID	Photoionization Detector
ppm	Parts Per Million
REC	Recognized Environmental Concern
RPD	Relative Percent Difference
SGS	SGS North America Inc.
SIM	Selective Ion Method
YRITWC	Yukon River Inter-Tribal Watershed Council

**BROWNFIELD ASSESSMENT AND CLEANUP
OLD BIA SCHOOL
CHEVAK, ALASKA
ADEC FILE No. 2409.57.001**

1.0 INTRODUCTION

This report presents the results of our Department of Environmental Conservation Brownfield Assessment and Cleanup (DBAC) activities conducted at the Old Bureau of Indian Affairs (BIA) School in Chevak, Alaska. The overall goal of the project is to allow the Yukon River Inter-Tribal Watershed Council (YRITWC) and the City of Chevak to re-use the property for community gatherings. The site is listed on the Alaska Department of Environmental Conservation (ADEC) contaminated database as File No. 2409.57.001.

The former BIA school is part of a larger facility, which is located on approximately 5 acres and includes the former BIA school, several outlying structures, and a fuel tank farm. This DBAC project included investigating potential environmental concerns associated with the approximately 26,500 square foot former school and an approximately 150 square foot storage building located southwest of the school. The school was constructed in the early-1970s and closed in 2003. The school is currently unoccupied and in disrepair. A vicinity map is included as Figure 1. A site plan showing the project site is included as Figure 2.

The project was conducted under Shannon & Wilson's ADEC Substance Spill Prevention and Cleanup Term Contract 18-8036-13. Authorization to proceed with the field activities was received from the ADEC on July 6, 2017 with Notice to Proceed No. 180000005. Authorization to proceed with the reporting activities was received from the ADEC on December 1, 2017 with Purchase Order 180005505-1.

The project was conducted in general accordance with our August 2017 work plan which was approved by Ms. Lisa Griswold of the ADEC in a letter dated August 17, 2017.

2.0 BACKGROUND

In 2014, APC Services, LLC prepared a Phase I Environmental Site Assessment (ESA) for the Old BIA School property, which included the former BIA school building (Building S1), the Village Safety Office Building (Building S2), a boiler house (Building S3), a residence (Building S4), a storage building (Building S6), and a fuel tank farm. With the exception of Building S2, the structures were unoccupied at the time of the Phase I ESA.

Recognized environmental concerns (RECs) associated with the fuel tank farm, a weathered transformer housing at Building S3, and crushed lead batteries adjacent to the northeast side of the former BIA school were identified. Other potential environmental concerns associated with the former BIA school and Building S6 included the following:

- Five crushed batteries were observed adjacent to Building S6. With the exception of the Phase I ESA report conclusions, the report does not reference batteries northeast of the former BIA school. It is unclear whether batteries were located in both locations or the report is in error.
- Oil sheening was observed on standing water adjacent to Building S6.
- A 300-gallon heating oil aboveground storage tank (AST) was located along the north side of the western portion of the former BIA school. A second AST was observed on the northeast side of the former BIA school.
- Solid waste and 55-gallon drums containing oil were documented beneath the former BIA school.
- 55-gallon drums, batteries, and solid waste were observed within Building S6.

In 2015, E3 Environmental, LLC conducted a site investigation to evaluate potential re-use of the former BIA school. Two soil samples were collected adjacent to the northeast side of the former school to evaluate the locations of the crushed batteries observed during the Phase I ESA. The crushed batteries were not located during the site investigation activities. The samples contained a maximum of 30.7 milligram per kilogram (mg/kg) lead which is less than the ADEC Method Two cleanup level of 400 mg/kg.

3.0 FIELD ACTIVITIES

The field activities were conducted on September 5 and 6, 2017 and consisted of a site reconnaissance, advancing hand borings, and collecting soil samples. The DBAC activities were limited to Buildings S1 and S6. The project also included a hazardous building material (HBM) inventory of the Old BIA School, which was conducted by EHS-Alaska, Inc. (EHS-Alaska), under subcontract to Shannon & Wilson. The results of the HBM inventory were documented in EHS-Alaska's *Hazardous Materials Assessment, Old Chevak School Hazmat Survey, Chevak, Alaska* report.

The site characterization activities were conducted by ADEC-qualified environmental professionals, as defined by 18 Alaska Administrative Code (AAC) 75.333. SGS North America Inc. (SGS) provided analytical testing of the soil samples. Prior to conducting the field activities,

the utility locate center and the City of Chevak were contacted to mark buried utilities within the project area and identify potential conflicts.

Soil sample locations, screening results, and soil descriptions are summarized in Table 1. Global position system (GPS) coordinates of the hand boring locations are included in Table 2.

However, swing-tie measurements, presented in the field notes included in Appendix A, are considered to be more accurate than the GPS coordinates due to the GPS' reported accuracy of 12 to 30 feet. Photographs of the sampling activities are included in Appendix B.

3.1 Scope Modifications

The following changes to the scope presented in the work plan was implemented due to conditions encountered in the field:

- The work plan stated that soil samples would be collected in the vicinity of the solid waste and drums previously observed beneath Building S1. Due to the number of items located beneath the school, our field staff were unable to access the majority of this area. Therefore, only one surface soil analytical sample was collected from beneath the building.
- According to the work plan, the hand borings would be advanced to about 2 feet below ground surface (bgs). Due to the presence of peat and/or saturated soil, several of the hand borings could not be advanced to 2 feet bgs.

3.2 Site Reconnaissance

Prior to advancing the hand borings, representatives of Shannon & Wilson conducted a reconnaissance of the site in the vicinity of Buildings S1 and S6. Four potential areas of concern were evaluated during our site reconnaissance including:

- Area of Concern 1 - An approximately 300-gallon oval-shaped AST is located on an elevated wooden platform along the northeast wall of Building S1 (Photo 1). The platform is approximately 10 feet tall. Product feed piping extends from the tank, enters the wall of the structure, and is reportedly connected to a boiler located inside Building S1 (Photo 2). A pipe which appears to be a remote fill is present on the southeast end of the tank. Area of Concern 1 is shown on Figure 3.
- Area of Concern 2 - An approximately 250-gallon capsule-shaped AST is located beneath the western portion of Building S1 along the north wall of the building (Photo 3). Plywood is located beneath the tank and miscellaneous items are stored around the tank.

An approximately 2-inch diameter steel pipe connected to the tank extends through a hole in the north wall of the building, and is lying on the ground surface (Photo 4).

Reportedly, a second tank was located in this area on an elevated wooden platform. A pipe associated with this potential tank remains on the exterior wall of the structure (Photo 5). Ponded water and creosote piles were observed lying on the ground surface north of the building (Photo 6). Area of Concern 2 is shown on Figure 4.

- Area of Concern 3 - The 2014 Phase I ESA documented an oily sheen on ponded water northwest of Building S6. In addition, crushed batteries were reportedly observed adjacent to Building S6. During our site visit, ponded water, oil staining, or crushed batteries were not documented in this area. Metal and wood debris, and a bull dozer are currently stored in this area (Photo 7). The 2014 Phase I ESA documented 55-gallon drums, batteries, and solid waste within Building S6. During our site visit, Building S6 contained a wooden table, lumber, plywood, and insulation (Photo 8). Area of Concern 3 is shown on Figure 5.
- Area of Concern 4 – Building supplies, miscellaneous equipment, 55-gallon drums, miscellaneous containers, and debris are located beneath the western portion of Building S1. Five-gallon containers labeled “corrosive” (Photo 9) and a 5-gallon container of used anti-freeze (Photo 10) were observed. A 55-gallon, which appears to contain used oil, was also observed (Photo 11).

3.3 Soil Sampling

As part of this project, 27 hand borings were advanced in the vicinity of Area of Concern 1 (Hand Borings HB1 through HB6), Area of Concern 2 (Hand Borings HB7 through 12), and Area of Concern 3 (Hand Borings HB14 through HB28). The hand borings were advanced until groundwater was encountered at depths of about 1 to 2.5 feet bgs. In addition, one surface soil sample (SS13) was collected from the vicinity of the debris located beneath Building S1 (Photo 12). The surface soil sample was collected using a shovel and stainless-steel spoons.

Generally, field screening samples were obtained from the hand borings at a rate of one sample per 1-foot interval starting at 1-foot bgs. Prior to collection of each sample, the hand auger was decontaminated using a soft bristle brush and analconox (detergent)/water solution followed by a distilled water rinse. Immediately following retrieval of the hand auger, the analytical samples and field screening samples were collected. The analytical sample jars for volatile analyses were collected first, followed by the field screening sample, and finally the non-volatile analytical sample jars. Each soil sample was visually described and “screened” for volatile organic vapors using a photoionization detector (PID) and ADEC-approved headspace screening techniques.

The field screening samples were collected in re-sealable plastic bags, warmed to at least 40 degrees Fahrenheit, and tested within 60 minutes of collection. To screen, the sample was agitated for about 15 seconds, the seal of the bag will be opened slightly, the instrument probe will be inserted into the air space above the soil, and the bag held closed around the probe. The maximum ionization response as the PID draws vapor from the sample bag was recorded. The PID was calibrated with 100 parts per million (ppm) isobutylene in air standard gas. The soil cuttings were used to backfill the boreholes.

Twenty-five analytical samples, including three duplicates, were collected based on field screening results. For each volatile sample, at least 25 grams of soil, but no more than what could be completely submerged with 25-milliliters of methanol, were placed into a pre-weighed, 4-ounce jar with a septa lid. A 25-milliliter aliquot of methanol containing laboratory-added surrogates was added to the sample jar to submerge the soil sample. For each non-volatile sample, the laboratory-supplied jar was completely filled with soil, taking care to exclude gravel and debris. Sample jars were filled using dedicated stainless-steel spoons, placed in coolers with ice packs, and transferred to the laboratory using chain of custody procedures.

4.0 LABORATORY ANALYSIS

A total of 25 soil samples, including three duplicate samples were collected and submitted to SGS for laboratory analysis. The samples were analyzed for gasoline range organics (GRO) by Alaska Method (AK) 101; benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8021B; and diesel range organics (DRO) by AK 102. In addition, Samples HB1S2, HB11S1, and HB26S2 were analyzed for polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270D selective ion method (SIM).

5.0 SUBSURFACE CONDITIONS

Based on our observations of soil recovered from the hand borings, the subsurface primarily consists of 1 to 2 feet of organic soil/peat overlying silty sand with varying organic content. Groundwater was encountered in each hand boring and ranged from about 1 to 2.5 feet bgs. Petroleum odors were noted in the soil samples recovered from Hand Borings HB1 and HB11.

6.0 DISCUSSION OF RESULTS

The analytical soil results were compared to the most stringent ADEC Method Two cleanup levels listed in Table B1 of 18 AAC 75.341, for the “under 40-inch (precipitation) zone (October 1, 2017). The applicable cleanup and regulatory levels are listed in Tables 3. The laboratory reports and completed ADEC Laboratory Data Review Checklists are provided in Appendix C.

6.1 Soil Samples

DRO were detected in four (Samples HB2S2, HB7S2, HB11S1, and HB26S303) of the 25 soil samples at concentrations exceeding the ADEC Method Two Migration to Groundwater cleanup levels of 250 mg/kg. The highest DRO concentrations were detected in Samples HB2S2 (451 mg/kg) and Sample HB7S2 (estimated 497 mg/kg). In a follow-up email, the SGS project manager indicated that the DRO in these samples appeared consistent with a biogenic source. Varying amounts of organic material was documented in both of these samples.

Sample HB11S1 contained 318 mg/kg DRO, which the laboratory indicated was likely associated with petroleum. In addition, 16 PAH compounds, at concentrations less than the applicable ADEC cleanup levels, were detected in the sample. Sample HB11S101 was a duplicate of HB11S1 and contained 211 mg/kg DRO, which is less than the applicable ADEC cleanup level. This duplicate sample set was collected in the vicinity of creosote coated poles which were lying on the ground surface.

Duplicate sample set HB26S2/HB26303 contained a maximum of 281 mg/kg DRO. The laboratory indicated that the DRO detected in these two samples was likely associated with petroleum. In addition, Sample HB26S2 contained six PAH compounds, including 0.759 mg/kg 1-methylnaphthalene and 7.66 mg/kg naphthalene, which exceed the ADEC cleanup levels of 0.41 mg/kg and 0.038 mg/kg, respectively. This duplicate sample set was collected adjacent to the door of Building S6.

The remaining soil samples did not contain concentrations of the tested analytes in excess of the applicable cleanup levels.

6.2 Quality Assurance/Quality Control

The project laboratory follows on-going quality assurance/quality control procedures to evaluate conformance to applicable ADEC data quality objectives (DQOs). Internal laboratory quality controls for this project included surrogates, method blanks, laboratory control sample/laboratory control sample duplicates (LCS/LCSD), and matrix spike/matrix spike (MS/MSD) duplicates. If a DQO for one of the controls is not met, the laboratory provides a brief explanation in the case narrative of their report.

External quality controls include field records, two trip blanks, and three field duplicate sample sets. Field logs and records were checked for completeness and accuracy. The relative percent difference (RPD) between the project sample and associated duplicate results is a measure of precision affected by matrix heterogeneity, sampling technique, and laboratory analyses. The

ADEC recommends an RPD of less than 50 percent for duplicate soil samples. For duplicate sample set HS26S2/HS26303, DRO and xylenes are greater than the ADEC's DQO of 50 percent. Therefore, these results are flagged "E" on Table 3 to indicate that the sample results are estimated due to the RPD failures.

A laboratory-prepared trip blank samples accompanied the project sample jars from the laboratory to the site during sampling activities and back again to SGS. The soil trip blanks did not contain detectable concentrations of GRO or BTEX. These results suggest that the project soil samples were not cross-contaminated during sampling, shipping, or analysis of the samples.

Two laboratory-prepared soil trip blank samples accompanied the project sample jars from the laboratory to the site during sampling activities and back again to SGS. The soil trip blank samples did not contain detectable concentrations of target analytes. These results suggest that the project soil samples were not cross-contaminated during sampling, transporting, or analysis of the samples.

Shannon & Wilson conducted a limited data assessment to review the laboratory's compliance with precision, accuracy, sensitivity, and completeness to the data quality objectives. Shannon & Wilson reviewed the SGS data deliverables and completed the ADEC's Laboratory Data Review Checklist, which is included in Appendix C. In our opinion, no non-conformances that would adversely impact data usability for the objectives of this project were noted.

7.0 CONCEPTUAL SITE MODEL

A Conceptual Site Model (CSM) was prepared to identify known and potential exposure pathways associated with contamination at the site. The CSM was developed using the ADEC's guidance CSM Scoping Form. The ADEC forms are included in Appendix D, with discussions of the potential exposure pathways provided below. The narrative includes descriptions of the site-specific considerations that increase or decrease the viability of each pathway at this site.

7.1 Soil

The direct contact exposure route is considered complete due to the presence of petroleum-impacted soil between 0 and 15 feet bgs. The direct contact exposure pathway is potentially complete for site visitors and trespassers, and future residents, commercial workers, and construction workers.

7.2 Groundwater

The ingestion of groundwater is considered a potentially complete exposure pathway because petroleum-impacted soil is in contact with groundwater and could potentially be used as a future drinking water source.

7.3 Air

Volatile contaminants have the potential to impact receptors through outdoor and indoor air inhalation. The presence of volatile contaminant concentrations in soil within the top 15 feet bgs creates a potentially complete outdoor air exposure pathway for site visitors and trespassers, and future residents, commercial workers, and construction workers. The Old BIA School is currently unsuitable for occupation and is built on piles. Therefore, the indoor air exposure pathway is currently incomplete. Although, if new non-pile supported structures were constructed on the site, the indoor air exposure pathway could be potentially complete for future residents, commercial and construction workers, and visitors.

7.4 Surface Water

Reportedly, surface water with a visible sheen has been observed at the site. In addition, petroleum-impacted soil is in contact with on-site groundwater and surface water, which may be hydraulically connected to Chevak Lake. Therefore, migration to surface water is considered a potentially complete exposure pathway for the subject site.

7.5 Other

Petroleum-impacted soil is in contact with on-site groundwater and surface water, which may be hydraulically connected to Chevak Lake. If contaminants were to impact Chevak Lake, sediment could be impacted. In turn, contaminants could be absorbed by plants and/or animals within the lake's ecosystem. Therefore, sediment and biota are considered potentially complete pathways.

7.6 CSM Summary

Currently complete or potentially complete exposure pathways, including direct contact with soil, groundwater, surface water, inhalation of outdoor air, sediment, and biota have been identified at the site. It is also recognized that changes in the site use or other site conditions may affect the viability of potential exposure pathways. In particular, the CSM will need to be re-evaluated and revised as necessary if demolition occurs at the site and/or a change in land use occurs.

8.0 DATA GAPS

The following is a list of data gaps identified for the site. Resolution of these data gaps may affect the conclusions and recommendations presented in this report and will likely be necessary to prepare a detailed cost estimate for site cleanup.

- Petroleum-impacted soil which is in contact with on-site surface water and groundwater was identified during this project. In addition, the 2014 Phase I ESA noted that oil sheening was observed on standing water adjacent to Building S6. Groundwater and surface water samples have not been collected and analyzed at the site.
- With the exception of Sample SS13, soil samples could not be collected from the ground surface beneath the Old BIA School, due to the presence of debris.
- The horizontal and vertical extent of soil contamination is currently undefined in the vicinity of the creosote coated poles located in Area of Concern 2 and southeast of Building S6.

9.0 SUMMARY

The DBAC field activities included advancing 27 hand borings. Analytical soil samples were collected from 20 of the hand borings. In addition, a surface soil sample was collected from beneath Building S1. Soil samples exceeding the ADEC Method Two cleanup levels for DRO, 1-methylnaphthalene, and naphthalene were documented at the site.

10.0 CLOSURE/LIMITATIONS

This report was prepared for the exclusive use of our client and their representatives. The findings we have presented within this report are based on the limited sampling and analyses we conducted for this project. As a result, the analyses and sampling performed can only provide you with our professional judgment as to the environmental characteristics of this site, and in no way guarantee that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The data presented in this report should be considered representative of the time of our site assessment. Changes due to natural forces or human activity can occur on the site. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised.

Shannon & Wilson has prepared the attachment in Appendix E, "Important Information About Your Geotechnical/Environmental Report," to assist you in understanding the use and limitations of our reports.

SHANNON & WILSON, INC.

You are advised that various state and federal agencies (ADEC, EPA, etc.) may require the reporting of this information. Shannon & Wilson does not assume the responsibility for reporting these findings and therefore has not, and will not, disclose the results of this study except upon your authorization or as required by law.

We appreciate this opportunity to be of service and your confidence in our firm. If you have questions or comments concerning this report, please call the undersigned at (907) 561-2120.

SHANNON & WILSON, INC.

A handwritten signature in blue ink, appearing to read "Alena Voigt".

Alena Voigt
Environmental Scientist

A handwritten signature in blue ink, appearing to read "Dan P. McMahon".

Dan P. McMahon
Associate

TABLE 1
SAMPLE LOCATIONS AND DESCRIPTIONS

Sample Number	Date	Sample Location (See Figures 3 through 5)	Depth (feet bgs)	Headspace (ppm) ^	Sample Description
Area of Concern 1 (See Figure 3)					
HB1S1	9/5/2017	Hand Boring 1, Sample 1	0-1	-	Dark brown to black, <i>Organic Soil (OL)</i> ; moist, hydrocarbon odor
* HB1S2	9/5/2017	Hand Boring 1, Sample 2	1-2	3.4	Gray, <i>Silty Sand (SM)</i> ; moist, hydrocarbon odor
* HB1S202	9/5/2017	Duplicate of Sample HB1S2	1-2	3.4	Gray, <i>Silty Sand (SM)</i> ; moist, hydrocarbon odor
HB1S3	9/5/2017	Hand Boring 1, Sample 3	2-3	-	Gray, <i>Silty Sand (SM)</i> ; wet, hydrocarbon odor
HB2S1	9/5/2017	Hand Boring 2, Sample 1	0-1	-	Dark brown to black, <i>Organic Soil (OL)</i> ; moist
* HB2S2	9/5/2017	Hand Boring 2, Sample 2	1-2	3.1	Gray, <i>Silty Sand (SM)</i> ; moist, trace organics
HB3S1	9/5/2017	Hand Boring 3, Sample 1	0-1	-	Dark brown to black, <i>Organic Soil (OL)</i> ; moist
* HB3S2	9/5/2017	Hand Boring 3, Sample 2	1-2	1.3	Gray, <i>Silty Sand (SM)</i> ; moist
HB4S1	9/5/2017	Hand Boring 4, Sample 1	0-1	-	Dark brown to black, <i>Organic Soil (OL)</i> ; moist
* HB4S2	9/5/2017	Hand Boring 4, Sample 2	1-2	1.5	Gray, <i>Silty Sand (SM)</i> ; moist
HB4S3	9/5/2017	Hand Boring 4, Sample 3	2-3	-	Gray, <i>Silty Sand (SM)</i> ; moist to wet
HB5S1	9/5/2017	Hand Boring 5, Sample 1	0-1	-	Gray to brown, <i>Organic Soil (OL)</i> with <i>Silty Sand (SM)</i> ; moist
* HB5S2	9/5/2017	Hand Boring 5, Sample 2	1-2	1.3	Gray, <i>Silty Sand (SM)</i> ; moist
HB5S3	9/5/2017	Hand Boring 5, Sample 3	2-3	-	Gray, <i>Silty Sand (SM)</i> ; wet
HB6S1	9/5/2017	Hand Boring 6, Sample 1	0-1	-	Gray to brown, intermixed <i>Organic Soil (OL)</i> with <i>Silty Sand (SM)</i> ; moist
* HB6S2	9/5/2017	Hand Boring 6, Sample 2	1-2	1.2	Gray, <i>Silty Sand (SM)</i> ; moist
Area of Concern 2 (See Figure 4)					
HB7S1	9/6/2017	Hand Boring 7, Sample 1	0-1	-	Dark brown to black, <i>Organic Soil (OL)</i> ; moist
* HB7S2	9/6/2017	Hand Boring 7, Sample 2	2-2.5	1.3	Dark brown to black, <i>Organic Soil (OL)</i> ; moist
HB8S1	9/6/2017	Hand Boring 8, Sample 1	0-1	-	Gray to brown, <i>Organic Soil (OL)</i> ; moist
HB8S2	9/6/2017	Hand Boring 8, Sample 2	1-2	-	Gray to brown, <i>Organic Soil (OL)</i> ; moist
* HB8S3	9/6/2017	Hand Boring 8, Sample 3	2-2.5	0.4	Brown, <i>Silty Sand (SM)</i> ; moist
* HB9S1	9/6/2017	Hand Boring 9, Sample 1	0-1	0.5	Gray to brown, intermixed <i>Organic Soil (OL)</i> with <i>Silty Sand (SM)</i> ; moist
HB9S2	9/6/2017	Hand Boring 9, Sample 2	1-2	-	Brown, <i>Organic Soil (OL)</i> ; moist to wet
* HB10S1	9/6/2017	Hand Boring 10, Sample 1	0-1	1.6	Gray to brown, <i>Organic Soil (OL)</i> and <i>Silty Sand (SM)</i> ; moist
* HB10S2	9/6/2017	Hand Boring 10, Sample 2	1-2	2.4	Dark brown to black, <i>Organic Soil (OL)</i> ; moist
* HB11S1	9/6/2017	Hand Boring 11, Sample 1	0-1	21.0	Gray to brown, <i>Organic Soil (OL)</i> with <i>Silty Sand (SM)</i> ; moist, hydrocarbon odor
* HB11S101	9/6/2017	Duplicate of Sample HB11S1	0-1	-	Gray to brown, <i>Organic Soil (OL)</i> with <i>Silty Sand (SM)</i> ; moist, hydrocarbon odor
HB12S1	9/6/2017	Hand Boring 12, Sample 1	0-1.5	-	Brown, <i>Organic Soil (OL)</i> ; moist
* HB12S2	9/6/2017	Hand Boring 12, Sample 2	1.5-2.5	2.0	Brown, <i>Silty Sand (SM)</i> ; moist
* SS13	9/6/2017	Surface Sample 13	0-0.3	0.2	Gray to brown, <i>Silty Sand (SM)</i> ; moist, trace organics

Notes:

* = Sample analyzed by the project laboratory (See Table 3)

^ = Field screening instrument was a Thermo Environmental Instruments 580B photoionization detector (PID).

- = Not applicable

bgs = below ground surface

ppm = parts per million

TABLE 1
SAMPLE LOCATIONS AND DESCRIPTIONS

Sample Number	Date	Sample Location (See Figures 3 through 5)	Depth (feet bgs)	Headspace (ppm) ^	Sample Description
Area of Concern 3 (See Figure 5)					
HB14S1	9/6/2017	Hand Boring 14, Sample 1	0-1	0.6	Brown, <i>Organic Soil (OL)</i> ; moist
HB15S1	9/6/2017	Hand Boring 15, Sample 1	0-1	1.5	Brown, <i>Organic Soil (OL)</i> ; moist
HB16S1	9/6/2017	Hand Boring 16, Sample 1	0-1	-	Brown, <i>Organic Soil (OL)</i> ; moist
* HB16S2	9/6/2017	Hand Boring 16, Sample 2	1-2	0.8	Gray, <i>Silty Sand (SM)</i> ; moist
HB17S1	9/6/2017	Hand Boring 17, Sample 1	0-2	-	Brown, <i>Organic Soil (OL)</i> ; moist to wet
HB18S1	9/6/2017	Hand Boring 18, Sample 1	0-2	-	Brown, <i>Organic Soil (OL)</i> ; moist to wet
* HB19S1	9/6/2017	Hand Boring 19, Sample 1	0-2	0.1	Brown, <i>Organic Soil (OL)</i> ; moist
HB20S1	9/6/2017	Hand Boring 20, Sample 1	0-1	0.9	Dark Brown, <i>Organic Soil (OL)</i> ; moist
* HB20S2	9/6/2017	Hand Boring 20, Sample 2	1-2	0.1	Gray, <i>Silty Sand (SM)</i> ; moist
HB21S1	9/6/2017	Hand Boring 21, Sample 1	0-0.8	-	Brown, <i>Organic Soil (OL)</i> ; moist to wet
HB22S1	9/6/2017	Hand Boring 21, Sample 2	0-0.9	-	Brown, <i>Organic Soil (OL)</i> ; moist to wet
HB23S1	9/6/2017	Hand Boring 23, Sample 1	0-1	0.6	Gray, <i>Silty Sand (SM)</i> ; moist
HB24S1	9/6/2017	Hand Boring 24, Sample 1	0-1	-	Brown, <i>Organic Soil (OL)</i> ; moist
* HB24S2	9/6/2017	Hand Boring 24, Sample 2	1-1.5	0.9	Gray, <i>Silty Sand (SM)</i> ; moist
HB25S1	9/6/2017	Hand Boring 25, Sample 1	0-0.5	-	Brown, <i>Silty Sand (SM)</i> ; moist, trace organics
* HB25S2	9/6/2017	Hand Boring 25, Sample 2	0.5-1.2	0.6	Brown, <i>Silty Sand (SM)</i> ; moist, trace organics
HB26S1	9/6/2017	Hand Boring 26, Sample 1	0-1	-	Brown, <i>Silty Sand (SM)</i> ; moist, trace organics
* HB26S2	9/6/2017	Hand Boring 26, Sample 2	1-1.5	0.7	Brown, <i>Silty Sand (SM)</i> ; moist, trace organics
* HB26S303	9/6/2017	Duplicate of Sample HB26S2	1-1.5	0.7	Brown, <i>Silty Sand (SM)</i> ; moist, trace organics
HB27S1	9/6/2017	Hand Boring 27, Sample 1	0-1	-	Gray, <i>Silty Sand (SM)</i> ; moist
* HB27S2	9/6/2017	Hand Boring 27, Sample 2	1-1.7	0.3	Gray, <i>Silty Sand (SM)</i> ; moist
HB28S1	9/6/2017	Hand Boring 28, Sample 1	0-1	-	Brown, <i>Organic Soil (OL)</i> ; moist
* HB28S2	9/6/2017	Hand Boring 28, Sample 2	1-1.5	0.5	Gray, <i>Silty Sand (SM)</i> ; moist
Quality Control Samples					
* STB1	9/6/2017	Soil Trip Blank	-	-	Ottawa sand with methanol added in the laboratory
* STB2	9/6/2017	Soil Trip Blank	-	-	Ottawa sand with methanol added in the laboratory

Notes:

* = Sample analyzed by the project laboratory (See Table 3)

^ = Field screening instrument was a Thermo Environmental Instruments 580B photoionization detector (PID).

- = Not applicable

bgs = below ground surface

ppm = parts per million

TABLE 2 - SUMMARY OF GPS COORDINATES

Hand Boring ID	Latitude*	Longitude*
HB1	61.52858	165.58649
HB2	61.52864	165.58641
HB3	61.52858	165.58653
HB4	61.52865	165.58638
HB5	61.52864	165.58632
HB6	61.52864	165.58636
HB7	61.52861	165.58727
HB8	61.52863	165.58719
HB9	61.52863	165.58728
HB10	61.52862	165.58730
HB11	61.52862	165.58730
HB12	61.52861	165.58733
HB14	61.52841	165.58745
HB15	61.52843	165.58763
HB16	61.52843	165.58751
HB17	61.52841	165.58743
HB18	61.52843	165.58736
HB19	61.52842	165.58737
HB20	61.52842	165.58737
HB21	61.52839	165.58737
HB22	61.52837	165.58740
HB23	61.52838	165.58733
HB24	61.52837	165.58736
HB25	61.52831	165.58727
HB26	61.52831	165.58725
HB27	61.52831	165.58725
HB28	61.52827	165.58714

Notes:

* = Datum is World Geodetic System of 1984 (WGS1984)

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS

Parameter Tested	Method*	Cleanup Level (mg/kg)**	Sample Location, Sample ID Number^, and Soil Sample Depth in Feet Below Ground Surface (See Table 1 and Figure 3, 4, and 5)															
			Area of Concern 1							Area of Concern 2								
			HB1S2 1-2	HB1S202~ 1-2	HB2S2 1-2	HB3S2 1-2	HB4S2 0-1	HB5S2 1-2	HB6S2 1-2	HB7S2 2-2.5	HB8S3 2-2.5	HB9S1 0-1	HB10S1 0-1	HB10S2 1-2	HB11S1 0-1	HB11S101~ 0-1	HB12S2 1.5-2.5	SS13^^ 0-0.3
PID Headspace Reading - ppm	580B PID	-	3.4	3.4	3.1	1.3	1.5	1.3	1.2	1.3	0.4	0.5	1.6	2.4	21.0	21.0	2.0	0.2
Gasoline Range Organics (GRO) - mg/kg	AK 101	300	1.58 J	1.35 J	1.23 J	<1.56	<1.13	<1.25	<1.12	<6.20 J-	1.89 J	0.795 J	0.991 J	3.38 J	3.90	3.15	<3.21	<1.98
Diesel Range Organics (DRO) - mg/kg	AK 102	250	125	144	451	79.3	10.3 J	8.13 J	<12.1	497 J+	208	20.0 J	78.4	41.0	318	211	13.0 J	65.3
Aromatic Volatile Organics (BTEX)																		
Benzene - mg/kg	EPA 8021B	0.022	<0.00765	<0.00685	<0.00970	<0.00785	<0.00560	<0.00620	<0.00560	<0.0309	<0.0143	<0.00655	<0.00740	<0.0186	<0.00775	<0.00715	<0.0161	<0.00990
Toluene - mg/kg	EPA 8021B	6.7	<0.0153	<0.0137	<0.0194	<0.0157	<0.0113	<0.0124	<0.0112	<0.0620	<0.0284	<0.0131	<0.0148	<0.0370	<0.0156	<0.0144	<0.0321	<0.0198
Ethylbenzene - mg/kg	EPA 8021B	0.13	0.0363	0.0393	<0.0194	<0.0157	<0.0113	<0.0124	<0.0112	<0.0620	<0.0284	<0.0131	<0.0148	<0.0370	0.0224 J	0.0138 J	<0.0321	<0.0198
Xylenes - mg/kg	EPA 8021B	1.5	0.173	0.181	<0.0582	0.0125 J	<0.0337	<0.0373	<0.0336	<0.0186	<0.0854	<0.0392	<0.0444	<0.111	0.227	0.179	0.0334 J	<0.0593
Polynuclear Aromatic Hydrocarbons (PAHs)																		
1-Methylnaphthalene - mg/kg	EPA 8270D SIM	0.41	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.347	-	-	
2- Methylnaphthalene - mg/kg	EPA 8270D SIM	1.3	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.266	-	-	
Acenaphthene - mg/kg	EPA 8270D SIM	37	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.142	-	-	
Acenaphthylene - mg/kg	EPA 8270D SIM	18	<0.0810												<0.0152			
Anthracene - mg/kg	EPA 8270D SIM	390	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.132	-	-	
Benzo(a)anthracene - mg/kg	EPA 8270D SIM	0.28	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.125	-	-	
Benzo[a]pyrene - mg/kg	EPA 8270D SIM	0.20	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.0548	-	-	
Benzo[b]fluoranthene - mg/kg	EPA 8270D SIM	2.0	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.104	-	-	
Benzo[g,h,i]perylene - mg/kg	EPA 8270D SIM	2,300	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.0195 J	-	-	
Benzo[k]fluoranthene - mg/kg	EPA 8270D SIM	20	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.0304	-	-	
Chrysene - mg/kg	EPA 8270D SIM	82	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.119	-	-	
Dibenzo[a,h]anthracene - mg/kg	EPA 8270D SIM	0.20	<0.0810												<0.0152			
Fluoranthene - mg/kg	EPA 8270D SIM	590	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.653	-	-	
Fluorene - mg/kg	EPA 8270D SIM	36	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.167	-	-	
Indeno[1,2,3-c,d] pyrene - mg/kg	EPA 8270D SIM	2.0	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.0183	-	-	
Naphthalene - mg/kg	EPA 8270D SIM	0.038	<0.0645	-	-	-	-	-	-	-	-	-	-	-	0.433	-	-	
Phenanthrene - mg/kg	EPA 8270D SIM	39	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.846	-	-	
Pyrene - mg/kg	EPA 8270D SIM	87	<0.0810	-	-	-	-	-	-	-	-	-	-	-	0.514	-	-	

Notes:

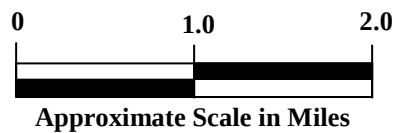
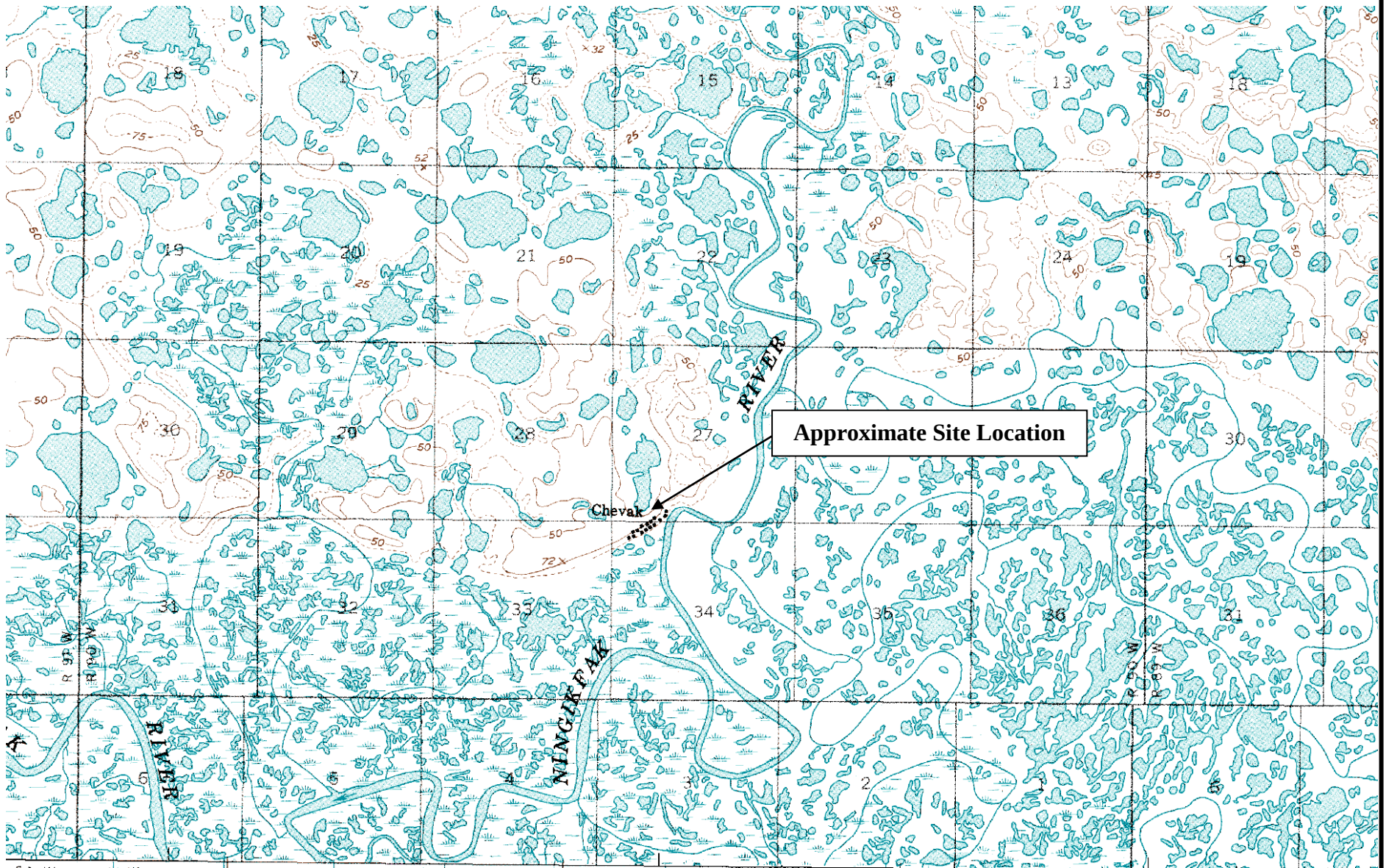
- * = See laboratory results in Appendix C for compounds tested, methods, and laboratory reporting limits
- ** = Soil cleanup level is the most stringent ADEC Method Two standard listed in Table B1 or B2, 18 AAC 75 (October 2017)
- ^ = Sample ID No. preceded by "20007-" on the chain-of-custody form
- ^^ = Sample SS13 is listed as Sample SS on chain-of-custody
- ppm = Parts per million
- mg/kg = Milligrams per kilogram
- PID = Photoionization detector
- = Not tested or not applicable
- <0.00765 = Analyte not detected; laboratory limit of detection is 0.00765 mg/kg
- 1.58 = Analyte detected at a concentration less than the applicable ADEC cleanup levels
- 451 = bolded and highlighted results exceed the applicable ADEC cleanup level
- J = Analyte detected, but at a concentration less than the limit of quantitation. See the SGS laboratory report for details.
- J+ = Analyte result is potentially biased high due to surrogate failure. See the SGS laboratory report for details.
- J- = Analyte result is potentially biased low due to surrogate failure. See the SGS laboratory report for details.
- ~ = Duplicate of preceding sample

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS

Parameter Tested	Method*	Cleanup Level (mg/kg)**	Sample Location, Sample ID Number^, and Soil Sample Depth in Feet Below Ground Surface (See Table 1 and Figure 3, 4, and 5)										
			Area of Concern 3									Trip Blanks	
			HB16S2 1-2	HB19S1 0-2	HB20S2 1-2	HB24S2 1-1.5	HB25S2 0.5-1.2	HB26S2 1-1.5	HB26S303~ 1-1.5	HB27S2 1-1.7	HB28S2 1-1.5	STB1 -	STB2 -
PID Headspace Reading - ppm	580B PID	-	0.8	0.1	0.1	0.9	0.6	0.7	0.7	0.3	0.5	-	-
Gasoline Range Organics (GRO) - mg/kg	AK 101	300	1.27 J	1.95 J	<1.87	<1.31	<1.80	<1.84	1.49 J	<1.79	<1.58	<1.25	<1.25
Diesel Range Organics (DRO) - mg/kg	AK 102	250	27.6	34.6	99.1 J	14.2 J	65.2 J	84.1 J, E	281 E	93.1 J	20.7 J	-	-
Aromatic Volatile Organics (BTEX)													
Benzene - mg/kg	EPA 8021B	0.022	<0.00805	<0.00700	<0.00935	<0.00655	<0.00900	<0.00920	<0.0111	<0.00895	<0.00790	<0.00625	<0.00630
Toluene - mg/kg	EPA 8021B	6.7	<0.0161	<0.0139	<0.0187	<0.0131	<0.0181	<0.0184	<0.0222	<0.0179	<0.0158	<0.0125	<0.0126
Ethylbenzene - mg/kg	EPA 8021B	0.13	<0.0161	<0.0139	<0.0187	<0.0131	<0.0181	0.0239 J	<0.0222	<0.0179	<0.0158	<0.0125	<0.0126
Xylenes - mg/kg	EPA 8021B	1.5	<0.0482	<0.0418	<0.0562	<0.0393	<0.0541	0.0567 J, E	0.0208 J, E	<0.0537	<0.0474	<0.0376	<0.0377
Polynuclear Aromatic Hydrocarbons (PAHs)													
1-Methylnaphthalene - mg/kg	EPA 8270D SIM	0.41			-	-	-	0.759	-	-	-	-	-
2- Methylnaphthalene - mg/kg	EPA 8270D SIM	1.3			-	-	-	0.793	-	-	-	-	-
Fluoranthene - mg/kg	EPA 8270D SIM	590			-	-	-	0.124 J	-	-	-	-	-
Naphthalene - mg/kg	EPA 8270D SIM	0.038			-	-	-	7.66	-	-	-	-	-
Phenanthrene - mg/kg	EPA 8270D SIM	39			-	-	-	0.132 J	-	-	-	-	-
Pyrene - mg/kg	EPA 8270D SIM	87			-	-	-	0.100 J	-	-	-	-	-
Other PAH analytes - mg/kg	EPA 8270D SIM	Varies			-	-	-	<0.167	-	-	-	-	-

Notes:

- * = See laboratory results for compounds tested, methods, and laboratory reporting limits
- ** = Soil cleanup level is the most stringent ADEC Method Two standard listed in Table B1 or B2, 18 AAC 75 (October 2017)
- ^ = Sample ID No. preceded by "20007-" on the chain-of-custody form
- ppm = Parts per million
- mg/kg = Milligrams per kilogram
- PID = Photoionization detector
- = Not tested or not applicable
- <1.31 = Analyte not detected; laboratory limit of detection is 1.31 mg/kg
- 14.2 = Analyte detected at a concentration less than the applicable ADEC cleanup levels
- 281 = bolded and highlighted results exceed the applicable ADEC cleanup level
- J = Analyte detected, but at a concentration less than the limit of quantitation. See the SGS laboratory report for details.
- E = Result is an estimate due to a primary/field duplicate sample pair relative percent difference (RPD) failure
- ~ = Duplicate of preceding sample



Elevation in Feet
Contour Interval 50 Feet
Taken From
Hooper Bay (C-2) Quadrangle
U.S. Geological Survey



Old BIA School
Chevak, Alaska

VICINITY MAP

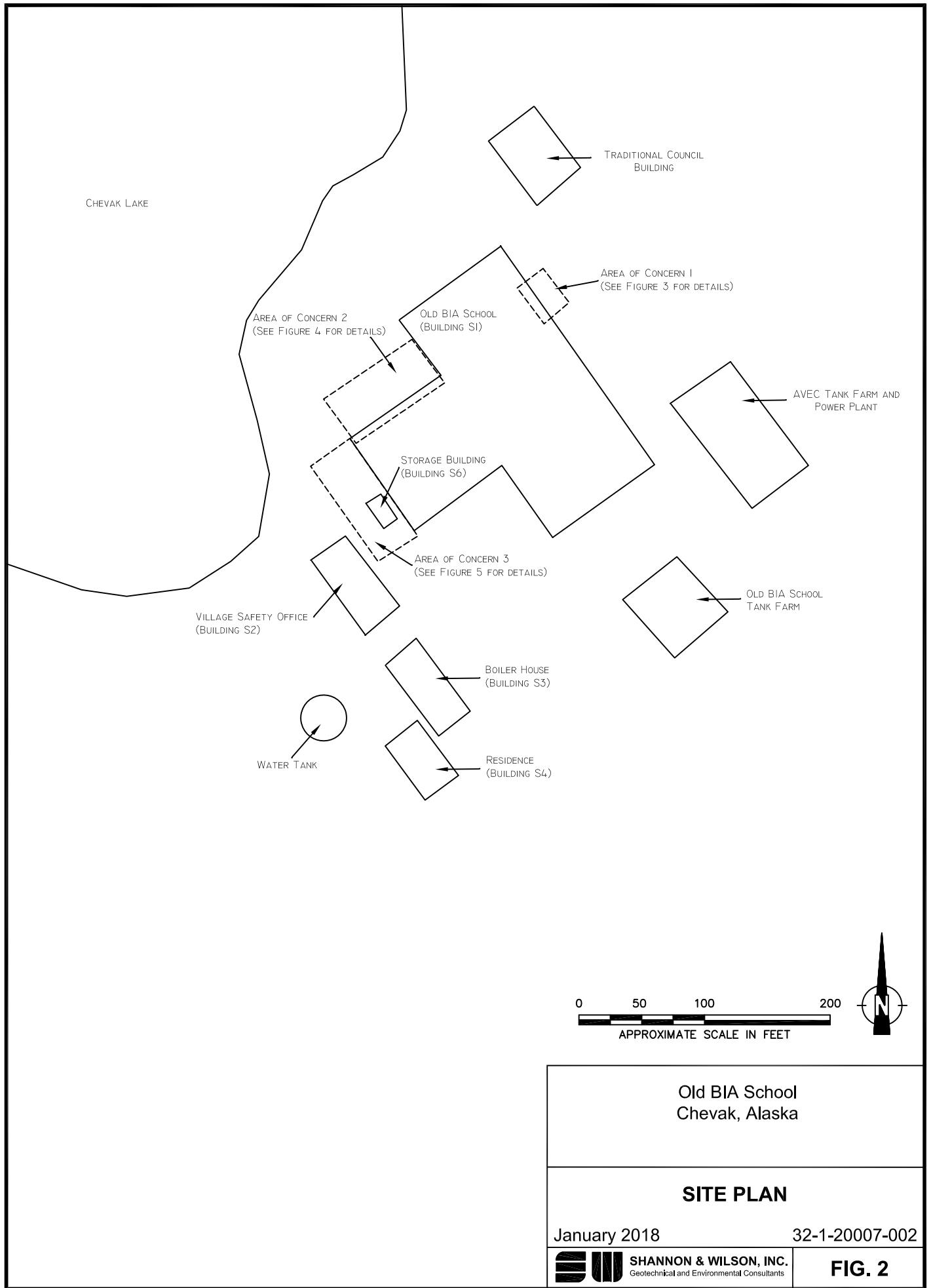
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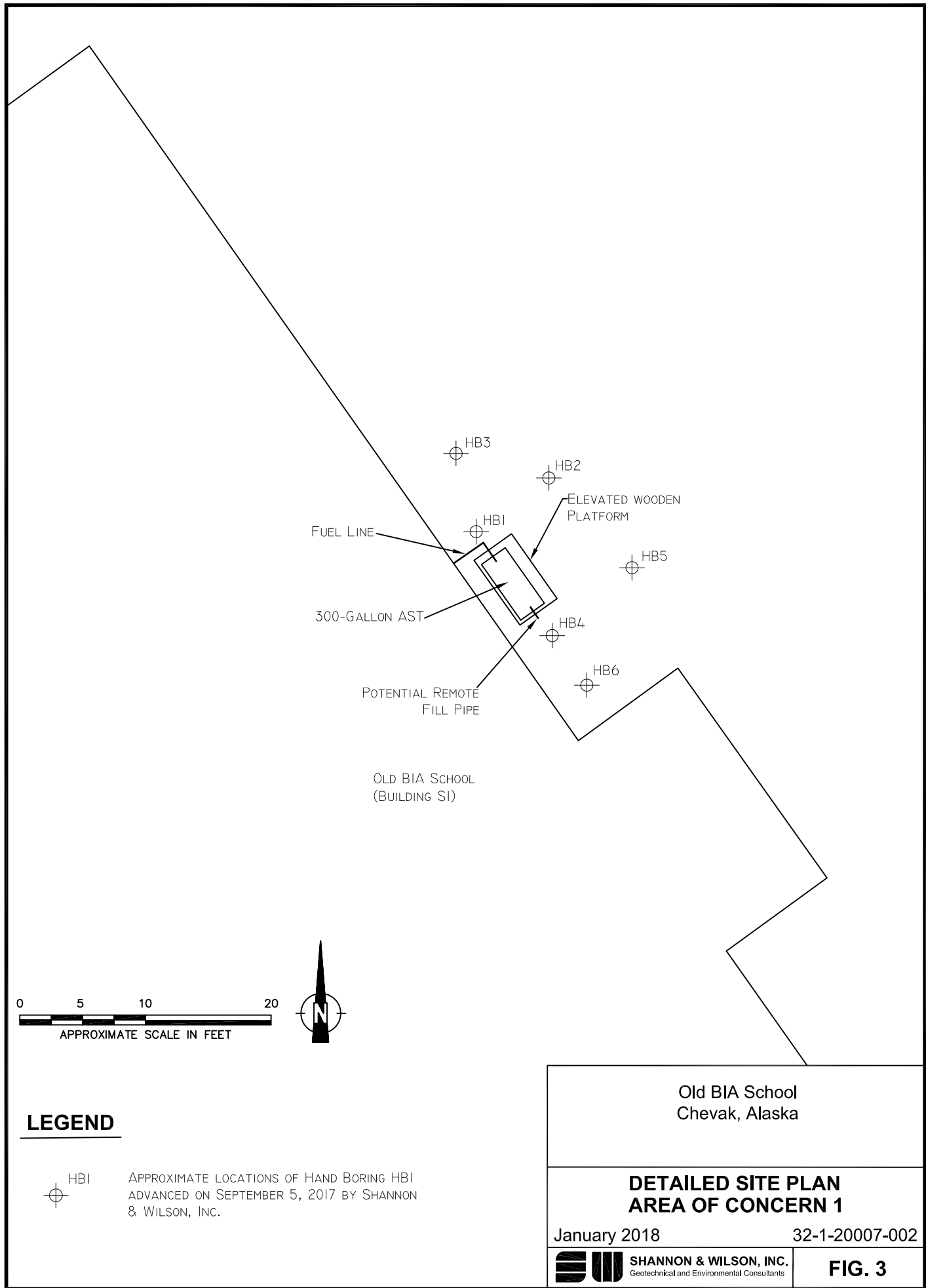
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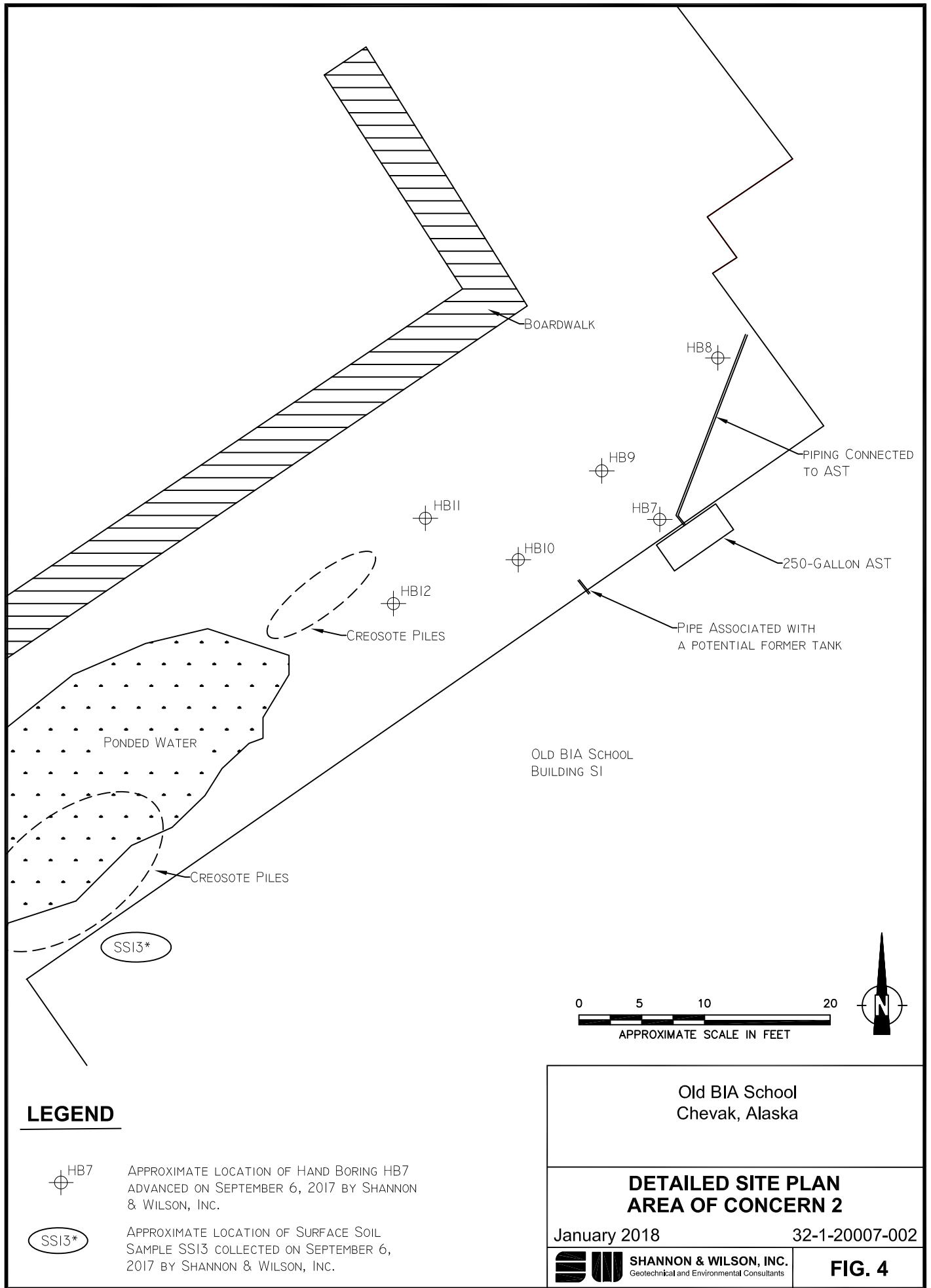


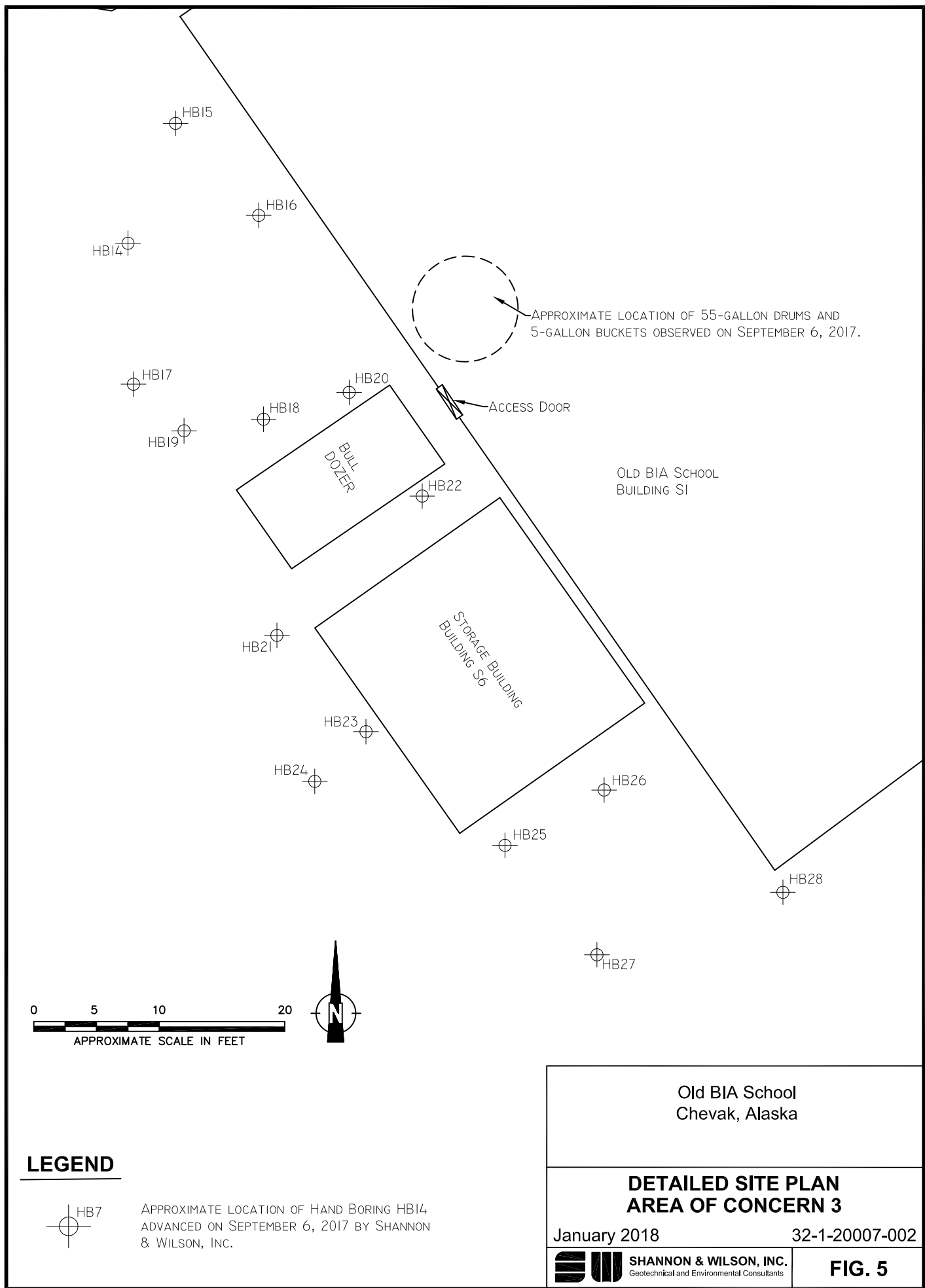
SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 1









APPENDIX A
FIELD NOTES

9/5/2017 - 18:00 - Calibrated PID #6
GPS Accuracy ~ 12-30 feet

SAMPLE COLLECTION LOG

SHANNON & WILSON, INC

Project Number: 32-1-20007							Location: CHEVAK, AK	
Date: 9/5/2017							Site: OLD BIAS SCHOOL	
Sampler: TWC, ADV							Sheet Number: 1 of 5	
Sample Number	GPS Location	Sample Time	Sample Depth	Sample Type	GPS Reading*	PID Reading	Soil Classification	NOTES
HB1 S1	WP26		0-1	N	61.52858	-	Dark brown to black, organic soil (OL); moist; Hydrocarbon odor	
HB1 S2		18:15	1-2	W	65.58649	3.4	Gray, Silty Sand (SM); moist; Hydrocarbon odor	Duplicate HB1S202 time - 19:00
HB1 S3			2-3			-	Gray, Silty Sand (SM); wet; Hydrocarbon odor	DTW @ 2 ft bgs
HB2 S1	WP25		0-1	N	61.52864	-	Dark brown to black, organic soil (OL); moist	
HB2 S2		18:35	1-2	W	65.58641	3.1	Gray, Silty Sand (SM); moist; trace organics	DTW @ 2 ft bgs
HB3 S1	WP27		0-1	N	61.52858	-	Dark brown to black, organic soil (OL); moist	
HB3 S2		18:45	1-2	W	65.58653	1.3	Gray, Silty Sand (SM); moist	DTW @ 2 ft bgs
HB4 S1	WP23		0-1	N	61.52865		Dark brown to black, organic soil (OL); moist	
HB4 S2		19:05	1-2	W	65.58638	1.5	Gray, Silty Sand (SM); moist	DTW @ 2.5 bgs (ft)
HB4 S3			2-3				Gray, Silty Sand (SM); moist to wet	
HB5 S1	WP24		0-1	N	61.52864	-	Gray to Brown, Intermixed organic soil (OL) with Silty Sand (SM); moist	
HB5 S2		19:15	1-2			1.3	Gray, Silty Sand (SM); moist	DTW @ 2.5 ft bgs
HB5 S3			2-3			-	Gray, Silty Sand (SM); wet	
HB6 S1	WP22		0-1	N	61.52864	-	Gray to brown, Intermixed organic soil (OL) with Silty Sand (SM); moist	
HB6 S2		19:25	1-2	W	65.58636	1.2	Gray, Silty Sand (SM); moist	DTW @ 2 ft bgs

Sample Type

ES Environmental sample
FD Field duplicate
FM Field Screening
TB Trip blank
* GPS readings only collected from analytical sample locations

SAMPLE COLLECTION LOG

SHANNON & WILSON, INC

Project Number: 32-1-20007									
Date: 9/6/2017									
Location: CHEVAK, AK									
Site: OLD BIASCHOO									
Sheet Number: 2 of 5									
Sampler: TWC, ADV									
Sample Number	GPS Location	Sample Time	Sample Depth	Sample Type	GPS Reading*	PID Reading	Soil Classification	NOTES	
HB7S1	WP20		0-1	N	61.52861	-	Dark brown to black, organic soil (OL); moist	44444444	
				W	165.58727	-	Same as above		
HB7S2		9:42	2-2.5			1.3	Same as above	DTW @ 2.5ft bgs	
								Water accumulated in hand boring	
HB8S1	WP21		0-1	N	61.52863	-	Gray to dark brown, organic soil (OL); moist		
HB8S2			1-2	W	165.58719	-	Same as above		
HB8S3		10:00	2-2.5			0.4	Brown, Silty Sand (SM); moist	DTW @ 2.5ft bgs	
HB9S1	WP19	10:15	0-1	N	61.52863	0.5	Gray to brown Intermixed organic soil (OL) and Silty Sand (SM); moist	Sample taken from silty sand @ 0.8 bgs	
HB9S2			1-2	W	165.58728	-	Brown, organic soil (OL); moist to wet		
			2-3.5			-	Same as above	DTW @ 3ft bgs - Accumulated in hand boring	
HB10S1	WP18	10:30	0-1	N	61.52862	1.6	Gray to brown Intermixed organic soil (OL) and Silty Sand (SM); moist	S1 taken from SM soil @ 0.9ft bgs	
HB10S2		10:38	1-2	W	165.58730	2.4	Dark brown to black, organic soil (OL); moist	S2 taken @ 1.8ft bgs	
								DTW @ 2.5ft bgs	
								Accumulated in hand boring	
HB11S1	WP17	10:50	0-1	N	61.52862	21.0	Gray to brown Intermixed organic soil (OL) and Silty Sand (SM); moist; hydrocarbon odor	S1 taken from SM soil @ 0.6ft bgs	
			1-2				Dark brown to black organic soil; Wet	DTW @ 1ft bgs	
								Accumulated in hand boring	
HB11S101		11:45		FD			Duplicate sample of HB11S1		

Sample Type

- ES Environmental sample
- FD Field duplicate
- FM Field Screening
- TB Trip blank
- * GPS readings only collected from analytical sample locations

SAMPLE COLLECTION LOG

SHANNON & WILSON, INC

Project Number: 32-1-20007										Location: CHEVAK, AK									
Date: 9/6/2017										Site: OLD BIA School									
Sampler: TWC, ADV										Sheet Number: 3 of 5									
Sample Number	GPS Location	Sample Time	Sample Depth	Sample Type	GPS Reading*	PID Reading	Soil Classification	NOTES											
HB12S1	WP16		0-1.5	N W	61.52861 165.58733		Brown, organic soil (OL); moist												
HB12S2		11:05	1.5-2.5			2.0	Brown, silty sand (SM); moist	DTW @ 2.5ft bgs											
								Accumulated in hand boring											
SS13		12:45	0-0.3			0.2	Gray to brown, silty sand (SM); trace organics, moist	SS = Surface sample											
HB14S1	WP13		0-1	N W	61.52841 165.58745	0.6	Brown, organic soil (OL); moist	Screening taken for PID											
								No Sample											
HB15S1	WP15		0-1	N W	61.52843 165.58763	1.5	Brown, Organic soil (OL); moist	DTW @ 1 ft bgs											
								Screening taken for PID											
								No Sample											
HB16S1	WP14		0-1	N W	61.52843 165.58751		Brown, organic soil (OL); moist	DTW @ 1.2 ft bgs											
HB16S2		14:05	1-2			0.8	Gray, silty sand (SM); moist												
HB17S1	WP12		0-2	N W	61.52841 165.58743		Brown, organic soil (OL); moist to wet	DTW @ 2 ft bgs											
								No Sample											
HB18S1	WP10		0-2	N W	61.52843 165.58736		Brown, organic soil (OL); moist to wet	No Sample											
HB19S1	WP9	14:20	0-2	N W	61.52842 165.58737	0.1	Brown, organic soil (OL); moist	DTW @ 2 ft bgs											

Sample Type

ES Environmental sample
 FD Field duplicate
 FM Field Screening
 TB Trip blank
 * GPS readings only collected from analytical sample locations

SAMPLE COLLECTION LOG

SHANNON & WILSON, INC

Project Number: 32-1-20007

Date: 9/6/2017

Sampler: TWC, ADV

Location: CHEVAK, AK

Site: OLD BIA School

Sheet Number: 4 of 5

Sample Number	Location	Sample Time	Sample Depth	Sample Type	GPS Reading*	PID Reading	Soil Classification	NOTES
HB20S1	WP11		0-1	N	61.52842	0.9	Dark brown, organic soil (OL); moist	Screening taken for PID
HB20S2		14:40	1-2	W	165.58737	0.1	Gray, Silty sand (SM); moist	DTW @ 2.2 ft bgs Water Accumulated in hand boxing
HB21S1	WP7		0-0.8	N	61.52839	-	Brown, organic soil (OL); moist to wet	organic soil to water 0.8 ft bgs NO sample
HB22S1	WP8		0-0.9	N	61.52837	-	Brown, organic soil (OL); moist to wet	organic soil to water 0.9 ft bgs NO sample
HB23S1	WP5		0-1	N	61.52838	0.6	Gray, Silty sand (SM); moist	DTW @ 1.2 ft bgs Screening taken for PID
HB24S1	WP6		0-1	N	61.52837	-	Brown, organic soil (OL); moist	NO sample
HB24S2		15:00	1-1.5	W	165.58736	0.9	Gray, Silty sand (SM); moist	DTW @ 1.5 ft bgs
HB25S1	WP4		0-0.5	N	61.52831	-	Brown, silty sand (SM), trace organics; moist	
HB25S2		15:10	0.5-1.2	W	165.58727	0.6	Same as above	DTW @ 1.2; water Accumulated in hand boxing
HB26S1	WP3		0-1	N	61.52831		Brown, Silty sand (SM), trace organics; moist	
HB26S2		15:20	1-1.5	W	165.58725	0.7	Same as above	DTW @ 1.5 ft bgs
HB26S3		16:00		FD			Duplicate sample of HB26S2	

Sample Type

ES Environmental sample
FD Field duplicate
FM Field Screening
TB Trip blank
* GPS readings only collected from analytical sample locations

SHANNON & WILSON, INC

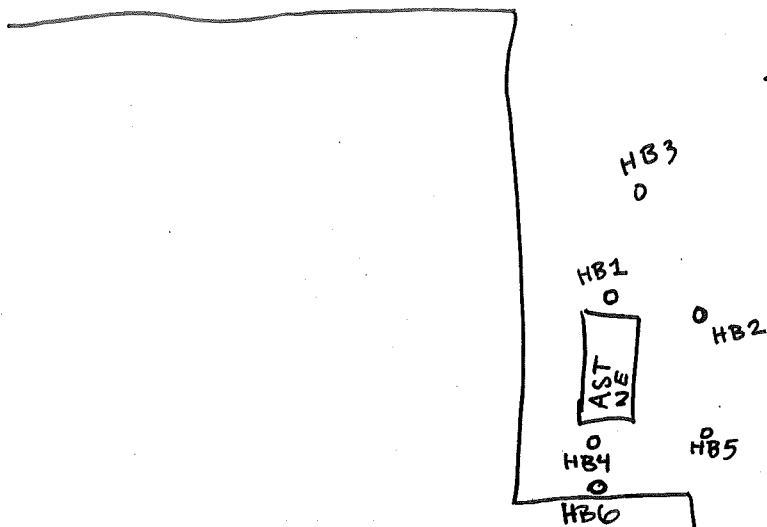
Sample Type
ES
Environmental sample
FD
Field duplicate
EM
Field Screening
TB
Trip blank
*
GFS readings only collected from analytical sample locations

HB1 Sample Locations

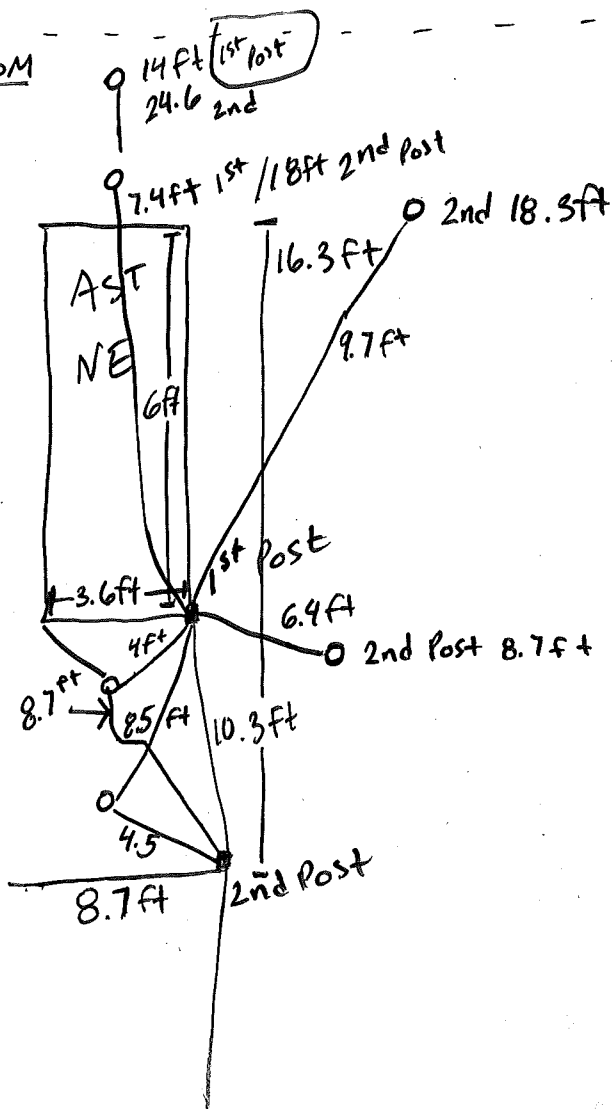
to
HB6

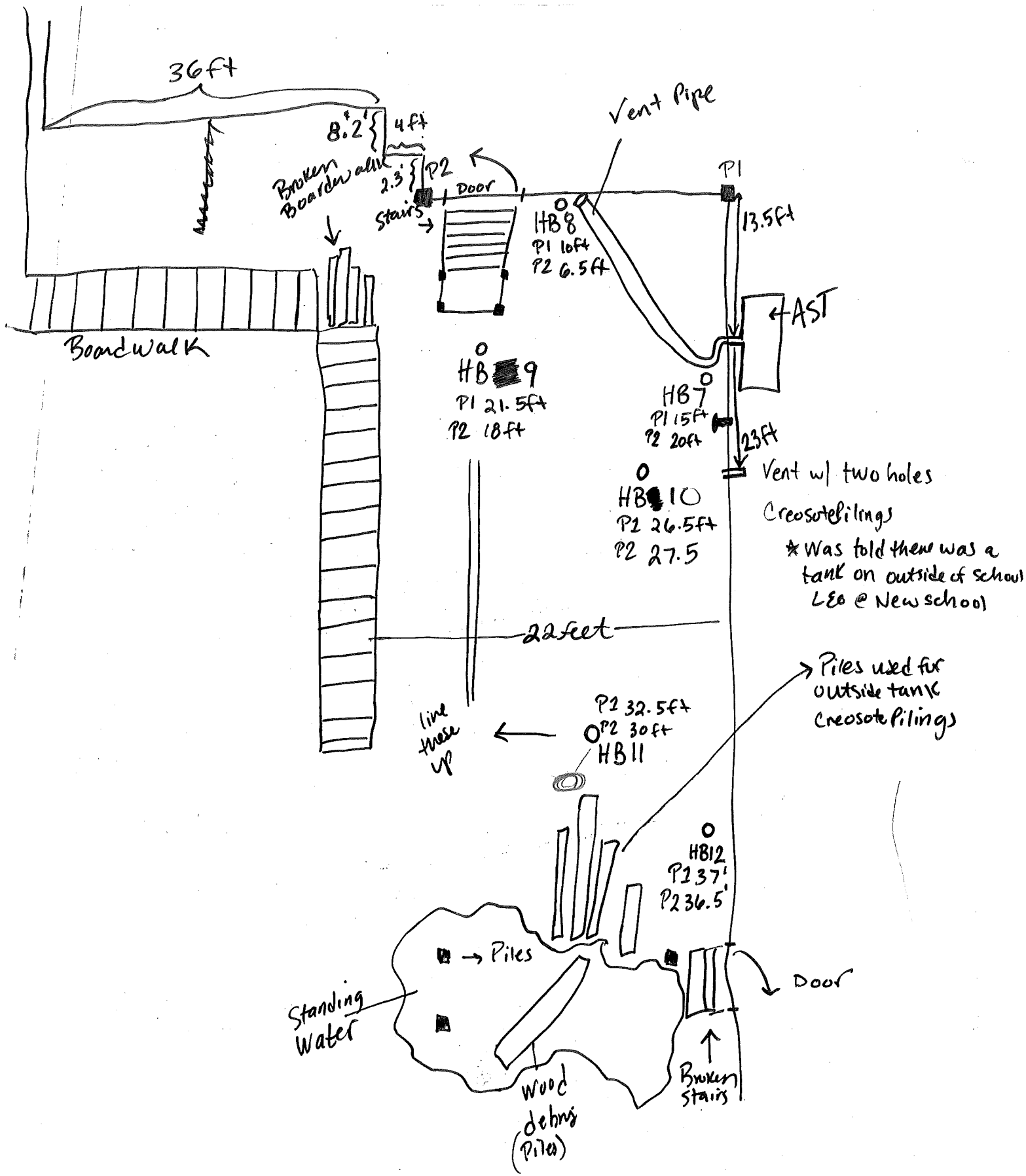
* Note → water Accumulated in hand
borings of backfilling.

* Not to Scale



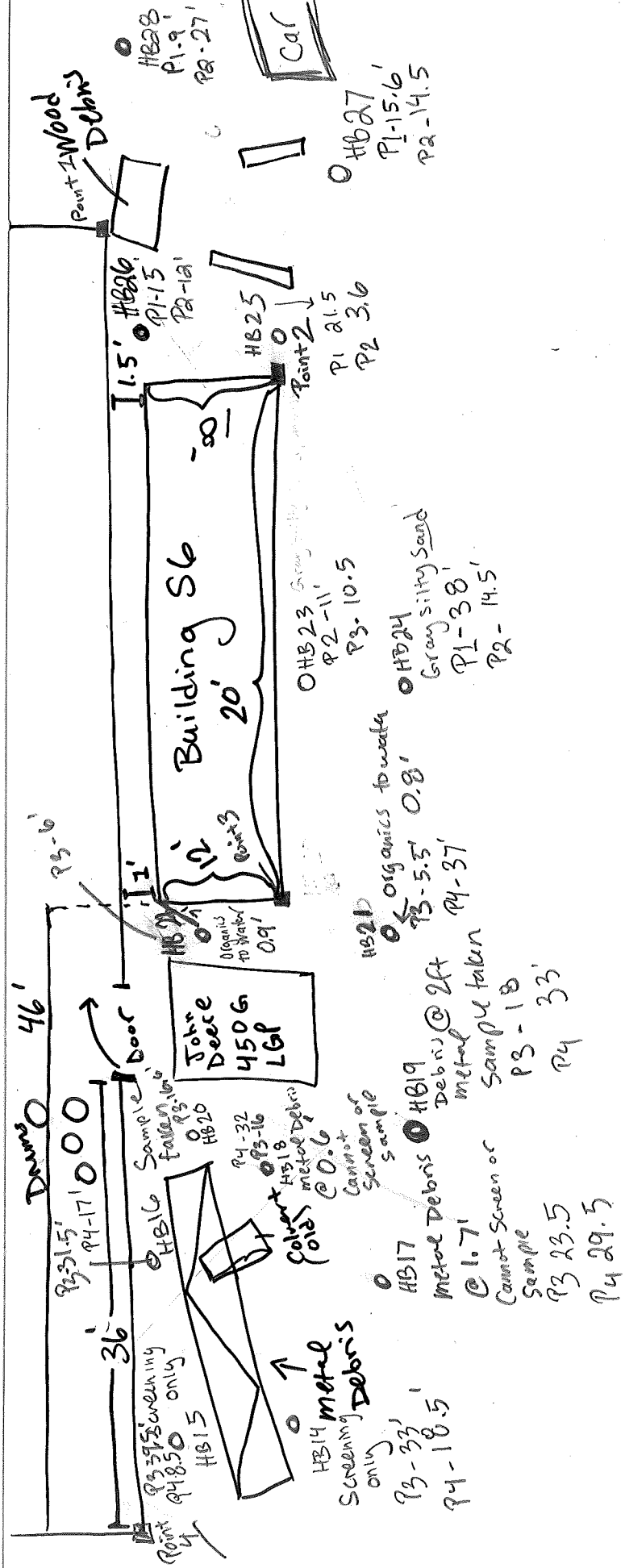
ZOOM



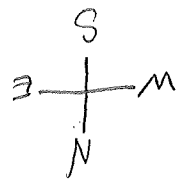


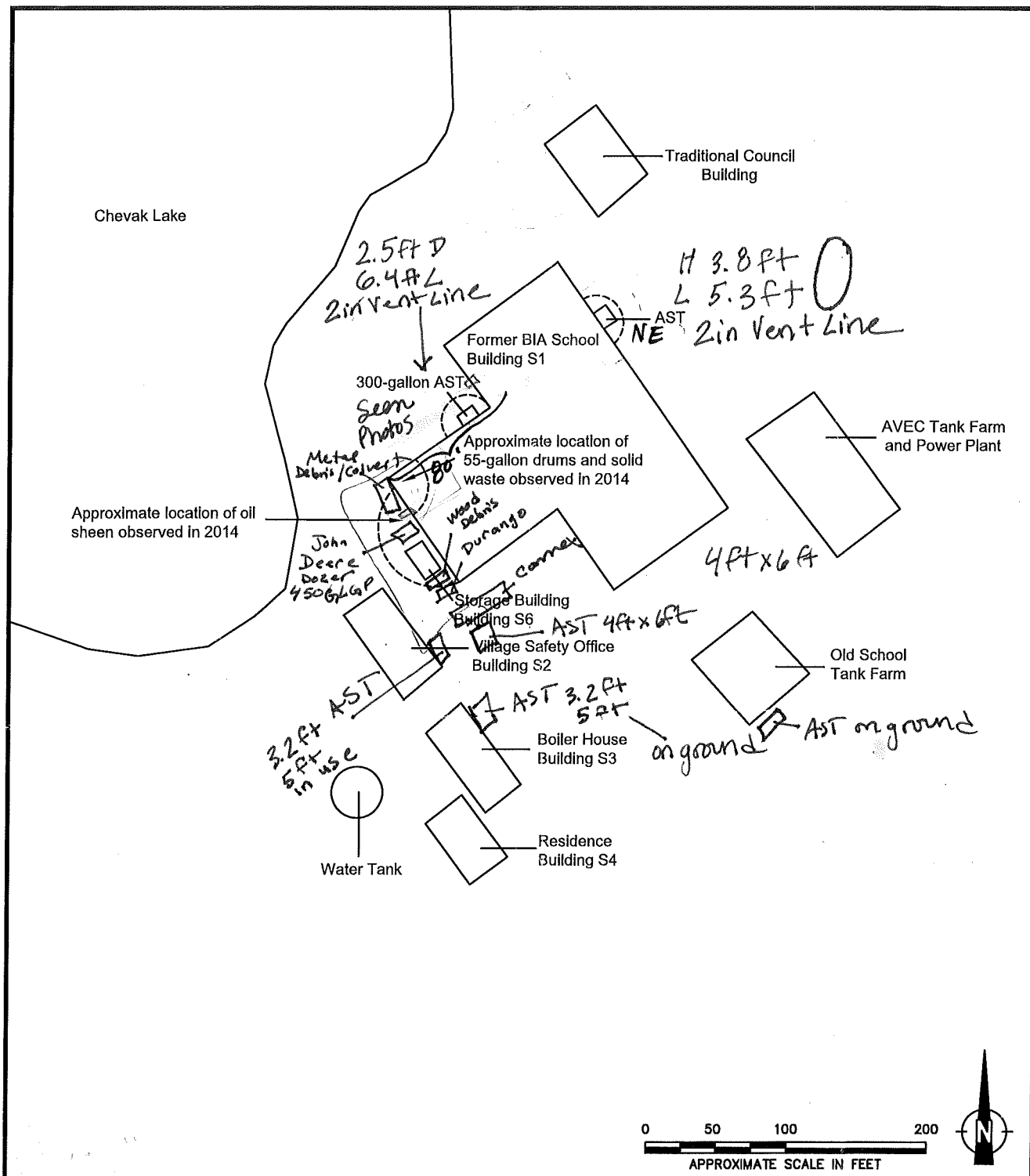
* Not to Scale





*NOT TO SCALE





LEGEND

----- Initial Area of Planned Investigation

Old BIA School
Chevak, Alaska

SITE PLAN

August 2017

32-1-20007

SW SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 2

APPENDIX B
SITE PHOTOGRAPHS



Photograph 1: Looking northwest at the AST located along the northeast wall of Building S1. (September 5, 2017)



Photograph 2: Product feed piping. (September 5, 2017)



Photograph 3: Approximately 250-gallon located beneath the western portion of Building S1. (September 5, 2017)



Photograph 4: Piping connected to AST located beneath Building S1. (September 5, 2017)



Photograph 5: Piping associated with a potential former AST located on the northern wall of the western portion of Building S1. (September 5, 2017)



Photograph 6: Product feed piping. (September 5, 2017)



Photograph 7: Looking northeast at Area of Concern 3. Building S6 is in the right side of the photo. (September 6, 2017)



Photograph 8: Looking at the interior of Building S6. (September 5, 2017)



Photograph 9: Containers labeled “corrosive” located beneath the western portion of Building S1. (September 5, 2017)



Photograph 10: 5-gallon bucket with used anti-freeze located beneath the western portion of Building S1. (September 5, 2017)



Photograph 11: Containers labeled “corrosive” located beneath the western portion of Building S1. (September 5, 2017)



Photograph 12: Looking at the location of Surface Sample SS13 which was collected beneath the western portion of Building S1. (September 6, 2017)

APPENDIX C

RESULTS OF ANALYTICAL TESTING BY SGS NORTH AMERICA INC.

AND

ADEC LABORATORY DATA REVIEW CHECKLISTS

Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks Street Suite 3
Anchorage, AK 99518
(907)433-3246

Report Number: **1176407**

Client Project: **32-1-20007 Old BIA School**

Dear Trevor Crosby,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Victoria at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Victoria Pennick
Project Manager
Victoria.Pennick@sgs.com

Date

Print Date: 09/18/2017 11:32:04AM

Case Narrative

SGS Client: **Shannon & Wilson, Inc.**
SGS Project: **1176407**
Project Name/Site: **32-1-20007 Old BIA School**
Project Contact: **Trevor Crosby**

Refer to sample receipt form for information on sample condition.

20007-HB7S2 (1176407008) PS

AK101 - Surrogate recovery for 4-bromofluorobenzene (36.8%) does not meet QC criteria. Sample was analyzed twice and results confirmed.

AK102 - Surrogate recovery for 5a-androstane (159%) does not meet QC criteria due to matrix interference.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 09/18/2017 11:32:05AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
20007-HB1S2	1176407001	09/05/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB1S202	1176407002	09/05/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB2S2	1176407003	09/05/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB3S2	1176407004	09/05/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB4S2	1176407005	09/05/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB5S2	1176407006	09/05/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB6S2	1176407007	09/05/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB7S2	1176407008	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB8S3	1176407009	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB9S1	1176407010	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB10S2	1176407011	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-STB1	1176407012	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB10S1	1176407013	09/06/2017	09/08/2017	Soil/Solid (dry weight)

Method

8270D SIM (PAH)
AK101
SW8021B
AK102
SM21 2540G

Method Description

8270 PAH SIM Semi-Volatiles GC/MS
AK101/8021 Combo. (S)
AK101/8021 Combo. (S)
Diesel Range Organics (S)
Percent Solids SM2540G

Print Date: 09/18/2017 11:32:07AM

Detectable Results Summary

Client Sample ID: **20007-HB1S2**

Lab Sample ID: 1176407001

Semivolatile Organic Fuels

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	125	mg/Kg
Ethylbenzene	36.3	ug/Kg
Gasoline Range Organics	1.58J	mg/Kg
o-Xylene	70.8	ug/Kg
P & M -Xylene	102	ug/Kg

Client Sample ID: **20007-HB1S202**

Lab Sample ID: 1176407002

Semivolatile Organic Fuels

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	144	mg/Kg
Ethylbenzene	39.3	ug/Kg
Gasoline Range Organics	1.35J	mg/Kg
o-Xylene	74.0	ug/Kg
P & M -Xylene	107	ug/Kg

Client Sample ID: **20007-HB2S2**

Lab Sample ID: 1176407003

Semivolatile Organic Fuels

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	451	mg/Kg
Gasoline Range Organics	1.23J	mg/Kg

Client Sample ID: **20007-HB3S2**

Lab Sample ID: 1176407004

Semivolatile Organic Fuels

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	79.3	mg/Kg
o-Xylene	12.5J	ug/Kg

Client Sample ID: **20007-HB4S2**

Lab Sample ID: 1176407005

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	10.3J	mg/Kg

Client Sample ID: **20007-HB5S2**

Lab Sample ID: 1176407006

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	8.13J	mg/Kg

Client Sample ID: **20007-HB7S2**

Lab Sample ID: 1176407008

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	497	mg/Kg

Client Sample ID: **20007-HB8S3**

Lab Sample ID: 1176407009

Semivolatile Organic Fuels

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	208	mg/Kg
Gasoline Range Organics	1.89J	mg/Kg

Client Sample ID: **20007-HB9S1**

Lab Sample ID: 1176407010

Semivolatile Organic Fuels

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	20.0J	mg/Kg
Gasoline Range Organics	0.795J	mg/Kg

Detectable Results Summary

Client Sample ID: **20007-HB10S2**

Lab Sample ID: 1176407011

Semivolatile Organic Fuels

Volatile Fuels

Parameter

Diesel Range Organics

Gasoline Range Organics

Result

41.0

3.38J

Units

mg/Kg

mg/Kg

Client Sample ID: **20007-HB10S1**

Lab Sample ID: 1176407013

Semivolatile Organic Fuels

Volatile Fuels

Parameter

Diesel Range Organics

Gasoline Range Organics

Result

78.4

0.991J

Units

mg/Kg

mg/Kg

Results of 20007-HB1S2

Client Sample ID: **20007-HB1S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407001
 Lab Project ID: 1176407

Collection Date: 09/05/17 18:15
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%): 76.3
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
2-Methylnaphthalene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Acenaphthene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Acenaphthylene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Anthracene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Benzo(a)Anthracene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Benzo[a]pyrene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Benzo[b]Fluoranthene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Benzo[g,h,i]perylene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Benzo[k]fluoranthene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Chrysene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Dibenzo[a,h]anthracene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Fluoranthene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Fluorene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Indeno[1,2,3-c,d] pyrene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Naphthalene	64.5 U	129	38.8	ug/Kg	5		09/15/17 00:07
Phenanthrene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Pyrene	81.0 U	162	48.5	ug/Kg	5		09/15/17 00:07
Surrogates							
2-Methylnaphthalene-d10 (surr)	82	50-150		%	5		09/15/17 00:07
Fluoranthene-d10 (surr)	84.2	50-150		%	5		09/15/17 00:07

Batch Information

Analytical Batch: XMS10400
 Analytical Method: 8270D SIM (PAH)
 Analyst: DSD
 Analytical Date/Time: 09/15/17 00:07
 Container ID: 1176407001-A

Prep Batch: XXX38387
 Prep Method: SW3550C
 Prep Date/Time: 09/10/17 12:39
 Prep Initial Wt./Vol.: 22.79 g
 Prep Extract Vol: 5 mL

Results of 20007-HB1S2

Client Sample ID: **20007-HB1S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407001
 Lab Project ID: 1176407

Collection Date: 09/05/17 18:15
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):76.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	125	26.1	8.08	mg/Kg	1		09/13/17 02:48
Surrogates							
5a Androstane (surr)	101	50-150		%	1		09/13/17 02:48

Batch Information

Analytical Batch: XFC13784
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/13/17 02:48
 Container ID: 1176407001-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.18 g
 Prep Extract Vol: 1 mL

Results of 20007-HB1S2

Client Sample ID: **20007-HB1S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407001
 Lab Project ID: 1176407

Collection Date: 09/05/17 18:15
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):76.3
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.58 J	3.05	0.916	mg/Kg	1		09/09/17 19:43

Surrogates

4-Bromofluorobenzene (surr)	117	50-150		%	1		09/09/17 19:43
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/09/17 19:43
 Container ID: 1176407001-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 18:15
 Prep Initial Wt./Vol.: 109.499 g
 Prep Extract Vol: 50.9889 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.65 U	15.3	4.88	ug/Kg	1		09/09/17 19:43
Ethylbenzene	36.3	30.5	9.52	ug/Kg	1		09/09/17 19:43
o-Xylene	70.8	30.5	9.52	ug/Kg	1		09/09/17 19:43
P & M -Xylene	102	61.1	18.3	ug/Kg	1		09/09/17 19:43
Toluene	15.3 U	30.5	9.52	ug/Kg	1		09/09/17 19:43

Surrogates

1,4-Difluorobenzene (surr)	89.9	72-119		%	1		09/09/17 19:43
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/09/17 19:43
 Container ID: 1176407001-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 18:15
 Prep Initial Wt./Vol.: 109.499 g
 Prep Extract Vol: 50.9889 mL

Results of 20007-HB1S202

Client Sample ID: **20007-HB1S202**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407002
 Lab Project ID: 1176407

Collection Date: 09/05/17 19:00
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):80.5
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	144	24.8	7.69	mg/Kg	1		09/13/17 02:57
Surrogates							
5a Androstane (surr)	96.2	50-150		%	1		09/13/17 02:57

Batch Information

Analytical Batch: XFC13784
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/13/17 02:57
 Container ID: 1176407002-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.015 g
 Prep Extract Vol: 1 mL

Results of 20007-HB1S202

Client Sample ID: **20007-HB1S202**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407002
 Lab Project ID: 1176407

Collection Date: 09/05/17 19:00
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):80.5
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.35 J	2.73	0.820	mg/Kg	1		09/09/17 20:02

Surrogates

4-Bromofluorobenzene (surr)	101	50-150		%	1		09/09/17 20:02
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/09/17 20:02
 Container ID: 1176407002-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 19:00
 Prep Initial Wt./Vol.: 101.865 g
 Prep Extract Vol: 44.8307 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	6.85 U	13.7	4.37	ug/Kg	1		09/09/17 20:02
Ethylbenzene	39.3	27.3	8.53	ug/Kg	1		09/09/17 20:02
o-Xylene	74.0	27.3	8.53	ug/Kg	1		09/09/17 20:02
P & M -Xylene	107	54.6	16.4	ug/Kg	1		09/09/17 20:02
Toluene	13.7 U	27.3	8.53	ug/Kg	1		09/09/17 20:02

Surrogates

1,4-Difluorobenzene (surr)	89.8	72-119		%	1		09/09/17 20:02
----------------------------	------	--------	--	---	---	--	----------------

Batch Information

Analytical Batch: VFC13870
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/09/17 20:02
 Container ID: 1176407002-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 19:00
 Prep Initial Wt./Vol.: 101.865 g
 Prep Extract Vol: 44.8307 mL

Results of 20007-HB2S2

Client Sample ID: **20007-HB2S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407003
 Lab Project ID: 1176407

Collection Date: 09/05/17 18:35
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):73.6
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	451	134	41.7	mg/Kg	1		09/13/17 03:07
Surrogates							
5a Androstane (surr)	119	50-150		%	1		09/13/17 03:07

Batch Information

Analytical Batch: XFC13784
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/13/17 03:07
 Container ID: 1176407003-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.323 g
 Prep Extract Vol: 5 mL

Results of 20007-HB2S2

Client Sample ID: **20007-HB2S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407003
 Lab Project ID: 1176407

Collection Date: 09/05/17 18:35
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%): 73.6
 Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.23 J	3.87	1.16	mg/Kg	1		09/09/17 20:21

Surrogates

4-Bromofluorobenzene (surr)	81.7	50-150		%	1		09/09/17 20:21
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/09/17 20:21
 Container ID: 1176407003-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 18:35
 Prep Initial Wt./Vol.: 81.689 g
 Prep Extract Vol: 46.5683 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	9.70 U	19.4	6.20	ug/Kg	1		09/09/17 20:21
Ethylbenzene	19.4 U	38.7	12.1	ug/Kg	1		09/09/17 20:21
o-Xylene	19.4 U	38.7	12.1	ug/Kg	1		09/09/17 20:21
P & M -Xylene	38.8 U	77.5	23.2	ug/Kg	1		09/09/17 20:21
Toluene	19.4 U	38.7	12.1	ug/Kg	1		09/09/17 20:21

Surrogates

1,4-Difluorobenzene (surr)	91.5	72-119		%	1		09/09/17 20:21
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/09/17 20:21
 Container ID: 1176407003-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 18:35
 Prep Initial Wt./Vol.: 81.689 g
 Prep Extract Vol: 46.5683 mL

Results of 20007-HB3S2

Client Sample ID: **20007-HB3S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407004
 Lab Project ID: 1176407

Collection Date: 09/05/17 18:45
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):79.5
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	79.3	25.1	7.77	mg/Kg	1		09/15/17 21:10
Surrogates							
5a Androstane (surr)	93.2	50-150		%	1		09/15/17 21:10

Batch Information

Analytical Batch: XFC13802
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 21:10
 Container ID: 1176407004-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.097 g
 Prep Extract Vol: 1 mL

Results of 20007-HB3S2

Client Sample ID: **20007-HB3S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407004
 Lab Project ID: 1176407

Collection Date: 09/05/17 18:45
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%): 79.5
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.56 U	3.13	0.940	mg/Kg	1		09/09/17 20:39

Surrogates

4-Bromofluorobenzene (surr)	89.4	50-150		%	1		09/09/17 20:39
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/09/17 20:39
 Container ID: 1176407004-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 18:45
 Prep Initial Wt./Vol.: 85.323 g
 Prep Extract Vol: 42.502 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.85 U	15.7	5.01	ug/Kg	1		09/09/17 20:39
Ethylbenzene	15.7 U	31.3	9.78	ug/Kg	1		09/09/17 20:39
o-Xylene	12.5 J	31.3	9.78	ug/Kg	1		09/09/17 20:39
P & M -Xylene	31.4 U	62.7	18.8	ug/Kg	1		09/09/17 20:39
Toluene	15.7 U	31.3	9.78	ug/Kg	1		09/09/17 20:39

Surrogates

1,4-Difluorobenzene (surr)	88	72-119		%	1		09/09/17 20:39
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/09/17 20:39
 Container ID: 1176407004-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 18:45
 Prep Initial Wt./Vol.: 85.323 g
 Prep Extract Vol: 42.502 mL

Results of 20007-HB4S2

Client Sample ID: **20007-HB4S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407005
 Lab Project ID: 1176407

Collection Date: 09/05/17 19:05
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):84.7
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	10.3 J	23.5	7.28	mg/Kg	1		09/15/17 21:20
Surrogates							
5a Androstane (surr)	105	50-150		%	1		09/15/17 21:20

Batch Information

Analytical Batch: XFC13802
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 21:20
 Container ID: 1176407005-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.193 g
 Prep Extract Vol: 1 mL

Results of 20007-HB4S2

Client Sample ID: **20007-HB4S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407005
 Lab Project ID: 1176407

Collection Date: 09/05/17 19:05
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):84.7
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.13 U	2.25	0.674	mg/Kg	1		09/09/17 20:58

Surrogates

4-Bromofluorobenzene (surr)	104	50-150		%	1		09/09/17 20:58
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/09/17 20:58
 Container ID: 1176407005-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 19:05
 Prep Initial Wt./Vol.: 109.981 g
 Prep Extract Vol: 41.8518 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	5.60 U	11.2	3.60	ug/Kg	1		09/09/17 20:58
Ethylbenzene	11.3 U	22.5	7.01	ug/Kg	1		09/09/17 20:58
o-Xylene	11.3 U	22.5	7.01	ug/Kg	1		09/09/17 20:58
P & M -Xylene	22.4 U	44.9	13.5	ug/Kg	1		09/09/17 20:58
Toluene	11.3 U	22.5	7.01	ug/Kg	1		09/09/17 20:58

Surrogates

1,4-Difluorobenzene (surr)	90.2	72-119		%	1		09/09/17 20:58
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/09/17 20:58
 Container ID: 1176407005-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 19:05
 Prep Initial Wt./Vol.: 109.981 g
 Prep Extract Vol: 41.8518 mL

Results of 20007-HB5S2

Client Sample ID: **20007-HB5S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407006
 Lab Project ID: 1176407

Collection Date: 09/05/17 19:15
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):83.1
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	8.13 J	23.9	7.40	mg/Kg	1		09/15/17 21:29
Surrogates							
5a Androstane (surr)	93.6	50-150		%	1		09/15/17 21:29

Batch Information

Analytical Batch: XFC13802
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 21:29
 Container ID: 1176407006-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.22 g
 Prep Extract Vol: 1 mL

Results of 20007-HB5S2

Client Sample ID: **20007-HB5S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407006
 Lab Project ID: 1176407

Collection Date: 09/05/17 19:15
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):83.1
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.25 U	2.49	0.746	mg/Kg	1		09/09/17 21:17

Surrogates

4-Bromofluorobenzene (surr)	101	50-150		%	1		09/09/17 21:17
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/09/17 21:17
 Container ID: 1176407006-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 19:15
 Prep Initial Wt./Vol.: 101.93 g
 Prep Extract Vol: 42.1767 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	6.20 U	12.4	3.98	ug/Kg	1		09/09/17 21:17
Ethylbenzene	12.4 U	24.9	7.76	ug/Kg	1		09/09/17 21:17
o-Xylene	12.4 U	24.9	7.76	ug/Kg	1		09/09/17 21:17
P & M -Xylene	24.9 U	49.8	14.9	ug/Kg	1		09/09/17 21:17
Toluene	12.4 U	24.9	7.76	ug/Kg	1		09/09/17 21:17

Surrogates

1,4-Difluorobenzene (surr)	90.3	72-119		%	1		09/09/17 21:17
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/09/17 21:17
 Container ID: 1176407006-B

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 19:15
 Prep Initial Wt./Vol.: 101.93 g
 Prep Extract Vol: 42.1767 mL

Results of 20007-HB6S2

Client Sample ID: **20007-HB6S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407007
 Lab Project ID: 1176407

Collection Date: 09/05/17 19:25
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):82.0
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	12.1 U	24.2	7.49	mg/Kg	1		09/15/17 21:39
Surrogates							
5a Androstane (surr)	88.6	50-150		%	1		09/15/17 21:39

Batch Information

Analytical Batch: XFC13802
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 21:39
 Container ID: 1176407007-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.265 g
 Prep Extract Vol: 1 mL

Results of 20007-HB6S2

Client Sample ID: **20007-HB6S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407007
 Lab Project ID: 1176407

Collection Date: 09/05/17 19:25
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):82.0
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.12 U	2.24	0.673	mg/Kg	1		09/10/17 05:23

Surrogates

4-Bromofluorobenzene (surr)	116	50-150		%	1		09/10/17 05:23
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 05:23
 Container ID: 1176407007-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 19:25
 Prep Initial Wt./Vol.: 133.018 g
 Prep Extract Vol: 48.9426 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	5.60 U	11.2	3.59	ug/Kg	1		09/10/17 05:23
Ethylbenzene	11.2 U	22.4	7.00	ug/Kg	1		09/10/17 05:23
o-Xylene	11.2 U	22.4	7.00	ug/Kg	1		09/10/17 05:23
P & M -Xylene	22.4 U	44.9	13.5	ug/Kg	1		09/10/17 05:23
Toluene	11.2 U	22.4	7.00	ug/Kg	1		09/10/17 05:23

Surrogates

1,4-Difluorobenzene (surr)	89.5	72-119		%	1		09/10/17 05:23
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 05:23
 Container ID: 1176407007-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/05/17 19:25
 Prep Initial Wt./Vol.: 133.018 g
 Prep Extract Vol: 48.9426 mL

Results of 20007-HB7S2

Client Sample ID: **20007-HB7S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407008
 Lab Project ID: 1176407

Collection Date: 09/06/17 09:42
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):44.4
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	497		225	69.7	mg/Kg	1		09/15/17 21:49
Surrogates								
5a Androstane (surr)	159	*	50-150		%	1		09/15/17 21:49

Batch Information

Analytical Batch: XFC13802
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 21:49
 Container ID: 1176407008-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.009 g
 Prep Extract Vol: 5 mL

Results of 20007-HB7S2

Client Sample ID: **20007-HB7S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407008
 Lab Project ID: 1176407

Collection Date: 09/06/17 09:42
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):44.4
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	6.20 U	12.4	3.71	mg/Kg	1		09/12/17 16:04

Surrogates

4-Bromofluorobenzene (surr)	36.8 *	50-150		%	1		09/12/17 16:04
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Batch Information

Analytical Batch: VFC13878
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/12/17 16:04
 Container ID: 1176407008-B

Prep Batch: VXX31292
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 09:42
 Prep Initial Wt./Vol.: 46.126 g
 Prep Extract Vol: 50.6307 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	30.9 U	61.8	19.8	ug/Kg	1		09/10/17 05:42
Ethylbenzene	62.0 U	124	38.5	ug/Kg	1		09/10/17 05:42
o-Xylene	62.0 U	124	38.5	ug/Kg	1		09/10/17 05:42
P & M -Xylene	124 U	247	74.1	ug/Kg	1		09/10/17 05:42
Toluene	62.0 U	124	38.5	ug/Kg	1		09/10/17 05:42

Surrogates

1,4-Difluorobenzene (surr)	87.6	72-119		%	1		09/10/17 05:42
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 05:42
 Container ID: 1176407008-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 09:42
 Prep Initial Wt./Vol.: 46.126 g
 Prep Extract Vol: 50.6307 mL

Results of 20007-HB8S3

Client Sample ID: **20007-HB8S3**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407009
 Lab Project ID: 1176407

Collection Date: 09/06/17 10:00
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):63.1
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	208	158	49.1	mg/Kg	1		09/15/17 21:58
Surrogates							
5a Androstane (surr)	134	50-150		%	1		09/15/17 21:58

Batch Information

Analytical Batch: XFC13802
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 21:58
 Container ID: 1176407009-A

Prep Batch: XXX38395
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 16:00
 Prep Initial Wt./Vol.: 30.04 g
 Prep Extract Vol: 5 mL

Results of 20007-HB8S3

Client Sample ID: **20007-HB8S3**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407009
 Lab Project ID: 1176407

Collection Date: 09/06/17 10:00
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):63.1
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.89 J	5.69	1.71	mg/Kg	1		09/10/17 06:01

Surrogates

4-Bromofluorobenzene (surr)	65.1	50-150		%	1		09/10/17 06:01
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 06:01
 Container ID: 1176407009-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:00
 Prep Initial Wt./Vol.: 71.464 g
 Prep Extract Vol: 51.3636 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	14.3 U	28.5	9.11	ug/Kg	1		09/10/17 06:01
Ethylbenzene	28.4 U	56.9	17.8	ug/Kg	1		09/10/17 06:01
o-Xylene	28.4 U	56.9	17.8	ug/Kg	1		09/10/17 06:01
P & M -Xylene	57.0 U	114	34.2	ug/Kg	1		09/10/17 06:01
Toluene	28.4 U	56.9	17.8	ug/Kg	1		09/10/17 06:01

Surrogates

1,4-Difluorobenzene (surr)	89.3	72-119		%	1		09/10/17 06:01
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 06:01
 Container ID: 1176407009-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:00
 Prep Initial Wt./Vol.: 71.464 g
 Prep Extract Vol: 51.3636 mL

Results of 20007-HB9S1

Client Sample ID: **20007-HB9S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407010
 Lab Project ID: 1176407

Collection Date: 09/06/17 10:15
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):85.0
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	20.0 J	23.5	7.27	mg/Kg	1		09/15/17 13:49
Surrogates							
5a Androstane (surr)	92.7	50-150		%	1		09/15/17 13:49

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 13:49
 Container ID: 1176407010-A

Prep Batch: XXX38401
 Prep Method: SW3550C
 Prep Date/Time: 09/12/17 09:49
 Prep Initial Wt./Vol.: 30.105 g
 Prep Extract Vol: 1 mL

Results of 20007-HB9S1

Client Sample ID: **20007-HB9S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407010
 Lab Project ID: 1176407

Collection Date: 09/06/17 10:15
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):85.0
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.795 J	2.61	0.784	mg/Kg	1		09/10/17 06:20

Surrogates

4-Bromofluorobenzene (surr)	96.2	50-150		%	1		09/10/17 06:20
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 06:20
 Container ID: 1176407010-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:15
 Prep Initial Wt./Vol.: 85.193 g
 Prep Extract Vol: 37.8113 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	6.55 U	13.1	4.18	ug/Kg	1		09/10/17 06:20
Ethylbenzene	13.1 U	26.1	8.15	ug/Kg	1		09/10/17 06:20
o-Xylene	13.1 U	26.1	8.15	ug/Kg	1		09/10/17 06:20
P & M -Xylene	26.1 U	52.2	15.7	ug/Kg	1		09/10/17 06:20
Toluene	13.1 U	26.1	8.15	ug/Kg	1		09/10/17 06:20

Surrogates

1,4-Difluorobenzene (surr)	89.2	72-119		%	1		09/10/17 06:20
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 06:20
 Container ID: 1176407010-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:15
 Prep Initial Wt./Vol.: 85.193 g
 Prep Extract Vol: 37.8113 mL

Results of 20007-HB10S2

Client Sample ID: **20007-HB10S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407011
 Lab Project ID: 1176407

Collection Date: 09/06/17 10:38
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):58.7
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	41.0	33.7	10.4	mg/Kg	1		09/13/17 11:55
Surrogates							
5a Androstane (surr)	98.7	50-150		%	1		09/13/17 11:55

Batch Information

Analytical Batch: XFC13789
 Analytical Method: AK102
 Analyst: KMD
 Analytical Date/Time: 09/13/17 11:55
 Container ID: 1176407011-A

Prep Batch: XXX38401
 Prep Method: SW3550C
 Prep Date/Time: 09/12/17 09:49
 Prep Initial Wt./Vol.: 30.32 g
 Prep Extract Vol: 1 mL

Results of 20007-HB10S2

Client Sample ID: **20007-HB10S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407011
 Lab Project ID: 1176407

Collection Date: 09/06/17 10:38
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):58.7
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	3.38 J	7.41	2.22	mg/Kg	1		09/10/17 06:39

Surrogates

4-Bromofluorobenzene (surr)	84.2	50-150		%	1		09/10/17 06:39
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 06:39
 Container ID: 1176407011-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:38
 Prep Initial Wt./Vol.: 54.591 g
 Prep Extract Vol: 47.5312 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	18.6 U	37.1	11.9	ug/Kg	1		09/10/17 06:39
Ethylbenzene	37.0 U	74.1	23.1	ug/Kg	1		09/10/17 06:39
o-Xylene	37.0 U	74.1	23.1	ug/Kg	1		09/10/17 06:39
P & M -Xylene	74.0 U	148	44.5	ug/Kg	1		09/10/17 06:39
Toluene	37.0 U	74.1	23.1	ug/Kg	1		09/10/17 06:39

Surrogates

1,4-Difluorobenzene (surr)	88.6	72-119		%	1		09/10/17 06:39
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 06:39
 Container ID: 1176407011-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:38
 Prep Initial Wt./Vol.: 54.591 g
 Prep Extract Vol: 47.5312 mL

Results of 20007-STB1

Client Sample ID: **20007-STB1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407012
 Lab Project ID: 1176407

Collection Date: 09/06/17 20:10
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.25 U	2.50	0.751	mg/Kg	1		09/09/17 14:43

Surrogates

4-Bromofluorobenzene (surr)	81.7	50-150		%	1		09/09/17 14:43
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/09/17 14:43
 Container ID: 1176407012-A

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 20:10
 Prep Initial Wt./Vol.: 49.926 g
 Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	6.25 U	12.5	4.01	ug/Kg	1		09/09/17 14:43
Ethylbenzene	12.5 U	25.0	7.81	ug/Kg	1		09/09/17 14:43
o-Xylene	12.5 U	25.0	7.81	ug/Kg	1		09/09/17 14:43
P & M -Xylene	25.1 U	50.1	15.0	ug/Kg	1		09/09/17 14:43
Toluene	12.5 U	25.0	7.81	ug/Kg	1		09/09/17 14:43

Surrogates

1,4-Difluorobenzene (surr)	90.7	72-119		%	1		09/09/17 14:43
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Batch Information

Analytical Batch: VFC13870
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/09/17 14:43
 Container ID: 1176407012-A

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 20:10
 Prep Initial Wt./Vol.: 49.926 g
 Prep Extract Vol: 25 mL

Results of 20007-HB10S1

Client Sample ID: **20007-HB10S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407013
 Lab Project ID: 1176407

Collection Date: 09/06/17 10:30
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):82.1
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	78.4	24.2	7.51	mg/Kg	1		09/13/17 12:04
Surrogates							
5a Androstane (surr)	97.5	50-150		%	1		09/13/17 12:04

Batch Information

Analytical Batch: XFC13789
 Analytical Method: AK102
 Analyst: KMD
 Analytical Date/Time: 09/13/17 12:04
 Container ID: 1176407013-A

Prep Batch: XXX38401
 Prep Method: SW3550C
 Prep Date/Time: 09/12/17 09:49
 Prep Initial Wt./Vol.: 30.172 g
 Prep Extract Vol: 1 mL

Results of 20007-HB10S1

Client Sample ID: **20007-HB10S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176407013
 Lab Project ID: 1176407

Collection Date: 09/06/17 10:30
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):82.1
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.991 J	2.96	0.889	mg/Kg	1		09/10/17 06:58

Surrogates

4-Bromofluorobenzene (surr)	90.6	50-150		%	1		09/10/17 06:58
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 06:58
 Container ID: 1176407013-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:30
 Prep Initial Wt./Vol.: 81.108 g
 Prep Extract Vol: 39.493 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.40 U	14.8	4.74	ug/Kg	1		09/10/17 06:58
Ethylbenzene	14.8 U	29.6	9.25	ug/Kg	1		09/10/17 06:58
o-Xylene	14.8 U	29.6	9.25	ug/Kg	1		09/10/17 06:58
P & M -Xylene	29.6 U	59.3	17.8	ug/Kg	1		09/10/17 06:58
Toluene	14.8 U	29.6	9.25	ug/Kg	1		09/10/17 06:58

Surrogates

1,4-Difluorobenzene (surr)	89.7	72-119		%	1		09/10/17 06:58
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 06:58
 Container ID: 1176407013-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:30
 Prep Initial Wt./Vol.: 81.108 g
 Prep Extract Vol: 39.493 mL

Method Blank

Blank ID: MB for HBN 1768041 [SPT/10302]
Blank Lab ID: 1411746

Matrix: Soil/Solid (dry weight)

QC for Samples:
1176407001, 1176407002, 1176407003, 1176407004, 1176407005

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT10302
Analytical Method: SM21 2540G
Instrument:
Analyst: S.D
Analytical Date/Time: 9/10/2017 3:48:00PM

Print Date: 09/18/2017 11:32:12AM

Duplicate Sample Summary

Original Sample ID: 1176437001

Duplicate Sample ID: 1411747

QC for Samples:

1176407001, 1176407002, 1176407003, 1176407004, 1176407005

Analysis Date: 09/10/2017 15:48

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	89.9	89.1	%	0.89	(< 15)

Batch Information

Analytical Batch: SPT10302

Analytical Method: SM21 2540G

Instrument:

Analyst: S.D

Print Date: 09/18/2017 11:32:13AM

Method Blank

Blank ID: MB for HBN 1768141 [SPT/10303]
Blank Lab ID: 1412093

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176407006, 1176407007, 1176407008, 1176407009, 1176407010, 1176407011, 1176407013

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT10303
Analytical Method: SM21 2540G
Instrument:
Analyst: NIC
Analytical Date/Time: 9/11/2017 4:18:00PM

Print Date: 09/18/2017 11:32:15AM

Duplicate Sample Summary

Original Sample ID: 1176419001

Duplicate Sample ID: 1412094

QC for Samples:

1176407006, 1176407007, 1176407008, 1176407009, 1176407010, 1176407011, 1176407013

Analysis Date: 09/11/2017 16:18

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	96.9	96.9	%	0.07	(< 15)

Batch Information

Analytical Batch: SPT10303

Analytical Method: SM21 2540G

Instrument:

Analyst: NIC

Print Date: 09/18/2017 11:32:17AM

Method Blank

Blank ID: MB for HBN 1768034 [VXX/31259]
Blank Lab ID: 1411670

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176407001, 1176407002, 1176407003, 1176407004, 1176407005, 1176407006, 1176407012

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	87.6	50-150		%

Batch Information

Analytical Batch: VFC13870
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/9/2017 1:47:00PM

Prep Batch: VXX31259
Prep Method: SW5035A
Prep Date/Time: 9/9/2017 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:20AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176407 [VXX31259]
 Blank Spike Lab ID: 1411673
 Date Analyzed: 09/09/2017 12:52

Spike Duplicate ID: LCSD for HBN 1176407 [VXX31259]
 Spike Duplicate Lab ID: 1411674
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407001, 1176407002, 1176407003, 1176407004, 1176407005, 1176407006, 1176407012

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	12.7	101	12.5	12.3	99	(60-120)	2.50	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	92.8	93	1.25	93.2	93	(50-150)	0.43	

Batch Information

Analytical Batch: VFC13870
 Analytical Method: AK101
 Instrument: Agilent 7890A PID/FID
 Analyst: ST

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/09/2017 08:00
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:22AM

Method Blank

Blank ID: MB for HBN 1768034 [VXX/31259]
Blank Lab ID: 1411670

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176407001, 1176407002, 1176407003, 1176407004, 1176407005, 1176407006, 1176407012

Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	6.25U	12.5	4.00	ug/Kg
Ethylbenzene	12.5U	25.0	7.80	ug/Kg
o-Xylene	12.5U	25.0	7.80	ug/Kg
P & M -Xylene	25.0U	50.0	15.0	ug/Kg
Toluene	12.5U	25.0	7.80	ug/Kg
Surrogates				
1,4-Difluorobenzene (surr)	91.6	72-119		%

Batch Information

Analytical Batch: VFC13870
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/9/2017 1:47:00PM

Prep Batch: VXX31259
Prep Method: SW5035A
Prep Date/Time: 9/9/2017 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:24AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176407 [VXX31259]
 Blank Spike Lab ID: 1411671
 Date Analyzed: 09/09/2017 12:14

Spike Duplicate ID: LCSD for HBN 1176407 [VXX31259]
 Spike Duplicate Lab ID: 1411672
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407001, 1176407002, 1176407003, 1176407004, 1176407005, 1176407006, 1176407012

Results by SW8021B

Parameter	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	1250	1230	98	1250	1210	96	(75-125)	1.60	(< 20)
Ethylbenzene	1250	1190	95	1250	1180	94	(75-125)	1.20	(< 20)
o-Xylene	1250	1160	93	1250	1140	91	(75-125)	1.70	(< 20)
P & M -Xylene	2500	2330	93	2500	2300	92	(80-125)	1.20	(< 20)
Toluene	1250	1220	98	1250	1200	96	(70-125)	1.60	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	1250	95.2	95	1250	95.3	95	(72-119)	0.08	

Batch Information

Analytical Batch: VFC13870
 Analytical Method: SW8021B
 Instrument: Agilent 7890A PID/FID
 Analyst: ST

Prep Batch: VXX31259
 Prep Method: SW5035A
 Prep Date/Time: 09/09/2017 08:00
 Spike Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:26AM

Method Blank

Blank ID: MB for HBN 1768035 [VXX/31260]
Blank Lab ID: 1411675

Matrix: Soil/Solid (dry weight)

QC for Samples:
1176407007, 1176407008, 1176407009, 1176407010, 1176407011, 1176407013

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	90.7	50-150		%

Batch Information

Analytical Batch: VFC13871
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/9/2017 11:28:00PM

Prep Batch: VXX31260
Prep Method: SW5035A
Prep Date/Time: 9/9/2017 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:28AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176407 [VXX31260]
 Blank Spike Lab ID: 1411678
 Date Analyzed: 09/09/2017 22:32

Spike Duplicate ID: LCSD for HBN 1176407 [VXX31260]
 Spike Duplicate Lab ID: 1411679
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407007, 1176407008, 1176407009, 1176407010, 1176407011, 1176407013

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	12.2	98	12.5	12.8	102	(60-120)	4.70	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	99.5	100	1.25	90.8	91	(50-150)	9.10	

Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Instrument: Agilent 7890A PID/FID
 Analyst: ST

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/09/2017 08:00
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:30AM

Method Blank

Blank ID: MB for HBN 1768035 [VXX/31260]
Blank Lab ID: 1411675

Matrix: Soil/Solid (dry weight)

QC for Samples:
1176407007, 1176407008, 1176407009, 1176407010, 1176407011, 1176407013

Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	6.25U	12.5	4.00	ug/Kg
Ethylbenzene	12.5U	25.0	7.80	ug/Kg
o-Xylene	12.5U	25.0	7.80	ug/Kg
P & M -Xylene	25.0U	50.0	15.0	ug/Kg
Toluene	12.5U	25.0	7.80	ug/Kg
Surrogates				
1,4-Difluorobenzene (surr)	91.3	72-119		%

Batch Information

Analytical Batch: VFC13871
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/9/2017 11:28:00PM

Prep Batch: VXX31260
Prep Method: SW5035A
Prep Date/Time: 9/9/2017 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:31AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176407 [VXX31260]
 Blank Spike Lab ID: 1411676
 Date Analyzed: 09/09/2017 21:54

Spike Duplicate ID: LCSD for HBN 1176407 [VXX31260]
 Spike Duplicate Lab ID: 1411677
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407007, 1176407008, 1176407009, 1176407010, 1176407011, 1176407013

Results by SW8021B

Parameter	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	1250	1230	98	1250	1200	96	(75-125)	2.40	(< 20)
Ethylbenzene	1250	1200	96	1250	1180	94	(75-125)	2.30	(< 20)
o-Xylene	1250	1170	94	1250	1150	92	(75-125)	2.10	(< 20)
P & M -Xylene	2500	2350	94	2500	2300	92	(80-125)	2.40	(< 20)
Toluene	1250	1230	98	1250	1200	96	(70-125)	2.50	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	1250	94.6	95	1250	95.2	95	(72-119)	0.65	

Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Instrument: Agilent 7890A PID/FID
 Analyst: ST

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/09/2017 08:00
 Spike Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:33AM

Matrix Spike Summary

Original Sample ID: 1176408005
MS Sample ID: 1411680 MS
MSD Sample ID: 1411681 MSD

Analysis Date: 09/10/2017 1:58
Analysis Date: 09/10/2017 2:17
Analysis Date: 09/10/2017 2:35
Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407007, 1176407008, 1176407009, 1176407010, 1176407011, 1176407013

Results by SW8021B

Parameter	Sample	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	8.05U	1107	1025	93	1107	1025	93	75-125	0.09	(< 20)
Ethylbenzene	16.1U	1107	1066	96	1107	1067	96	75-125	0.12	(< 20)
o-Xylene	16.1U	1107	1046	94	1107	1049	95	75-125	0.38	(< 20)
P & M -Xylene	32.1U	2209	2101	95	2209	2113	95	80-125	0.25	(< 20)
Toluene	16.1U	1107	1076	97	1107	1077	97	70-125	0.08	(< 20)

Surrogates

1,4-Difluorobenzene (surr)	1107	1025	93	1107	1019	92	72-119	0.56
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Batch Information

Analytical Batch: VFC13871
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/10/2017 2:17:00AM

Prep Batch: VXX31260
Prep Method: AK101 Extraction (S)
Prep Date/Time: 9/9/2017 8:00:00AM
Prep Initial Wt./Vol.: 67.76g
Prep Extract Vol: 25.00mL

Print Date: 09/18/2017 11:32:34AM

Method Blank

Blank ID: MB for HBN 1768311 [VXX/31292]
Blank Lab ID: 1412869

Matrix: Soil/Solid (dry weight)

QC for Samples:
1176407008

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	86.9	50-150		%

Batch Information

Analytical Batch: VFC13878
Analytical Method: AK101
Instrument: Agilent 7890 PID/FID
Analyst: ST
Analytical Date/Time: 9/12/2017 2:47:00PM

Prep Batch: VXX31292
Prep Method: SW5035A
Prep Date/Time: 9/12/2017 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:34AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176407 [VXX31292]
 Blank Spike Lab ID: 1412872
 Date Analyzed: 09/12/2017 13:50

Spike Duplicate ID: LCSD for HBN 1176407 [VXX31292]
 Spike Duplicate Lab ID: 1412873
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407008

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	13.5	108	12.5	13.6	109	(60-120)	0.17	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	85.9	86	1.25	88.5	89	(50-150)	3.00	

Batch Information

Analytical Batch: VFC13878
 Analytical Method: AK101
 Instrument: Agilent 7890 PID/FID
 Analyst: ST

Prep Batch: VXX31292
 Prep Method: SW5035A
 Prep Date/Time: 09/12/2017 08:00
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 09/18/2017 11:32:35AM

Method Blank

Blank ID: MB for HBN 1768036 [XXX/38387]
Blank Lab ID: 1411682

Matrix: Soil/Solid (dry weight)

QC for Samples:
1176407001

Results by 8270D SIM (PAH)

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	12.5U	25.0	7.50	ug/Kg
2-Methylnaphthalene	12.5U	25.0	7.50	ug/Kg
Acenaphthene	12.5U	25.0	7.50	ug/Kg
Acenaphthylene	12.5U	25.0	7.50	ug/Kg
Anthracene	12.5U	25.0	7.50	ug/Kg
Benzo(a)Anthracene	12.5U	25.0	7.50	ug/Kg
Benzo[a]pyrene	12.5U	25.0	7.50	ug/Kg
Benzo[b]Fluoranthene	12.5U	25.0	7.50	ug/Kg
Benzo[g,h,i]perylene	12.5U	25.0	7.50	ug/Kg
Benzo[k]fluoranthene	12.5U	25.0	7.50	ug/Kg
Chrysene	12.5U	25.0	7.50	ug/Kg
Dibenzo[a,h]anthracene	12.5U	25.0	7.50	ug/Kg
Fluoranthene	12.5U	25.0	7.50	ug/Kg
Fluorene	12.5U	25.0	7.50	ug/Kg
Indeno[1,2,3-c,d] pyrene	12.5U	25.0	7.50	ug/Kg
Naphthalene	10.0U	20.0	6.00	ug/Kg
Phenanthrene	12.5U	25.0	7.50	ug/Kg
Pyrene	12.5U	25.0	7.50	ug/Kg

Surrogates

2-Methylnaphthalene-d10 (surr)	85.8	50-150	%
Fluoranthene-d10 (surr)	86.7	50-150	%

Batch Information

Analytical Batch: XMS10400
Analytical Method: 8270D SIM (PAH)
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: DSD
Analytical Date/Time: 9/14/2017 4:36:00PM

Prep Batch: XXX38387
Prep Method: SW3550C
Prep Date/Time: 9/10/2017 12:39:07PM
Prep Initial Wt./Vol.: 22.5 g
Prep Extract Vol: 5 mL

Print Date: 09/18/2017 11:32:36AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176407 [XXX38387]

Blank Spike Lab ID: 1411683

Date Analyzed: 09/14/2017 16:56

Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407001

Results by 8270D SIM (PAH)

Blank Spike (ug/Kg)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	111	90.0	81	(43-111)
2-Methylnaphthalene	111	84.3	76	(39-114)
Acenaphthene	111	113	101	(44-111)
Acenaphthylene	111	90.4	81	(39-116)
Anthracene	111	93.7	84	(50-114)
Benzo(a)Anthracene	111	93.0	84	(54-122)
Benzo[a]pyrene	111	91.6	83	(50-125)
Benzo[b]Fluoranthene	111	93.7	84	(53-128)
Benzo[g,h,i]perylene	111	94.0	85	(49-127)
Benzo[k]fluoranthene	111	95.5	86	(56-123)
Chrysene	111	97.4	88	(57-118)
Dibenzo[a,h]anthracene	111	91.7	83	(50-129)
Fluoranthene	111	94.6	85	(55-119)
Fluorene	111	92.7	83	(47-114)
Indeno[1,2,3-c,d] pyrene	111	93.6	84	(49-130)
Naphthalene	111	84.4	76	(38-111)
Phenanthrene	111	91.4	82	(49-113)
Pyrene	111	98.7	89	(55-117)

Surrogates

2-Methylnaphthalene-d10 (surr)	111	82.5	83	(50-150)
Fluoranthene-d10 (surr)	111	85.7	86	(50-150)

Batch Information

Analytical Batch: XMS10400

Analytical Method: 8270D SIM (PAH)

Instrument: SVA Agilent 780/5975 GC/MS

Analyst: DSD

Prep Batch: XXX38387

Prep Method: SW3550C

Prep Date/Time: 09/10/2017 12:39

Spike Init Wt./Vol.: 111 ug/Kg Extract Vol: 5 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 09/18/2017 11:32:37AM

Matrix Spike Summary

Original Sample ID: 1178331003
MS Sample ID: 1411684 MS
MSD Sample ID: 1411685 MSD

Analysis Date: 09/14/2017 17:58
Analysis Date: 09/14/2017 18:18
Analysis Date: 09/14/2017 18:39
Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407001

Results by 8270D SIM (PAH)

Parameter	Sample	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	14.3U	128	106	83	126	107	85	43-111	1.10	(< 20)
2-Methylnaphthalene	14.3U	128	99.3	77	126	99.9	79	39-114	0.55	(< 20)
Acenaphthene	14.3U	128	131	102	126	131	103	44-111	0.15	(< 20)
Acenaphthylene	14.3U	128	107	84	126	108	85	39-116	0.40	(< 20)
Anthracene	14.3U	128	114	89	126	112	89	50-114	1.50	(< 20)
Benzo(a)Anthracene	14.3U	128	110	86	126	109	87	54-122	0.95	(< 20)
Benzo(a)pyrene	14.3U	128	109	85	126	108	85	50-125	0.87	(< 20)
Benzo(b)Fluoranthene	14.3U	128	109	85	126	110	87	53-128	1.20	(< 20)
Benzo(g,h,i)perylene	14.3U	128	107	84	126	106	84	49-127	1.50	(< 20)
Benzo(k)fluoranthene	14.3U	128	111	87	126	108	85	56-123	2.70	(< 20)
Chrysene	14.3U	128	113	88	126	111	88	57-118	1.70	(< 20)
Dibenzo(a,h)anthracene	14.3U	128	106	83	126	105	83	50-129	0.72	(< 20)
Fluoranthene	14.3U	128	110	86	126	108	85	55-119	1.80	(< 20)
Fluorene	14.3U	128	109	85	126	111	88	47-114	1.60	(< 20)
Indeno[1,2,3-c,d] pyrene	14.3U	128	108	84	126	107	84	49-130	0.78	(< 20)
Naphthalene	11.4U	128	99.1	77	126	101	80	38-111	1.50	(< 20)
Phenanthrene	14.3U	128	109	85	126	106	84	49-113	2.20	(< 20)
Pyrene	14.3U	128	116	90	126	113	90	55-117	2.20	(< 20)
Surrogates										
2-Methylnaphthalene-d10 (surr)		128	112	87	126	109	87	50-150	2.00	
Fluoranthene-d10 (surr)		128	113	88	126	111	88	50-150	1.60	

Batch Information

Analytical Batch: XMS10400
Analytical Method: 8270D SIM (PAH)
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: DSD
Analytical Date/Time: 9/14/2017 6:18:00PM

Prep Batch: XXX38387
Prep Method: Sonication Extr Soil 8270 PAH SIM 5ml
Prep Date/Time: 9/10/2017 12:39:07PM
Prep Initial Wt./Vol.: 22.56g
Prep Extract Vol: 5.00mL

Print Date: 09/18/2017 11:32:38AM

Method Blank

Blank ID: MB for HBN 1768093 [XXX/38395]
Blank Lab ID: 1412000

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176407001, 1176407002, 1176407003, 1176407004, 1176407005, 1176407006, 1176407007, 1176407008, 1176407009

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	97.5	60-120		%

Batch Information

Analytical Batch: XFC13784
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: JMG
Analytical Date/Time: 9/13/2017 1:40:00AM

Prep Batch: XXX38395
Prep Method: SW3550C
Prep Date/Time: 9/11/2017 4:00:45PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 1 mL

Print Date: 09/18/2017 11:32:39AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176407 [XXX38395]
 Blank Spike Lab ID: 1412001
 Date Analyzed: 09/13/2017 01:49

Spike Duplicate ID: LCSD for HBN 1176407 [XXX38395]
 Spike Duplicate Lab ID: 1412002
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407001, 1176407002, 1176407003, 1176407004, 1176407005, 1176407006, 1176407007, 1176407008, 1176407009

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	167	156	94	167	165	99	(75-125)	5.10	(< 20)
Surrogates									
5a Androstane (surr)	3.33	106	106	3.33	110	110	(60-120)	3.70	

Batch Information

Analytical Batch: **XFC13784**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B R**
 Analyst: **JMG**

Prep Batch: **XXX38395**
 Prep Method: **SW3550C**
 Prep Date/Time: **09/11/2017 16:00**
 Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

Print Date: 09/18/2017 11:32:41AM

Method Blank

Blank ID: MB for HBN 1768147 [XXX/38401]
Blank Lab ID: 1412114

Matrix: Soil/Solid (dry weight)

QC for Samples:
1176407010, 1176407011, 1176407013

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	101	60-120		%

Batch Information

Analytical Batch: XFC13789
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: KMD
Analytical Date/Time: 9/13/2017 11:16:00AM

Prep Batch: XXX38401
Prep Method: SW3550C
Prep Date/Time: 9/12/2017 9:49:16AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 1 mL

Print Date: 09/18/2017 11:32:43AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176407 [XXX38401]
 Blank Spike Lab ID: 1412115
 Date Analyzed: 09/13/2017 11:26

Spike Duplicate ID: LCSD for HBN 1176407 [XXX38401]
 Spike Duplicate Lab ID: 1412116
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176407010, 1176407011, 1176407013

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	167	184	110	167	182	109	(75-125)	0.99	(< 20)
Surrogates									
5a Androstane (surr)	3.33	119	119	3.33	117	117	(60-120)	1.70	

Batch Information

Analytical Batch: **XFC13789**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B F**
 Analyst: **KMD**

Prep Batch: **XXX38401**
 Prep Method: **SW3550C**
 Prep Date/Time: **09/12/2017 09:49**
 Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

Print Date: 09/18/2017 11:32:44AM

1176407



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CHAIN-OF-CUSTODY RECORD

Laboratory JGS Page 1 of 2
Attn: TORI

Analysis Parameters/Sample Container Description (include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO/AX101	BTEX/8021B	DRO/AX102	PAHS/8270D	SIM	Total Number of Containers	Remarks/Matrix
20007-HB1S2	①A-B	18:15	9/5/17	✓	✓	✓	✓	✓	✓			Soil
-HB1S202	②A-B	19:00	9/5/17	✓	✓	✓	✓	✓	✓			
HB2S2	③A-B	18:35	9/5/17	✓	✓	✓	✓	✓	✓			
HB3S2	④A-B	18:45	9/5/17	✓	✓	✓	✓	✓	✓			
HB4S2	⑤A-B	19:05	9/5/17	✓	✓	✓	✓	✓	✓			
HB5S2	⑥A-B	19:15	9/5/17	✓	✓	✓	✓	✓	✓			
HB6S2	⑦A-B	19:25	9/5/17	✓	✓	✓	✓	✓	✓			
HB7S2	⑧A-B	9:42	9/6/17	✓	✓	✓	✓	✓	✓			
HB8S3	⑨A-B	10:00	9/6/17	✓	✓	✓	✓	✓	✓			
✓ HB9S1	⑩A-B	10:15	9/6/17	✓	✓	✓	✓	✓	✓			

Project Information		Sample Receipt	
Project Number: <u>32-1-20007</u>	Total Number of Containers		
Project Name: <u>OLD BIA School - Oneonta</u>	Received Good Cond./Cold		
Contact: <u>DPM, ADV, TWC</u>	Delivery Method:		
Ongoing Project? Yes ☒ No ☐	(attach shipping bill, if any)		
Sampler: <u>ADV/TWC</u>			

Instructions	
Requested Turnaround Time: <u>Standard - 10 day</u>	
Special Instructions: <u>Standard ADV Level 2 Data Deliverables</u>	

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

Relinquished By: 1.		Relinquished By: 2.		Relinquished By: 3.	
Signature: <u>[Signature]</u>	Time: <u>6:15</u>	Signature: <u>[Signature]</u>	Time: <u>0845</u>	Signature: <u>[Signature]</u>	Time: <u>0941</u>
Printed Name: <u>TORON CROSBY</u>	Date: <u>9/7/17</u>	Printed Name: <u>[Signature]</u>	Date: <u>9/8/17</u>	Printed Name: <u>TORON CROSBY</u>	Date: <u>9/8/17</u>
Company: <u>TRAVON CROSBY</u>		Company: <u>TRAVON CROSBY</u>		Company: <u>SW</u>	
Received By: 1.		Received By: 2.		Received By: 3.	
Signature: <u>[Signature]</u>	Time: <u>0845</u>	Signature: <u>[Signature]</u>	Time: <u>0845</u>	Signature: <u>[Signature]</u>	Time: <u>0941</u>
Printed Name: <u>TRAVON CROSBY</u>	Date: <u>9/8/17</u>	Printed Name: <u>TRAVON CROSBY</u>	Date: <u>9/8/17</u>	Printed Name: <u>Carl Stipe</u>	Date: <u>9/8/17</u>
Company: <u>TRAVON CROSBY</u>		Company: <u>TRAVON CROSBY</u>		Company: <u>SGS</u>	

1-G D40
CS: IF

No. 35441

1176407



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CHAIN-OF-CUSTODY RECORD

Laboratory SGS Page 2 of 2
Attn: TOR

Analysis Parameters/Sample Container Description

(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GPB/AK101	BTEX/AK21B	DRD/AK102	PAHs/82700 SIM	Total Number of Containers	Remarks/Matrix
20007-HB10S2	11A-B	1038	9/6/17	✓	✓	✓	✓				Soil
↓ - STB1	12A	2010	↓		✓	✓					Trip Blank
20007-HB10S1	13AB	1030	9/6/17		✓	✓	✓				added per TWC vup 9/8/17

Project Information		Sample Receipt		Relinquished By: 1.		Relinquished By: 2.		Relinquished By: 3.	
Project Number: <u>32-1-20007</u>		Total Number of Containers: <u>4-10</u>		Signature: <u>[Signature]</u> Time: <u>1015</u>		Signature: <u>[Signature]</u> Time: <u> </u>		Signature: <u>[Signature]</u> Time: <u>0941</u>	
Project Name: <u>OLD BIA SCHOOL - CHEVAL</u>		COC Seals/Intact? <u>Y/N/NA</u> <u>4F</u>		Printed Name: <u>Trevor Crosby</u> Date: <u>9/2/17</u>		Printed Name: <u>[Signature]</u> Date: <u> </u>		Printed Name: <u>Trevor Crosby</u> Date: <u>9/8/17</u>	
Contact: <u>DPM, ADV, TWC</u>		Received Good Cond./Cold: <u>1-0</u>		Company: <u>SWI</u>		Company: <u>crushed cool intact TWC</u>		Company: <u>SWI</u>	
Ongoing Project? Yes ☒ No ☐		Delivery Method: <u>040</u>		Received By: <u>1.</u>		Received By: <u>2.</u>		Received By: <u>3.</u>	
Sampler: <u>ADV/TWC</u>		(attach shipping bill, if any)		Signature: <u>[Signature]</u> Time: <u> </u>		Signature: <u>[Signature]</u> Time: <u>0845</u>		Signature: <u>[Signature]</u> Time: <u>0941</u>	
Instructions				Printed Name: <u>Trevor Crosby</u> Date: <u> </u>		Printed Name: <u>Trevor Crosby</u> Date: <u>9/8/17</u>		Printed Name: <u>Carl Skipe</u> Date: <u>9/8/17</u>	
Requested Turnaround Time: <u>Standard - 10 day</u>				Company: <u>SWI</u>		Company: <u>SWI</u>		Company: <u>SGS</u>	
Special Instructions: <u>Level 2 Data Deliverables</u>									

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File



Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
Chain of Custody / Temperature Requirements			N/A	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location		Yes	1 Front	
COC accompanied samples?		Yes		
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		Yes	Cooler ID: 1	@ 1.6 °C Therm. ID: D40
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
Temperature blank compliant* (i.e., 0-6 °C after CF)?				
*If >6°C, were samples collected <8 hours ago?		N/A		
If <0°C, were sample containers ice free?		N/A		
If samples received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".				
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.				
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.		
Were samples received within holding time?		Yes		
Do samples match COC** (i.e., sample IDs, dates/times collected)? **Note: If times differ <1hr, record details & login per COC.		No	Sample 13 "20007-HB10S1" jars received and were not written on COC. Run per client request.	
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)		Yes		
N/A ***Exemption permitted for metals (e.g. 200.8/6020A).				
Were proper containers (type/mass/volume/preservative***) used?		Yes		
Volatile / LL-Hg Requirements				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?		Yes		
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?		N/A		
Were all soil VOAs field extracted with MeOH+BFB?		Yes		
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.				
Additional notes (if applicable):				

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1176407001-A	No Preservative Required	OK			
1176407001-B	Methanol field pres. 4 C	OK			
1176407002-A	No Preservative Required	OK			
1176407002-B	Methanol field pres. 4 C	OK			
1176407003-A	No Preservative Required	OK			
1176407003-B	Methanol field pres. 4 C	OK			
1176407004-A	No Preservative Required	OK			
1176407004-B	Methanol field pres. 4 C	OK			
1176407005-A	No Preservative Required	OK			
1176407005-B	Methanol field pres. 4 C	OK			
1176407006-A	No Preservative Required	OK			
1176407006-B	Methanol field pres. 4 C	OK			
1176407007-A	No Preservative Required	OK			
1176407007-B	Methanol field pres. 4 C	OK			
1176407008-A	No Preservative Required	OK			
1176407008-B	Methanol field pres. 4 C	OK			
1176407009-A	No Preservative Required	OK			
1176407009-B	Methanol field pres. 4 C	OK			
1176407010-A	No Preservative Required	OK			
1176407010-B	Methanol field pres. 4 C	OK			
1176407011-A	No Preservative Required	OK			
1176407011-B	Methanol field pres. 4 C	OK			
1176407012-A	Methanol field pres. 4 C	OK			
1176407013-A	No Preservative Required	OK			
1176407013-B	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM- The container was received damaged.

FR- The container was received frozen and not usable for Bacteria or BOD analyses.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: Old BIA School
Chevak, Alaska

Date: January 2018

Laboratory Report Date: September 18, 2017

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Alena Voigt

Title: Environmental Scientist

Laboratory Name: SGS North America Inc.

Laboratory Report Number: 1176407

ADEC File Number: 2409.57.001

(NOTE: NA = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No / NA (please explain)

Comments:

- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?

Yes / No / **NA** (please explain)

Comments: *Samples were not transferred.*

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No / NA (please explain)

Comments:

- b. Correct analyses requested? **Yes** / No / NA (please explain)

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes / No / NA (please explain)

Comments: *The temperature blank was 1.6° C.*

- b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)? **Yes** / No / NA (please explain)

Comments:

- c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)? **Yes** / No / NA (please explain)

Comments:

- d. If there were any discrepancies, were they documented? – For example, incorrect sample containers/preservation, sample temperature outside acceptance range, insufficient or missing samples, etc.? **Yes** / No / NA (please explain)

Comments: *Sample 13 “20007-HB10S1” sample jars were received and not written on the COC. Ran per client’s request.*

- e. Data quality or usability affected? Yes **No** / NA

Comments:

4. Case Narrative

- a. Present and understandable? **Yes** / No / NA (please explain)

Comments:

- b. Discrepancies, errors or QC failures identified by the lab? **Yes** / No / NA (please explain)

Comments:

- For sample 20007-HB7S2 the Surrogate recovery for 4-bromofluorobenzene (36.8%) does not meet QC criteria. Sample was analyzed twice and results confirmed.
- For sample 20007-HB7S2 the Surrogate recovery for 5a-androstane (159%) does not meet QC criteria due to matrix interference.

- c. Were corrective actions documented? Yes **No** / NA (please explain)

Comments: *Corrective actions were not noted.*

- d. What is the effect on data quality/usability, according to the case narrative?

Comments: *The case narrative does not comment on data quality/usability.*

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No / NA (please explain)

Comments:

- b. All applicable holding times met? **Yes** / No / NA (please explain)

Comments:

- c. All soils reported on a dry weight basis? **Yes** / No / NA (please explain)

Comments:

- d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / No / NA (please explain)
Comments:
- e. Data quality or usability affected? **NA** Please explain.
Comments:

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?
Yes / No / NA (please explain)
Comments:
- ii. All method blank results less than LOQ? **Yes** / No / NA (please explain)
Comments:
- iii. If above LOQ, what samples are affected? **NA**
Comments:
- iv. Do the affected sample(s) have data flags? Yes / No / **NA** (please explain)
Comments:
- If so, are the data flags clearly defined? Yes / No / **NA**
Comments:
- v. Data quality or usability affected? Please explain. **NA**
Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846) **Yes** / No / NA (please explain)
Comments:
- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? Yes / No / **NA** (please explain)
Comments: *Metals/inorganics were not analyzed.*
- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) **Yes** / No / NA (please explain)
Comments:

- iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%, VOCs 20%; all other analyses see the laboratory QC pages) **Yes**/ No / NA (please explain)

Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected? **NA**

Comments:

- vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined? **Yes** / No / **NA** (please explain)

Comments:

- vii. Data quality or usability affected? Please explain. **NA**

Comments:

c. Surrogates - Organics Only

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? **Yes**/ No / NA (please explain)

Comments:

- ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **Yes** **No** / NA (please explain)

Comments: *For Sample HP7S2 the surrogate recovery for 4-bromofluorobenzene and 5a-androstane do not meet the QC criteria.*

- iii. Do the sample results with failed surrogate recoveries have data flags?

Yes / No / NA (please explain)

Comments: *For Sample HP7S2 the GRO results are considered biased low and flagged “J-” and the DRO results are considered biased high and flagged “J+” on Table 2 of the report.*

- iv. If so, are the data flags clearly defined? **Yes**/ No / NA (please explain)

Comments: *See above.*

- v. Data quality or usability affected? Please explain. **Yes** / No / NA

Comments: *See above.*

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.)

- i. One trip blank reported per matrix, analysis, and cooler? (If not, enter explanation below.) **Yes** / No / NA (please explain)

Comments:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment stating why must be entered below.) **Yes** / **No** / **NA** (please explain)
Comments: *Only one cooler was used to transport the volatile samples and trip blank.*

- iii. All results less than LOQ? **Yes** / **No** / **NA** (please explain)
Comments:

- iv. If above LOQ, what samples are affected?
Comments: **NA**

- v. Data quality or usability affected? Please explain.
Comments:

e. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / **No** / **NA** (please explain)
Comments: *The field duplicate set is HB1S2/HB1S202.*

- ii. Submitted blind to the lab? **Yes** / **No** / **NA** (please explain)
Comments:

- iii. Precision – All relative percent differences (RPDs) less than specified DQOs? (Recommended: 30% for water, 50% for soil) **Yes** / **No** / **NA** (please explain)
Comments:

- iv. Data quality or usability affected? Please explain. **NA**
Comments:

f. Decontamination or Equipment Blank (if not applicable)
Yes / **No** / **NA** (please explain)

Comments: *An equipment blank was not included in our ADEC-approved work plan.*

- i. All results less than LOQ? **Yes** / **No** / **NA** (please explain)
Comments:

- ii. If above LOQ, what samples are affected? **NA**
Comments:

- iii. Data quality or usability affected? Please explain. **NA**
Comments:

Work Order Number: 1176407

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab-specific, etc.)

- a. Defined and appropriate? **Yes** / No / NA (please explain)

Comments: *Laboratory-specific qualifiers are defined on page 3 of the laboratory report.*

Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks Street Suite 3
Anchorage, AK 99518
(907)433-3246

Report Number: **1176408**

Client Project: **32-1-20007 Old BIA School**

Dear Trevor Crosby,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Victoria at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Victoria Pennick
Project Manager
Victoria.Pennick@sgs.com

Date

Case Narrative

SGS Client: **Shannon & Wilson, Inc.**
SGS Project: **1176408**
Project Name/Site: **32-1-20007 Old BIA School**
Project Contact: **Trevor Crosby**

Refer to sample receipt form for information on sample condition.

1176443005MS (1412038) MS

8270D SIM - PAH MS recoveries for several analytes do not meet QC criteria. Refer to the LCS for accuracy requirements.

1176443005MSD (1412039) MSD

8270D SIM - PAH MSD recoveries for several analytes do not meet QC criteria. Refer to the LCS for accuracy requirements.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 09/18/2017 11:34:37AM

Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
8270D SIM (PAH)				
1176408002	20007-HB11S1	XMS10396	Benzo[k]fluoranthene	RP
1176443005	LABREFQC	XMS10396	Benzo[k]fluoranthene	BLC

Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

Print Date: 09/18/2017 11:34:38AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
20007-SS	1176408001	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB11S1	1176408002	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB11S101	1176408003	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB12S2	1176408004	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB16S2	1176408005	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB19S1	1176408006	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB20S2	1176408007	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB24S2	1176408008	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB25S2	1176408009	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB26S2	1176408010	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB27S2	1176408011	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB28S2	1176408012	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-HB26S303	1176408013	09/06/2017	09/08/2017	Soil/Solid (dry weight)
20007-STB2	1176408014	09/06/2017	09/08/2017	Soil/Solid (dry weight)

Method

8270D SIM (PAH)
AK101
SW8021B
AK102
SM21 2540G

Method Description

8270 PAH SIM Semi-Volatiles GC/MS
AK101/8021 Combo. (S)
AK101/8021 Combo. (S)
Diesel Range Organics (S)
Percent Solids SM2540G

Detectable Results Summary

Client Sample ID: **20007-SS**

Lab Sample ID: 1176408001

Semivolatile Organic Fuels

Parameter	Result	Units
Diesel Range Organics	65.3	mg/Kg

Client Sample ID: **20007-HB11S1**

Lab Sample ID: 1176408002

Polynuclear Aromatics GC/MS

Parameter	Result	Units
1-Methylnaphthalene	347	ug/Kg
2-Methylnaphthalene	266	ug/Kg
Acenaphthene	142	ug/Kg
Anthracene	132	ug/Kg
Benzo(a)Anthracene	125	ug/Kg
Benzo[a]pyrene	54.8	ug/Kg
Benzo[b]Fluoranthene	104	ug/Kg
Benzo[g,h,i]perylene	19.5J	ug/Kg
Benzo[k]fluoranthene	30.4	ug/Kg
Chrysene	119	ug/Kg
Fluoranthene	653	ug/Kg
Fluorene	167	ug/Kg
Indeno[1,2,3-c,d] pyrene	18.3J	ug/Kg
Naphthalene	433	ug/Kg
Phenanthrene	846	ug/Kg
Pyrene	514	ug/Kg
Diesel Range Organics	318	mg/Kg
Ethylbenzene	22.4J	ug/Kg
Gasoline Range Organics	3.90	mg/Kg
o-Xylene	131	ug/Kg
P & M -Xylene	95.7	ug/Kg

Semivolatile Organic Fuels

Volatile Fuels

Client Sample ID: **20007-HB11S101**

Lab Sample ID: 1176408003

Semivolatile Organic Fuels

Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	211	mg/Kg
Ethylbenzene	13.8J	ug/Kg
Gasoline Range Organics	3.15	mg/Kg
o-Xylene	100	ug/Kg
P & M -Xylene	78.8	ug/Kg

Client Sample ID: **20007-HB12S2**

Lab Sample ID: 1176408004

Semivolatile Organic Fuels

Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	13.0J	mg/Kg
o-Xylene	33.4J	ug/Kg

Client Sample ID: **20007-HB16S2**

Lab Sample ID: 1176408005

Semivolatile Organic Fuels

Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	27.6	mg/Kg
Gasoline Range Organics	1.27J	mg/Kg

Detectable Results Summary

Client Sample ID: **20007-HB19S1**

Lab Sample ID: 1176408006

Semivolatile Organic Fuels

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	34.6	mg/Kg
Gasoline Range Organics	1.95J	mg/Kg

Client Sample ID: **20007-HB20S2**

Lab Sample ID: 1176408007

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	99.1J	mg/Kg

Client Sample ID: **20007-HB24S2**

Lab Sample ID: 1176408008

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	14.2J	mg/Kg

Client Sample ID: **20007-HB25S2**

Lab Sample ID: 1176408009

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	65.2J	mg/Kg

Client Sample ID: **20007-HB26S2**

Lab Sample ID: 1176408010

Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	759	ug/Kg
2-Methylnaphthalene	793	ug/Kg
Fluoranthene	124J	ug/Kg
Naphthalene	7660	ug/Kg
Phenanthrene	132J	ug/Kg
Pyrene	100J	ug/Kg
Diesel Range Organics	84.1J	mg/Kg
Ethylbenzene	23.9J	ug/Kg
o-Xylene	24.3J	ug/Kg
P & M -Xylene	32.4J	ug/Kg

Semivolatile Organic Fuels

Volatile Fuels

Client Sample ID: **20007-HB27S2**

Lab Sample ID: 1176408011

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	93.1J	mg/Kg

Client Sample ID: **20007-HB28S2**

Lab Sample ID: 1176408012

Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	20.7J	mg/Kg

Client Sample ID: **20007-HB26S303**

Lab Sample ID: 1176408013

Semivolatile Organic Fuels

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	281	mg/Kg
Gasoline Range Organics	1.49J	mg/Kg
o-Xylene	20.8J	ug/Kg

Results of 20007-SS

Client Sample ID: **20007-SS**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408001
 Lab Project ID: 1176408

Collection Date: 09/06/17 12:45
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):72.5
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	65.3	27.5	8.51	mg/Kg	1		09/15/17 15:36
Surrogates							
5a Androstane (surr)	95.5	50-150		%	1		09/15/17 15:36

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 15:36
 Container ID: 1176408001-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.157 g
 Prep Extract Vol: 1 mL

Results of 20007-SS

Client Sample ID: **20007-SS**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408001
 Lab Project ID: 1176408

Collection Date: 09/06/17 12:45
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%): 72.5
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.98 U	3.95	1.19	mg/Kg	1		09/10/17 00:05

Surrogates

4-Bromofluorobenzene (surr)	83.4	50-150		%	1		09/10/17 00:05
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 00:05
 Container ID: 1176408001-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 12:45
 Prep Initial Wt./Vol.: 84.009 g
 Prep Extract Vol: 48.1278 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	9.90 U	19.8	6.32	ug/Kg	1		09/10/17 00:05
Ethylbenzene	19.8 U	39.5	12.3	ug/Kg	1		09/10/17 00:05
o-Xylene	19.8 U	39.5	12.3	ug/Kg	1		09/10/17 00:05
P & M -Xylene	39.5 U	79.1	23.7	ug/Kg	1		09/10/17 00:05
Toluene	19.8 U	39.5	12.3	ug/Kg	1		09/10/17 00:05

Surrogates

1,4-Difluorobenzene (surr)	87.9	72-119		%	1		09/10/17 00:05
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 00:05
 Container ID: 1176408001-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 12:45
 Prep Initial Wt./Vol.: 84.009 g
 Prep Extract Vol: 48.1278 mL

Results of 20007-HB11S1

Client Sample ID: **20007-HB11S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408002
 Lab Project ID: 1176408

Collection Date: 09/06/17 10:50
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):81.9
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	347	30.3	9.10	ug/Kg	1		09/12/17 18:27
2-Methylnaphthalene	266	30.3	9.10	ug/Kg	1		09/12/17 18:27
Acenaphthene	142	30.3	9.10	ug/Kg	1		09/12/17 18:27
Acenaphthylene	15.2 U	30.3	9.10	ug/Kg	1		09/12/17 18:27
Anthracene	132	30.3	9.10	ug/Kg	1		09/12/17 18:27
Benzo(a)Anthracene	125	30.3	9.10	ug/Kg	1		09/12/17 18:27
Benzo[a]pyrene	54.8	30.3	9.10	ug/Kg	1		09/12/17 18:27
Benzo[b]Fluoranthene	104	30.3	9.10	ug/Kg	1		09/12/17 18:27
Benzo[g,h,i]perylene	19.5 J	30.3	9.10	ug/Kg	1		09/12/17 18:27
Benzo[k]fluoranthene	30.4	30.3	9.10	ug/Kg	1		09/12/17 18:27
Chrysene	119	30.3	9.10	ug/Kg	1		09/12/17 18:27
Dibenzo[a,h]anthracene	15.2 U	30.3	9.10	ug/Kg	1		09/12/17 18:27
Fluoranthene	653	30.3	9.10	ug/Kg	1		09/12/17 18:27
Fluorene	167	30.3	9.10	ug/Kg	1		09/12/17 18:27
Indeno[1,2,3-c,d] pyrene	18.3 J	30.3	9.10	ug/Kg	1		09/12/17 18:27
Naphthalene	433	24.3	7.28	ug/Kg	1		09/12/17 18:27
Phenanthrene	846	60.7	18.2	ug/Kg	2		09/14/17 00:41
Pyrene	514	30.3	9.10	ug/Kg	1		09/12/17 18:27
Surrogates							
2-Methylnaphthalene-d10 (surr)	78.4	50-150		%	1		09/12/17 18:27
Fluoranthene-d10 (surr)	80.7	50-150		%	1		09/12/17 18:27

Batch Information

Analytical Batch: XMS10399
 Analytical Method: 8270D SIM (PAH)
 Analyst: DSD
 Analytical Date/Time: 09/14/17 00:41
 Container ID: 1176408002-A

Prep Batch: XXX38396
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 17:30
 Prep Initial Wt./Vol.: 22.619 g
 Prep Extract Vol: 5 mL

Analytical Batch: XMS10396
 Analytical Method: 8270D SIM (PAH)
 Analyst: DSD
 Analytical Date/Time: 09/12/17 18:27
 Container ID: 1176408002-A

Prep Batch: XXX38396
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 17:30
 Prep Initial Wt./Vol.: 22.619 g
 Prep Extract Vol: 5 mL

Results of 20007-HB11S1

Client Sample ID: **20007-HB11S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408002
 Lab Project ID: 1176408

Collection Date: 09/06/17 10:50
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):81.9
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	318	96.6	30.0	mg/Kg	4		09/15/17 17:22
Surrogates							
5a Androstane (surr)	87.6	50-150		%	4		09/15/17 17:22

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 17:22
 Container ID: 1176408002-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.313 g
 Prep Extract Vol: 1 mL

Results of 20007-HB11S1

Client Sample ID: **20007-HB11S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408002
 Lab Project ID: 1176408

Collection Date: 09/06/17 10:50
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):81.9
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	3.90	3.11	0.932	mg/Kg	1		09/10/17 00:24

Surrogates

4-Bromofluorobenzene (surr)	68.7	50-150		%	1		09/10/17 00:24
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 00:24
 Container ID: 1176408002-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:50
 Prep Initial Wt./Vol.: 76.07 g
 Prep Extract Vol: 38.7366 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.75 U	15.5	4.97	ug/Kg	1		09/10/17 00:24
Ethylbenzene	22.4 J	31.1	9.69	ug/Kg	1		09/10/17 00:24
o-Xylene	131	31.1	9.69	ug/Kg	1		09/10/17 00:24
P & M -Xylene	95.7	62.1	18.6	ug/Kg	1		09/10/17 00:24
Toluene	15.6 U	31.1	9.69	ug/Kg	1		09/10/17 00:24

Surrogates

1,4-Difluorobenzene (surr)	88.1	72-119		%	1		09/10/17 00:24
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 00:24
 Container ID: 1176408002-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 10:50
 Prep Initial Wt./Vol.: 76.07 g
 Prep Extract Vol: 38.7366 mL

Results of 20007-HB11S101

Client Sample ID: **20007-HB11S101**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408003
 Lab Project ID: 1176408

Collection Date: 09/06/17 11:45
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):82.1
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	211	24.0	7.44	mg/Kg	1		09/15/17 15:45
Surrogates							
5a Androstane (surr)	90.4	50-150		%	1		09/15/17 15:45

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 15:45
 Container ID: 1176408003-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.441 g
 Prep Extract Vol: 1 mL

Results of 20007-HB11S101

Client Sample ID: **20007-HB11S101**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408003
 Lab Project ID: 1176408

Collection Date: 09/06/17 11:45
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):82.1
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	3.15	2.87	0.860	mg/Kg	1		09/10/17 01:21

Surrogates

4-Bromofluorobenzene (surr)	102	50-150		%	1		09/10/17 01:21
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 01:21
 Container ID: 1176408003-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 11:45
 Prep Initial Wt./Vol.: 85.704 g
 Prep Extract Vol: 40.3318 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.15 U	14.3	4.58	ug/Kg	1		09/10/17 01:21
Ethylbenzene	13.8 J	28.7	8.94	ug/Kg	1		09/10/17 01:21
o-Xylene	100	28.7	8.94	ug/Kg	1		09/10/17 01:21
P & M -Xylene	78.8	57.3	17.2	ug/Kg	1		09/10/17 01:21
Toluene	14.4 U	28.7	8.94	ug/Kg	1		09/10/17 01:21

Surrogates

1,4-Difluorobenzene (surr)	89	72-119		%	1		09/10/17 01:21
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 01:21
 Container ID: 1176408003-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 11:45
 Prep Initial Wt./Vol.: 85.704 g
 Prep Extract Vol: 40.3318 mL

Results of 20007-HB12S2

Client Sample ID: **20007-HB12S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408004
 Lab Project ID: 1176408

Collection Date: 09/06/17 11:05
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):62.8
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	13.0 J	31.8	9.86	mg/Kg	1		09/15/17 15:55
Surrogates							
5a Androstane (surr)	79	50-150		%	1		09/15/17 15:55

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 15:55
 Container ID: 1176408004-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.025 g
 Prep Extract Vol: 1 mL

Results of 20007-HB12S2

Client Sample ID: **20007-HB12S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408004
 Lab Project ID: 1176408

Collection Date: 09/06/17 11:05
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):62.8
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	3.21 U	6.42	1.93	mg/Kg	1		09/10/17 01:39

Surrogates

4-Bromofluorobenzene (surr)	91.2	50-150		%	1		09/10/17 01:39
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 01:39
 Container ID: 1176408004-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 11:05
 Prep Initial Wt./Vol.: 57.491 g
 Prep Extract Vol: 46.38 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	16.1 U	32.1	10.3	ug/Kg	1		09/10/17 01:39
Ethylbenzene	32.1 U	64.2	20.0	ug/Kg	1		09/10/17 01:39
o-Xylene	33.4 J	64.2	20.0	ug/Kg	1		09/10/17 01:39
P & M -Xylene	64.0 U	128	38.5	ug/Kg	1		09/10/17 01:39
Toluene	32.1 U	64.2	20.0	ug/Kg	1		09/10/17 01:39

Surrogates

1,4-Difluorobenzene (surr)	88.3	72-119		%	1		09/10/17 01:39
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 01:39
 Container ID: 1176408004-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 11:05
 Prep Initial Wt./Vol.: 57.491 g
 Prep Extract Vol: 46.38 mL

Results of 20007-HB16S2

Client Sample ID: **20007-HB16S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408005
 Lab Project ID: 1176408

Collection Date: 09/06/17 14:05
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):83.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	27.6	23.9	7.40	mg/Kg	1		09/15/17 16:05
Surrogates							
5a Androstane (surr)	89.9	50-150		%	1		09/15/17 16:05

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 16:05
 Container ID: 1176408005-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.169 g
 Prep Extract Vol: 1 mL

Results of 20007-HB16S2

Client Sample ID: **20007-HB16S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408005
 Lab Project ID: 1176408

Collection Date: 09/06/17 14:05
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):83.3
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.27 J	3.21	0.964	mg/Kg	1		09/10/17 01:58

Surrogates

4-Bromofluorobenzene (surr)	97.6	50-150		%	1		09/10/17 01:58
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 01:58
 Container ID: 1176408005-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 14:05
 Prep Initial Wt./Vol.: 67.763 g
 Prep Extract Vol: 36.2958 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	8.05 U	16.1	5.14	ug/Kg	1		09/10/17 01:58
Ethylbenzene	16.1 U	32.1	10.0	ug/Kg	1		09/10/17 01:58
o-Xylene	16.1 U	32.1	10.0	ug/Kg	1		09/10/17 01:58
P & M -Xylene	32.1 U	64.3	19.3	ug/Kg	1		09/10/17 01:58
Toluene	16.1 U	32.1	10.0	ug/Kg	1		09/10/17 01:58

Surrogates

1,4-Difluorobenzene (surr)	91.4	72-119		%	1		09/10/17 01:58
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 01:58
 Container ID: 1176408005-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 14:05
 Prep Initial Wt./Vol.: 67.763 g
 Prep Extract Vol: 36.2958 mL

Results of 20007-HB19S1

Client Sample ID: **20007-HB19S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408006
 Lab Project ID: 1176408

Collection Date: 09/06/17 14:20
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):81.1
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	34.6	24.4	7.55	mg/Kg	1		09/15/17 16:14
Surrogates							
5a Androstane (surr)	88.2	50-150		%	1		09/15/17 16:14

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 16:14
 Container ID: 1176408006-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.374 g
 Prep Extract Vol: 1 mL

Results of 20007-HB19S1

Client Sample ID: **20007-HB19S1**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408006
 Lab Project ID: 1176408

Collection Date: 09/06/17 14:20
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):81.1
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.95 J	2.79	0.838	mg/Kg	1		09/10/17 02:54

Surrogates

4-Bromofluorobenzene (surr)	96.4	50-150		%	1		09/10/17 02:54
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 02:54
 Container ID: 1176408006-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 14:20
 Prep Initial Wt./Vol.: 94.916 g
 Prep Extract Vol: 42.9678 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.00 U	14.0	4.47	ug/Kg	1		09/10/17 02:54
Ethylbenzene	13.9 U	27.9	8.71	ug/Kg	1		09/10/17 02:54
o-Xylene	13.9 U	27.9	8.71	ug/Kg	1		09/10/17 02:54
P & M -Xylene	27.9 U	55.8	16.8	ug/Kg	1		09/10/17 02:54
Toluene	13.9 U	27.9	8.71	ug/Kg	1		09/10/17 02:54

Surrogates

1,4-Difluorobenzene (surr)	88.7	72-119		%	1		09/10/17 02:54
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 02:54
 Container ID: 1176408006-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 14:20
 Prep Initial Wt./Vol.: 94.916 g
 Prep Extract Vol: 42.9678 mL

Results of 20007-HB20S2

Client Sample ID: **20007-HB20S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408007
 Lab Project ID: 1176408

Collection Date: 09/06/17 14:40
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):75.4
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	99.1 J	106	32.7	mg/Kg	4		09/15/17 17:32
Surrogates							
5a Androstane (surr)	93.6	50-150		%	4		09/15/17 17:32

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 17:32
 Container ID: 1176408007-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.154 g
 Prep Extract Vol: 1 mL

Results of 20007-HB20S2

Client Sample ID: **20007-HB20S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408007
 Lab Project ID: 1176408

Collection Date: 09/06/17 14:40
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):75.4
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.87 U	3.74	1.12	mg/Kg	1		09/10/17 03:12

Surrogates

4-Bromofluorobenzene (surr)	82.3	50-150		%	1		09/10/17 03:12
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 03:12
 Container ID: 1176408007-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 14:40
 Prep Initial Wt./Vol.: 78.604 g
 Prep Extract Vol: 44.3644 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	9.35 U	18.7	5.99	ug/Kg	1		09/10/17 03:12
Ethylbenzene	18.7 U	37.4	11.7	ug/Kg	1		09/10/17 03:12
o-Xylene	18.7 U	37.4	11.7	ug/Kg	1		09/10/17 03:12
P & M -Xylene	37.5 U	74.9	22.5	ug/Kg	1		09/10/17 03:12
Toluene	18.7 U	37.4	11.7	ug/Kg	1		09/10/17 03:12

Surrogates

1,4-Difluorobenzene (surr)	87.9	72-119		%	1		09/10/17 03:12
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 03:12
 Container ID: 1176408007-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 14:40
 Prep Initial Wt./Vol.: 78.604 g
 Prep Extract Vol: 44.3644 mL

Results of 20007-HB24S2

Client Sample ID: **20007-HB24S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408008
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:00
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):82.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	14.2 J	24.1	7.47	mg/Kg	1		09/15/17 16:24
Surrogates							
5a Androstane (surr)	89.5	50-150		%	1		09/15/17 16:24

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 16:24
 Container ID: 1176408008-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.221 g
 Prep Extract Vol: 1 mL

Results of 20007-HB24S2

Client Sample ID: **20007-HB24S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408008
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:00
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):82.3
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.31 U	2.62	0.786	mg/Kg	1		09/10/17 03:31

Surrogates

4-Bromofluorobenzene (surr)	100	50-150		%	1		09/10/17 03:31
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 03:31
 Container ID: 1176408008-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:00
 Prep Initial Wt./Vol.: 98.013 g
 Prep Extract Vol: 42.3077 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	6.55 U	13.1	4.19	ug/Kg	1		09/10/17 03:31
Ethylbenzene	13.1 U	26.2	8.18	ug/Kg	1		09/10/17 03:31
o-Xylene	13.1 U	26.2	8.18	ug/Kg	1		09/10/17 03:31
P & M -Xylene	26.2 U	52.4	15.7	ug/Kg	1		09/10/17 03:31
Toluene	13.1 U	26.2	8.18	ug/Kg	1		09/10/17 03:31

Surrogates

1,4-Difluorobenzene (surr)	89.1	72-119		%	1		09/10/17 03:31
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 03:31
 Container ID: 1176408008-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:00
 Prep Initial Wt./Vol.: 98.013 g
 Prep Extract Vol: 42.3077 mL

Results of 20007-HB25S2

Client Sample ID: **20007-HB25S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408009
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:10
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):73.0
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	65.2 J	109	33.7	mg/Kg	4		09/15/17 17:46
Surrogates							
5a Androstane (surr)	94.4	50-150		%	4		09/15/17 17:46

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 17:46
 Container ID: 1176408009-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.203 g
 Prep Extract Vol: 1 mL

Results of 20007-HB25S2

Client Sample ID: **20007-HB25S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408009
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:10
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):73.0
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.80 U	3.61	1.08	mg/Kg	1		09/10/17 03:50

Surrogates

4-Bromofluorobenzene (surr)	79.5	50-150		%	1		09/10/17 03:50
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 03:50
 Container ID: 1176408009-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:10
 Prep Initial Wt./Vol.: 97.185 g
 Prep Extract Vol: 51.2031 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	9.00 U	18.0	5.77	ug/Kg	1		09/10/17 03:50
Ethylbenzene	18.1 U	36.1	11.3	ug/Kg	1		09/10/17 03:50
o-Xylene	18.1 U	36.1	11.3	ug/Kg	1		09/10/17 03:50
P & M -Xylene	36.0 U	72.1	21.6	ug/Kg	1		09/10/17 03:50
Toluene	18.1 U	36.1	11.3	ug/Kg	1		09/10/17 03:50

Surrogates

1,4-Difluorobenzene (surr)	89	72-119		%	1		09/10/17 03:50
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 03:50
 Container ID: 1176408009-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:10
 Prep Initial Wt./Vol.: 97.185 g
 Prep Extract Vol: 51.2031 mL

Results of 20007-HB26S2

Client Sample ID: **20007-HB26S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408010
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:20
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%): 74.4
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	759	333	99.9	ug/Kg	10		09/12/17 18:47
2-Methylnaphthalene	793	333	99.9	ug/Kg	10		09/12/17 18:47
Acenaphthene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Acenaphthylene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Anthracene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Benzo(a)Anthracene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Benzo[a]pyrene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Benzo[b]Fluoranthene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Benzo[g,h,i]perylene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Benzo[k]fluoranthene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Chrysene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Dibenzo[a,h]anthracene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Fluoranthene	124 J	333	99.9	ug/Kg	10		09/12/17 18:47
Fluorene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Indeno[1,2,3-c,d] pyrene	167 U	333	99.9	ug/Kg	10		09/12/17 18:47
Naphthalene	7660	533	160	ug/Kg	20		09/14/17 01:02
Phenanthrene	132 J	333	99.9	ug/Kg	10		09/12/17 18:47
Pyrene	100 J	333	99.9	ug/Kg	10		09/12/17 18:47
Surrogates							
2-Methylnaphthalene-d10 (surr)	84.9	50-150		%	10		09/12/17 18:47
Fluoranthene-d10 (surr)	91	50-150		%	10		09/12/17 18:47

Batch Information

Analytical Batch: XMS10399
 Analytical Method: 8270D SIM (PAH)
 Analyst: DSD
 Analytical Date/Time: 09/14/17 01:02
 Container ID: 1176408010-A

Prep Batch: XXX38396
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 17:30
 Prep Initial Wt./Vol.: 22.695 g
 Prep Extract Vol: 5 mL

Analytical Batch: XMS10396
 Analytical Method: 8270D SIM (PAH)
 Analyst: DSD
 Analytical Date/Time: 09/12/17 18:47
 Container ID: 1176408010-A

Prep Batch: XXX38396
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 17:30
 Prep Initial Wt./Vol.: 22.695 g
 Prep Extract Vol: 5 mL

Results of 20007-HB26S2

Client Sample ID: **20007-HB26S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408010
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:20
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):74.4
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	84.1 J	106	32.9	mg/Kg	4		09/15/17 17:56
Surrogates							
5a Androstane (surr)	93.9	50-150		%	4		09/15/17 17:56

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 17:56
 Container ID: 1176408010-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.417 g
 Prep Extract Vol: 1 mL

Results of 20007-HB26S2

Client Sample ID: **20007-HB26S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408010
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:20
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):74.4
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.84 U	3.68	1.10	mg/Kg	1		09/10/17 04:08

Surrogates

4-Bromofluorobenzene (surr)	60.9	50-150		%	1		09/10/17 04:08
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 04:08
 Container ID: 1176408010-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:20
 Prep Initial Wt./Vol.: 85.502 g
 Prep Extract Vol: 46.8537 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	9.20 U	18.4	5.89	ug/Kg	1		09/10/17 04:08
Ethylbenzene	23.9 J	36.8	11.5	ug/Kg	1		09/10/17 04:08
o-Xylene	24.3 J	36.8	11.5	ug/Kg	1		09/10/17 04:08
P & M -Xylene	32.4 J	73.6	22.1	ug/Kg	1		09/10/17 04:08
Toluene	18.4 U	36.8	11.5	ug/Kg	1		09/10/17 04:08

Surrogates

1,4-Difluorobenzene (surr)	87.8	72-119		%	1		09/10/17 04:08
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 04:08
 Container ID: 1176408010-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:20
 Prep Initial Wt./Vol.: 85.502 g
 Prep Extract Vol: 46.8537 mL

Results of 20007-HB27S2

Client Sample ID: **20007-HB27S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408011
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:30
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):77.6
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	93.1 J	103	31.9	mg/Kg	4		09/15/17 18:05
Surrogates							
5a Androstane (surr)	77.1	50-150		%	4		09/15/17 18:05

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 18:05
 Container ID: 1176408011-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.054 g
 Prep Extract Vol: 1 mL

Results of 20007-HB27S2

Client Sample ID: **20007-HB27S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408011
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:30
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):77.6
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.79 U	3.58	1.07	mg/Kg	1		09/10/17 04:27

Surrogates

4-Bromofluorobenzene (surr)	86.8	50-150		%	1		09/10/17 04:27
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 04:27
 Container ID: 1176408011-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:30
 Prep Initial Wt./Vol.: 75.13 g
 Prep Extract Vol: 41.7959 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	8.95 U	17.9	5.73	ug/Kg	1		09/10/17 04:27
Ethylbenzene	17.9 U	35.8	11.2	ug/Kg	1		09/10/17 04:27
o-Xylene	17.9 U	35.8	11.2	ug/Kg	1		09/10/17 04:27
P & M -Xylene	35.8 U	71.6	21.5	ug/Kg	1		09/10/17 04:27
Toluene	17.9 U	35.8	11.2	ug/Kg	1		09/10/17 04:27

Surrogates

1,4-Difluorobenzene (surr)	89.8	72-119		%	1		09/10/17 04:27
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 04:27
 Container ID: 1176408011-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:30
 Prep Initial Wt./Vol.: 75.13 g
 Prep Extract Vol: 41.7959 mL

Results of 20007-HB28S2

Client Sample ID: **20007-HB28S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408012
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:40
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):78.1
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	20.7 J	25.4	7.89	mg/Kg	1		09/15/17 16:34
Surrogates							
5a Androstane (surr)	88.1	50-150		%	1		09/15/17 16:34

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 16:34
 Container ID: 1176408012-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.202 g
 Prep Extract Vol: 1 mL

Results of 20007-HB28S2

Client Sample ID: **20007-HB28S2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408012
 Lab Project ID: 1176408

Collection Date: 09/06/17 15:40
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):78.1
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.58 U	3.15	0.946	mg/Kg	1		09/10/17 04:46

Surrogates

4-Bromofluorobenzene (surr)	94.8	50-150		%	1		09/10/17 04:46
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 04:46
 Container ID: 1176408012-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:40
 Prep Initial Wt./Vol.: 91.406 g
 Prep Extract Vol: 45.0289 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.90 U	15.8	5.05	ug/Kg	1		09/10/17 04:46
Ethylbenzene	15.8 U	31.5	9.84	ug/Kg	1		09/10/17 04:46
o-Xylene	15.8 U	31.5	9.84	ug/Kg	1		09/10/17 04:46
P & M -Xylene	31.6 U	63.1	18.9	ug/Kg	1		09/10/17 04:46
Toluene	15.8 U	31.5	9.84	ug/Kg	1		09/10/17 04:46

Surrogates

1,4-Difluorobenzene (surr)	88.8	72-119		%	1		09/10/17 04:46
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 04:46
 Container ID: 1176408012-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 15:40
 Prep Initial Wt./Vol.: 91.406 g
 Prep Extract Vol: 45.0289 mL

Results of 20007-HB26S303

Client Sample ID: **20007-HB26S303**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408013
 Lab Project ID: 1176408

Collection Date: 09/06/17 16:00
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):78.3
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	281	25.3	7.84	mg/Kg	1		09/15/17 16:44
Surrogates							
5a Androstane (surr)	109	50-150		%	1		09/15/17 16:44

Batch Information

Analytical Batch: XFC13798
 Analytical Method: AK102
 Analyst: JMG
 Analytical Date/Time: 09/15/17 16:44
 Container ID: 1176408013-A

Prep Batch: XXX38397
 Prep Method: SW3550C
 Prep Date/Time: 09/11/17 19:11
 Prep Initial Wt./Vol.: 30.316 g
 Prep Extract Vol: 1 mL

Results of 20007-HB26S303

Client Sample ID: **20007-HB26S303**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408013
 Lab Project ID: 1176408

Collection Date: 09/06/17 16:00
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):78.3
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.49 J	4.44	1.33	mg/Kg	1		09/10/17 05:05

Surrogates

4-Bromofluorobenzene (surr)	57.8	50-150		%	1		09/10/17 05:05
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/10/17 05:05
 Container ID: 1176408013-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 16:00
 Prep Initial Wt./Vol.: 52.399 g
 Prep Extract Vol: 36.3843 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	11.1 U	22.2	7.10	ug/Kg	1		09/10/17 05:05
Ethylbenzene	22.2 U	44.4	13.8	ug/Kg	1		09/10/17 05:05
o-Xylene	20.8 J	44.4	13.8	ug/Kg	1		09/10/17 05:05
P & M -Xylene	44.4 U	88.7	26.6	ug/Kg	1		09/10/17 05:05
Toluene	22.2 U	44.4	13.8	ug/Kg	1		09/10/17 05:05

Surrogates

1,4-Difluorobenzene (surr)	84.6	72-119		%	1		09/10/17 05:05
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/10/17 05:05
 Container ID: 1176408013-B

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 16:00
 Prep Initial Wt./Vol.: 52.399 g
 Prep Extract Vol: 36.3843 mL

Results of 20007-STB2

Client Sample ID: **20007-STB2**
 Client Project ID: **32-1-20007 Old BIA School**
 Lab Sample ID: 1176408014
 Lab Project ID: 1176408

Collection Date: 09/06/17 20:20
 Received Date: 09/08/17 09:41
 Matrix: Soil/Solid (dry weight)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.25 U	2.51	0.753	mg/Kg	1		09/09/17 23:47

Surrogates

4-Bromofluorobenzene (surr)	85.1	50-150		%	1		09/09/17 23:47
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 09/09/17 23:47
 Container ID: 1176408014-A

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 20:20
 Prep Initial Wt./Vol.: 49.795 g
 Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	6.30 U	12.6	4.02	ug/Kg	1		09/09/17 23:47
Ethylbenzene	12.6 U	25.1	7.83	ug/Kg	1		09/09/17 23:47
o-Xylene	12.6 U	25.1	7.83	ug/Kg	1		09/09/17 23:47
P & M -Xylene	25.1 U	50.2	15.1	ug/Kg	1		09/09/17 23:47
Toluene	12.6 U	25.1	7.83	ug/Kg	1		09/09/17 23:47

Surrogates

1,4-Difluorobenzene (surr)	93.6	72-119		%	1		09/09/17 23:47
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Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Analyst: ST
 Analytical Date/Time: 09/09/17 23:47
 Container ID: 1176408014-A

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/06/17 20:20
 Prep Initial Wt./Vol.: 49.795 g
 Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1768141 [SPT/10303]
Blank Lab ID: 1412093

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007, 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT10303
Analytical Method: SM21 2540G
Instrument:
Analyst: NIC
Analytical Date/Time: 9/11/2017 4:18:00PM

Print Date: 09/18/2017 11:34:47AM

Duplicate Sample Summary

Original Sample ID: 1176419001

Duplicate Sample ID: 1412094

Analysis Date: 09/11/2017 16:18

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007, 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	96.9	96.9	%	0.07	(< 15)

Batch Information

Analytical Batch: SPT10303

Analytical Method: SM21 2540G

Instrument:

Analyst: NIC

Print Date: 09/18/2017 11:34:47AM

Method Blank

Blank ID: MB for HBN 1768035 [VXX/31260]
Blank Lab ID: 1411675

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007, 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013, 1176408014

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	90.7	50-150		%

Batch Information

Analytical Batch: VFC13871
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/9/2017 11:28:00PM

Prep Batch: VXX31260
Prep Method: SW5035A
Prep Date/Time: 9/9/2017 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 09/18/2017 11:34:51AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176408 [VXX31260]
 Blank Spike Lab ID: 1411678
 Date Analyzed: 09/09/2017 22:32

Spike Duplicate ID: LCSD for HBN 1176408 [VXX31260]
 Spike Duplicate Lab ID: 1411679
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007, 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013, 1176408014

Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	12.2	98	12.5	12.8	102	(60-120)	4.70	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	99.5	100	1.25	90.8	91	(50-150)	9.10	

Batch Information

Analytical Batch: VFC13871
 Analytical Method: AK101
 Instrument: Agilent 7890A PID/FID
 Analyst: ST

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/09/2017 08:00
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 09/18/2017 11:34:53AM

Method Blank

Blank ID: MB for HBN 1768035 [VXX/31260]
Blank Lab ID: 1411675

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007, 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013, 1176408014

Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	6.25U	12.5	4.00	ug/Kg
Ethylbenzene	12.5U	25.0	7.80	ug/Kg
o-Xylene	12.5U	25.0	7.80	ug/Kg
P & M -Xylene	25.0U	50.0	15.0	ug/Kg
Toluene	12.5U	25.0	7.80	ug/Kg
Surrogates				
1,4-Difluorobenzene (surr)	91.3	72-119		%

Batch Information

Analytical Batch: VFC13871
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/9/2017 11:28:00PM

Prep Batch: VXX31260
Prep Method: SW5035A
Prep Date/Time: 9/9/2017 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 09/18/2017 11:34:54AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176408 [VXX31260]
 Blank Spike Lab ID: 1411676
 Date Analyzed: 09/09/2017 21:54

Spike Duplicate ID: LCSD for HBN 1176408 [VXX31260]
 Spike Duplicate Lab ID: 1411677
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007, 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013, 1176408014

Results by SW8021B

Parameter	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	1250	1230	98	1250	1200	96	(75-125)	2.40	(< 20)
Ethylbenzene	1250	1200	96	1250	1180	94	(75-125)	2.30	(< 20)
o-Xylene	1250	1170	94	1250	1150	92	(75-125)	2.10	(< 20)
P & M -Xylene	2500	2350	94	2500	2300	92	(80-125)	2.40	(< 20)
Toluene	1250	1230	98	1250	1200	96	(70-125)	2.50	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	1250	94.6	95	1250	95.2	95	(72-119)	0.65	

Batch Information

Analytical Batch: VFC13871
 Analytical Method: SW8021B
 Instrument: Agilent 7890A PID/FID
 Analyst: ST

Prep Batch: VXX31260
 Prep Method: SW5035A
 Prep Date/Time: 09/09/2017 08:00
 Spike Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL

Print Date: 09/18/2017 11:34:56AM

Matrix Spike Summary

Original Sample ID: 1176408005
MS Sample ID: 1411680 MS
MSD Sample ID: 1411681 MSD

Analysis Date: 09/10/2017 1:58
Analysis Date: 09/10/2017 2:17
Analysis Date: 09/10/2017 2:35
Matrix: Soil/Solid (dry weight)

QC for Samples: 1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007, 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013, 1176408014

Results by SW8021B

Parameter	Sample	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	8.05U	1107	1025	93	1107	1025	93	75-125	0.09	(< 20)
Ethylbenzene	16.1U	1107	1066	96	1107	1067	96	75-125	0.12	(< 20)
o-Xylene	16.1U	1107	1046	94	1107	1049	95	75-125	0.38	(< 20)
P & M -Xylene	32.1U	2209	2101	95	2209	2113	95	80-125	0.25	(< 20)
Toluene	16.1U	1107	1076	97	1107	1077	97	70-125	0.08	(< 20)

Surrogates

1,4-Difluorobenzene (surr)	1107	1025	93	1107	1019	92	72-119	0.56
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Batch Information

Analytical Batch: VFC13871
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 9/10/2017 2:17:00AM

Prep Batch: VXX31260
Prep Method: AK101 Extraction (S)
Prep Date/Time: 9/9/2017 8:00:00AM
Prep Initial Wt./Vol.: 67.76g
Prep Extract Vol: 25.00mL

Print Date: 09/18/2017 11:34:57AM

Method Blank

Blank ID: MB for HBN 1768099 [XXX/38396]

Blank Lab ID: 1412036

QC for Samples:

1176408002, 1176408010

Matrix: Soil/Solid (dry weight)

Results by 8270D SIM (PAH)

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	12.5U	25.0	7.50	ug/Kg
2-Methylnaphthalene	12.5U	25.0	7.50	ug/Kg
Acenaphthene	12.5U	25.0	7.50	ug/Kg
Acenaphthylene	12.5U	25.0	7.50	ug/Kg
Anthracene	12.5U	25.0	7.50	ug/Kg
Benzo(a)Anthracene	12.5U	25.0	7.50	ug/Kg
Benzo[a]pyrene	12.5U	25.0	7.50	ug/Kg
Benzo[b]Fluoranthene	12.5U	25.0	7.50	ug/Kg
Benzo[g,h,i]perylene	12.5U	25.0	7.50	ug/Kg
Benzo[k]fluoranthene	12.5U	25.0	7.50	ug/Kg
Chrysene	12.5U	25.0	7.50	ug/Kg
Dibenzo[a,h]anthracene	12.5U	25.0	7.50	ug/Kg
Fluoranthene	12.5U	25.0	7.50	ug/Kg
Fluorene	12.5U	25.0	7.50	ug/Kg
Indeno[1,2,3-c,d] pyrene	12.5U	25.0	7.50	ug/Kg
Naphthalene	10.0U	20.0	6.00	ug/Kg
Phenanthrene	12.5U	25.0	7.50	ug/Kg
Pyrene	12.5U	25.0	7.50	ug/Kg

Surrogates

2-Methylnaphthalene-d10 (surr)	81.3	50-150	%
Fluoranthene-d10 (surr)	84.8	50-150	%

Batch Information

Analytical Batch: XMS10396
 Analytical Method: 8270D SIM (PAH)
 Instrument: Agilent GC 7890B/5977A SWA
 Analyst: DSD
 Analytical Date/Time: 9/12/2017 2:01:00PM

Prep Batch: XXX38396
 Prep Method: SW3550C
 Prep Date/Time: 9/11/2017 5:30:42PM
 Prep Initial Wt./Vol.: 22.5 g
 Prep Extract Vol: 5 mL

Print Date: 09/18/2017 11:34:58AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176408 [XXX38396]

Blank Spike Lab ID: 1412037

Date Analyzed: 09/12/2017 14:21

Matrix: Soil/Solid (dry weight)

QC for Samples: 1176408002, 1176408010

Results by 8270D SIM (PAH)

Blank Spike (ug/Kg)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	111	88.7	80	(43-111)
2-Methylnaphthalene	111	82.3	74	(39-114)
Acenaphthene	111	106	95	(44-111)
Acenaphthylene	111	91.5	82	(39-116)
Anthracene	111	103	93	(50-114)
Benzo(a)Anthracene	111	92.2	83	(54-122)
Benzo[a]pyrene	111	91.0	82	(50-125)
Benzo[b]Fluoranthene	111	93.8	84	(53-128)
Benzo[g,h,i]perylene	111	87.1	78	(49-127)
Benzo[k]fluoranthene	111	91.1	82	(56-123)
Chrysene	111	92.6	83	(57-118)
Dibenzo[a,h]anthracene	111	82.7	74	(50-129)
Fluoranthene	111	91.6	83	(55-119)
Fluorene	111	94.3	85	(47-114)
Indeno[1,2,3-c,d] pyrene	111	87.8	79	(49-130)
Naphthalene	111	86.9	78	(38-111)
Phenanthrene	111	96.7	87	(49-113)
Pyrene	111	94.2	85	(55-117)

Surrogates

2-Methylnaphthalene-d10 (surr)	111	80.7	81	(50-150)
Fluoranthene-d10 (surr)	111	81.3	81	(50-150)

Batch Information

Analytical Batch: XMS10396

Analytical Method: 8270D SIM (PAH)

Instrument: Agilent GC 7890B/5977A SWA

Analyst: DSD

Prep Batch: XXX38396

Prep Method: SW3550C

Prep Date/Time: 09/11/2017 17:30

Spike Init Wt./Vol.: 111 ug/Kg Extract Vol: 5 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 09/18/2017 11:35:00AM

Matrix Spike Summary

Original Sample ID: 1176443005
MS Sample ID: 1412038 MS
MSD Sample ID: 1412039 MSD

Analysis Date: 09/12/2017 17:05
Analysis Date: 09/12/2017 17:25
Analysis Date: 09/12/2017 17:46
Matrix: Soil/Solid (dry weight)

QC for Samples: 1176408002, 1176408010

Results by 8270D SIM (PAH)

Parameter	Sample	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)					
		Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1-Methylnaphthalene	400	127	424	19 *	126	438	30 *	43-111	3.10	(< 20)
2-Methylnaphthalene	532	127	485	-38 *	126	527	-4 *	39-114	8.30	(< 20)
Acenaphthene	155	127	251	77	126	241	68	44-111	4.40	(< 20)
Acenaphthylene	71.0U	127	133J	105	126	128J	101	39-116	3.70	(< 20)
Anthracene	55.9J	127	147	73	126	136J	64	50-114	8.00	(< 20)
Benzo(a)Anthracene	99.9J	127	157	45 *	126	157	45 *	54-122	0.07	(< 20)
Benzo(a)pyrene	87.8J	127	157	55	126	160	57	50-125	1.80	(< 20)
Benzo(b)Fluoranthene	117J	127	167	40 *	126	167	40 *	53-128	0.34	(< 20)
Benzo(g,h,i)perylene	67.0J	127	153	68	126	162	76	49-127	5.70	(< 20)
Benzo(k)fluoranthene	71.0U	127	128J	101	126	133J	105	56-123	3.90	(< 20)
Chrysene	96.0J	127	151	43 *	126	151	44 *	57-118	0.22	(< 20)
Dibenzo(a,h)anthracene	71.0U	127	120J	95	126	115J	92	50-129	3.20	(< 20)
Fluoranthene	223	127	182	-33 *	126	176	-37 *	55-119	2.90	(< 20)
Fluorene	157	127	234	61	126	233	61	47-114	0.44	(< 20)
Indeno[1,2,3-c,d] pyrene	54.0J	127	145	72	126	150	76	49-130	2.90	(< 20)
Naphthalene	257	127	258	2 *	126	274	14 *	38-111	5.70	(< 20)
Phenanthrene	294	127	272	-17 *	126	259	-27 *	49-113	4.80	(< 20)
Pyrene	175	127	174	-1 *	126	167	-7 *	55-117	3.90	(< 20)
Surrogates										
2-Methylnaphthalene-d10 (surr)		127	127	100	126	119	94	50-150	6.30	
Fluoranthene-d10 (surr)		127	117	92	126	109	86	50-150	6.80	

Batch Information

Analytical Batch: XMS10396
Analytical Method: 8270D SIM (PAH)
Instrument: Agilent GC 7890B/5977A SWA
Analyst: DSD
Analytical Date/Time: 9/12/2017 5:25:00PM

Prep Batch: XXX38396
Prep Method: Sonication Extr Soil 8270 PAH SIM 5ml
Prep Date/Time: 9/11/2017 5:30:42PM
Prep Initial Wt./Vol.: 22.62g
Prep Extract Vol: 5.00mL

Print Date: 09/18/2017 11:35:01AM

Method Blank

Blank ID: MB for HBN 1768106 [XXX/38397]
Blank Lab ID: 1412080

Matrix: Soil/Solid (dry weight)

QC for Samples:

1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007, 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	83.3	60-120		%

Batch Information

Analytical Batch: XFC13798
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: JMG
Analytical Date/Time: 9/15/2017 2:38:00PM

Prep Batch: XXX38397
Prep Method: SW3550C
Prep Date/Time: 9/11/2017 7:11:00PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 1 mL

Print Date: 09/18/2017 11:35:02AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1176408 [XXX38397]
 Blank Spike Lab ID: 1412081
 Date Analyzed: 09/15/2017 14:47

Spike Duplicate ID: LCSD for HBN 1176408
 [XXX38397]
 Spike Duplicate Lab ID: 1412082
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1176408001, 1176408002, 1176408003, 1176408004, 1176408005, 1176408006, 1176408007,
 1176408008, 1176408009, 1176408010, 1176408011, 1176408012, 1176408013

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	167	153	92	167	162	97	(75-125)	5.20	(< 20)
Surrogates									
5a Androstane (surr)	3.33	102	102	3.33	108	108	(60-120)	5.80	

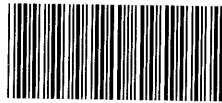
Batch Information

Analytical Batch: **XFC13798**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B F**
 Analyst: **JMG**

Prep Batch: **XXX38397**
 Prep Method: **SW3550C**
 Prep Date/Time: **09/11/2017 19:11**
 Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

Print Date: 09/18/2017 11:35:04AM

1176408



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CHAIN-OF-CUSTODY RECORD

Laboratory SGS Page 1 of 2
Attn: TORE

Analysis Parameters/Sample Container Description

(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GPO/PAK101	BTEX/BOD/B	DRO/PAK102	PAHs/82TDD SIM	Total Number of Containers	Remarks/Matrix
20007-SS	①A-B	12:45	9/6/17	✓	✓	✓	✓	✓		2	Soil
-HB11S1	②A-B	10:50		✓	✓	✓	✓	✓			
-HB11SID1	③A-B	11:45		✓	✓	✓	✓				
-HB12S2	④A-B	11:05		✓	✓	✓	✓				
-HB16S2	⑤A-B	14:05		✓	✓	✓	✓				
-HB19S1	⑥A-B	14:20		✓	✓	✓	✓				
-HB20S2	⑦A-B	14:40		✓	✓	✓	✓				
-HB24S2	⑧A-B	15:00		✓	✓	✓	✓				
-HB25S2	⑨A-B	15:10		✓	✓	✓	✓				
-HB26S2	⑩A-B	15:20		✓	✓	✓	✓	✓			

Project Information		Sample Receipt		Relinquished By: 1.		Relinquished By: 2.		Relinquished By: 3.	
Project Number: <u>32-1-20007</u>		Total Number of Containers		Signature: <u>[Signature]</u> Time: <u>10:15</u>		Signature: _____ Time: _____		Signature: <u>[Signature]</u> Time: <u>09:41</u>	
Project Name: <u>Old BIA School - Cheval</u>		COC Seals/Intact? Y/N/NA		Printed Name: <u>Trevor Cooney</u> Date: <u>9/11/17</u>		Printed Name: _____ Date: _____		Printed Name: <u>Trevor Cooney</u> Date: <u>9/8/17</u>	
Contact: <u>DPM, ADV, TWC</u>		Received Good Cond./Cold		Company: <u>SW</u>		Company: <u>custody seal intact true</u>		Company: <u>SW</u>	
Ongoing Project? Yes ☒ No ☐		Delivery Method:		Received By: <u>[Signature]</u> Time: <u>08:45</u>		Received By: <u>[Signature]</u> Time: <u>08:45</u>		Received By: <u>[Signature]</u> Time: <u>09:41</u>	
Sampler: <u>ADV/TWC</u>		(attach shipping bill, if any)		Printed Name: <u>PAVN</u> Date: _____		Printed Name: <u>Trevor Cooney</u> Date: <u>9/11/17</u>		Printed Name: <u>Carl Stipe</u> Date: <u>9/8/17</u>	
Instructions				Received By: 2.		Received By: 3.			
Requested Turnaround Time: <u>10 Day Standard</u>				Signature: _____ Time: _____		Signature: _____ Time: _____			
Special Instructions: <u>Level 2 Data Deliverables</u>				Printed Name: _____ Date: _____		Printed Name: <u>Carl Stipe</u> Date: <u>9/8/17</u>			
Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report Yellow - w/shipment - for consignee files Pink - Shannon & Wilson - Job File				Company: <u>SW</u>		Company: <u>SGS</u>			

0.3D 40
CS:IF

1176408



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CHAIN-OF-CUSTODY RECORD

Laboratory SGS Page 2 of 2
Attn: TORI

Analysis Parameters/Sample Container Description (include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO/PA101	BTEX/802B	DRO/4K102	PAHs/8270D SIM	Total Number of Containers	Remarks/Matrix
20007-HB27S2	(17)A-B	15:30	9/6/17	✓	✓	✓	✓	✓		2	Soil
↓ -HB28S2	(17)A-B	15:40	↓	✓	✓	✓	✓	✓		↓	↓
↓ -HB26S303	(17)A-B	16:00	↓	✓	✓	✓	✓	✓		↓	↓
↓ -STB2	(19)A	20:20	↓		✓	✓				1	Tip Blank

Project Information	Sample Receipt
Project Number: <u>381-20007</u>	Total Number of Containers
Project Name: <u>Old BIA School - CHEVAIC</u>	COC Seals/Intact? Y/N/NA
Contact: <u>DPM, ADV</u>	Received Good Cond./Cold
Ongoing Project? Yes ☒ No ☐	Delivery Method:
Sampler: <u>ADV, TWC</u>	(attach shipping bill, if any)

Instructions
Requested Turnaround Time: <u>10 Day standard</u>
Special Instructions: <u>Level 2 Data Deliverables</u>

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <u>[Signature]</u> Time: <u>10/5</u>	Signature: <u>[Signature]</u> Time: <u>0941</u>	Signature: <u>[Signature]</u> Time: <u>0941</u>
Printed Name: <u>Trevon Cressy</u> Date: <u>9/7/17</u>	Printed Name: <u>Trevon Cressy</u> Date: <u>9/8/17</u>	Printed Name: <u>Trevon Cressy</u> Date: <u>9/8/17</u>
Company: <u>SW</u>	Company: <u>SW</u>	Company: <u>SW</u>
Received By: 1.	Received By: 2.	Received By: 3.
Signature: <u>[Signature]</u> Time: <u>0945</u>	Signature: <u>[Signature]</u> Time: <u>0945</u>	Signature: <u>[Signature]</u> Time: <u>0941</u>
Printed Name: <u>Trevon Cressy</u> Date: <u>9/8/17</u>	Printed Name: <u>Trevon Cressy</u> Date: <u>9/8/17</u>	Printed Name: <u>Stacy Stipe</u> Date: <u>9/8/17</u>
Company: <u>SW</u>	Company: <u>SW</u>	Company: <u>SGS</u>



Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
Chain of Custody / Temperature Requirements			Yes	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location		Yes	1-F	
COC accompanied samples?		Yes		
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		Yes	Cooler ID: 1	@ 0.3 °C Therm. ID: D40
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
			Cooler ID:	@ °C Therm. ID:
Temperature blank compliant* (i.e., 0-6 °C after CF)?				
*If >6°C, were samples collected <8 hours ago?		N/A		
If <0°C, were sample containers ice free?		N/A		
If samples received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".				
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.				
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.		
Were samples received within holding time?		Yes		
Do samples match COC ** (i.e., sample IDs, dates/times collected)? **Note: If times differ <1hr, record details & login per COC.		Yes		
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)		Yes		
N/A ***Exemption permitted for metals (e.g. 200.8/6020A).				
Were proper containers (type/mass/volume/preservative***) used?		Yes		
Volatile / LL-Hg Requirements				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?		Yes		
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?		N/A		
Were all soil VOAs field extracted with MeOH+BFB?		Yes		
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.				
Additional notes (if applicable):				

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1176408001-A	No Preservative Required	OK			
1176408001-B	Methanol field pres. 4 C	OK			
1176408002-A	No Preservative Required	OK			
1176408002-B	Methanol field pres. 4 C	OK			
1176408003-A	No Preservative Required	OK			
1176408003-B	Methanol field pres. 4 C	OK			
1176408004-A	No Preservative Required	OK			
1176408004-B	Methanol field pres. 4 C	OK			
1176408005-A	No Preservative Required	OK			
1176408005-B	Methanol field pres. 4 C	OK			
1176408006-A	No Preservative Required	OK			
1176408006-B	Methanol field pres. 4 C	OK			
1176408007-A	No Preservative Required	OK			
1176408007-B	Methanol field pres. 4 C	OK			
1176408008-A	No Preservative Required	OK			
1176408008-B	Methanol field pres. 4 C	OK			
1176408009-A	No Preservative Required	OK			
1176408009-B	Methanol field pres. 4 C	OK			
1176408010-A	No Preservative Required	OK			
1176408010-B	Methanol field pres. 4 C	OK			
1176408011-A	No Preservative Required	OK			
1176408011-B	Methanol field pres. 4 C	OK			
1176408012-A	No Preservative Required	OK			
1176408012-B	Methanol field pres. 4 C	OK			
1176408013-A	No Preservative Required	OK			
1176408013-B	Methanol field pres. 4 C	OK			
1176408014-A	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM- The container was received damaged.

FR- The container was received frozen and not usable for Bacteria or BOD analyses.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: Old BIA School
Chevak, Alaska

Date: January 2018

Laboratory Report Date: September 18, 2017

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Alena Voigt

Title: Environmental Scientist

Laboratory Name: SGS North America Inc.

Laboratory Report Number: 1176408

ADEC File Number: 2409.57.001

(NOTE: NA = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No / NA (please explain)

Comments:

- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?

Yes / No / **NA** (please explain)

Comments: *Samples were not transferred.*

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No / NA (please explain)

Comments:

- b. Correct analyses requested? **Yes** / No / NA (please explain)

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes / No / NA (please explain)

Comments: *The temperature blank was 0.3° C.*

- b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)? **Yes** / No / NA (please explain)

Comments:

- c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)? **Yes** / No / NA (please explain)
Comments:
- d. If there were any discrepancies, were they documented? – For example, incorrect sample containers/preservation, sample temperature outside acceptance range, insufficient or missing samples, etc.? **Yes** / No / **NA** (please explain)
Comments: *No discrepancies were noted.*
- e. Data quality or usability affected? **Yes** / **No** / NA
Comments:

4. Case Narrative

- a. Present and understandable? **Yes** / No / NA (please explain)
Comments:
- b. Discrepancies, errors or QC failures identified by the lab? **Yes** / No / NA (please explain)
Comments:
 - *PAH MS/MSD recoveries for several analytes do not meet QC criteria. Refer to the LCS for accuracy requirements.*
- c. Were corrective actions documented? **Yes** / **No** / NA (please explain)
Comments: *Corrective actions were not noted.*
- d. What is the effect on data quality/usability, according to the case narrative?
Comments: *With the exception of referring to the LCS for accuracy requirements, the case narrative does not comment on data quality/usability.*

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No / NA (please explain)
Comments:
- b. All applicable holding times met? **Yes** / No / NA (please explain)
Comments:
- c. All soils reported on a dry weight basis? **Yes** / No / NA (please explain)
Comments:
- d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / No / NA (please explain)
Comments:
- e. Data quality or usability affected? **NA** Please explain.
Comments:

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?
Yes / No / NA (please explain)
Comments:
- ii. All method blank results less than LOQ? **Yes** / No / NA (please explain)
Comments:
- iii. If above LOQ, what samples are affected? **NA**
Comments:
- iv. Do the affected sample(s) have data flags? Yes / No / **NA** (please explain)
Comments:

If so, are the data flags clearly defined? Yes / No / **NA**
Comments:
- v. Data quality or usability affected? Please explain. **NA**
Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?
(LCS/LCSD required per AK methods, LCS required per SW846) **Yes** / No / NA
(please explain)
Comments:
- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis
and 20 samples? Yes / No / **NA** (please explain)
Comments: *Metals/inorganics were not analyzed.*
- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory
limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101
60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the
laboratory QC pages) **Yes** / No / NA (please explain)
Comments:
- iv. Precision – All relative percent differences (RPDs) reported and less than method or
laboratory limits? And project specified DQOs, if applicable. RPD reported from
LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods
20%, VOCs 20%; all other analyses see the laboratory QC pages) **Yes** / No / NA
(please explain)
Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected? **NA**
Comments: *Sample HB11S2 and HB26S2.*

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?
Yes / No / NA (please explain)
Comments:

vii. Data quality or usability affected? Please explain. **NA**
Comments:

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? **Yes / No / NA** (please explain)
Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **Yes / No / NA** (please explain)
Comments:

iii. Do the sample results with failed surrogate recoveries have data flags?
Yes / No / NA (please explain)

Comments:

iv. If so, are the data flags clearly defined? **Yes / No / NA** (please explain)

Comments:

v. Data quality or usability affected? Please explain. **Yes / No / NA**

Comments:

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.)

i. One trip blank reported per matrix, analysis, and cooler? (If not, enter explanation below.) **Yes / No / NA** (please explain)
Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment stating why must be entered below.) **Yes / No / NA** (please explain)
Comments: *Only one cooler was used to transport the volatile samples and trip blank.*

- iii. All results less than LOQ? **Yes** / No / NA (please explain)

Comments:

- iv. If above LOQ, what samples are affected?

Comments: **NA**

- v. Data quality or usability affected? Please explain.

Comments:

e. Field Duplicate

- i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes / No / NA (please explain)

Comments: *The field duplicate set is HB26S2/HB26S303.*

- ii. Submitted blind to the lab? Yes / No **NA** (please explain)

Comments:

- iii. Precision – All relative percent differences (RPDs) less than specified DQOs?
(Recommended: 30% for water, 50% for soil) Yes **NA** / No (please explain)

Comments: *The DRO and xylenes RPDs are greater than 50%.*

- iv. Data quality or usability affected? Please explain. **NA**

Comments: *The affected results are flagged “E” to indicate that the sample results are estimated due to the RPD failure.*

f. Decontamination or Equipment Blank (if not applicable)

Yes / No **NA** (please explain)

Comments: *An equipment blank was not included in our ADEC-approved work plan.*

- i. All results less than LOQ? Yes / No **NA** (please explain)

Comments:

- ii. If above LOQ, what samples are affected? **NA**

Comments:

- iii. Data quality or usability affected? Please explain. **NA**

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFC EE, Lab-specific, etc.)

- a. Defined and appropriate? **Yes** / No / NA (please explain)

Comments: *Laboratory-specific qualifiers are defined on page 4 of the laboratory report.*

APPENDIX D
ADEC CONCEPTUAL SITE MODEL

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Old BIA School

2409.57.001

Completed By: Shannon & Wilson, Inc.

Date Completed: January 2018

Instructions: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

(1) Check the media that could be directly affected by the release.	(2) For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.
Media	Transport Mechanisms
☒ Surface Soil (0-2 ft bgs)	☒ Direct release to surface soil <i>check soil</i> ☒ Migration to subsurface <i>check soil</i> ☒ Migration to groundwater <i>check groundwater</i> ☒ Volatilization <i>check air</i> ☒ Runoff or erosion <i>check surface water</i> ☒ Uptake by plants or animals <i>check biota</i> ☐ Other (list):
☒ Subsurface Soil (2-15 ft bgs)	☒ Direct release to subsurface soil <i>check soil</i> ☒ Migration to groundwater <i>check groundwater</i> ☒ Volatilization <i>check air</i> ☒ Uptake by plants or animals <i>check biota</i> ☐ Other (list):
☒ Ground-water	☒ Direct release to groundwater <i>check groundwater</i> ☒ Volatilization <i>check air</i> ☒ Flow to surface water body <i>check surface water</i> ☒ Flow to sediment <i>check sediment</i> ☒ Uptake by plants or animals <i>check biota</i> ☐ Other (list):
☒ Surface Water	☒ Direct release to surface water <i>check surface water</i> ☐ Volatilization <i>check air</i> ☐ Sedimentation <i>check sediment</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list):
☐ Sediment	☐ Direct release to sediment <i>check sediment</i> ☐ Resuspension, runoff, or erosion <i>check surface water</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list):

(3)
Check all exposure media identified in (2).

(4)
Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.

(5)
Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.

Current & Future Receptors

Exposure Media

Exposure Pathway/Route

	Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☒ soil							
☒ Incidental Soil Ingestion	F	F	C/F	F			
☒ Dermal Absorption of Contaminants from Soil	F	F	C/F	F			
☐ Inhalation of Fugitive Dust							
☒ groundwater							
☒ Ingestion of Groundwater	F	F	F	F			
☐ Dermal Absorption of Contaminants in Groundwater							
☐ Inhalation of Volatile Compounds in Tap Water							
☒ air							
☒ Inhalation of Outdoor Air	F	F	C/F	F			
☒ Inhalation of Indoor Air	F	F	F	F			
☐ Inhalation of Fugitive Dust							
☒ surface water							
☒ Ingestion of Surface Water			C/F				
☐ Dermal Absorption of Contaminants in Surface Water							
☐ Inhalation of Volatile Compounds in Tap Water							
☒ sediment							
☐ Direct Contact with Sediment			C/F				
☒ biota							
☐ Ingestion of Wild or Farmed Foods			C/F				

Revised, 10/01/2010

Appendix A - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name:

File Number:

Completed by:

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: *Follow the italicized instructions in each section below.*

1. General Information:

Sources (*check potential sources at the site*)

- | | |
|--|---|
| ☐ USTs | ☐ Vehicles |
| ☒ ASTs | ☐ Landfills |
| ☐ Dispensers/fuel loading racks | ☐ Transformers |
| ☒ Drums | ☒ Other: <input type="text" value="Batteries, miscellaneous debris"/> |

Release Mechanisms (*check potential release mechanisms at the site*)

- | | |
|--|--|
| ☒ Spills | ☐ Direct discharge |
| ☒ Leaks | ☐ Burning |
| | ☐ Other: <input type="text"/> |

Impacted Media (*check potentially-impacted media at the site*)

- | | |
|---|--|
| ☒ Surface soil (0-2 feet bgs*) | ☒ Groundwater |
| ☒ Subsurface soil (>2 feet bgs) | ☒ Surface water |
| ☒ Air | ☐ Biota |
| ☐ Sediment | ☐ Other: <input type="text"/> |

Receptors (*check receptors that could be affected by contamination at the site*)

- | | |
|--|--|
| ☒ Residents (adult or child) | ☒ Site visitor |
| ☒ Commercial or industrial worker | ☒ Trespasser |
| ☒ Construction worker | ☐ Recreational user |
| ☐ Subsistence harvester (i.e. gathers wild foods) | ☐ Farmer |
| ☐ Subsistence consumer (i.e. eats wild foods) | ☐ Other: <input type="text"/> |

2. Exposure Pathways: *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface?
(Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete:

Complete

Comments:

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface?
(Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☒

If both boxes are checked, label this pathway complete:

Complete

Comments:

Naphthalene exceeding ADEC Method Two migration to groundwater cleanup levels has been documented at the site.

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future? ☒

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☒

If both boxes are checked, label this pathway complete:

Complete

Comments:

Impacted soil is in contact with groundwater.

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future?



Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).



If both boxes are checked, label this pathway complete:

Complete

Comments:

There is a potential that if impacted surface water or groundwater is present at the site it could migrate to Chevak Lake.

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods?



Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)?



Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.)



If all of the boxes are checked, label this pathway complete:

Complete

Comments:

PAHs where are listed on Appendix C have been documented at the site.

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.)



Are the contaminants in soil volatile (see Appendix D in the guidance document)?



If both boxes are checked, label this pathway complete:

Complete

Comments:

PAHs listed on Appendix D have been documented at the site.

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminated soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures)



Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)?



If both boxes are checked, label this pathway complete:

Complete

Comments:

The Old BIA School is built on piles. Therefore, inhalation of indoor air is currently incomplete.

3. Additional Exposure Pathways: *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- ☐ Climate permits recreational use of waters for swimming.
- ☐ Climate permits exposure to groundwater during activities, such as construction.
- ☐ Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are deemed protective of this pathway because dermal absorption is incorporated into the groundwater exposure equation for residential uses.

Check the box if further evaluation of this pathway is needed:

☐

Comments:

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- ☐ The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- ☐ The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

DEC groundwater cleanup levels in 18 AAC 75, Table C are protective of this pathway because the inhalation of vapors during normal household activities is incorporated into the groundwater exposure equation.

Check the box if further evaluation of this pathway is needed:

☐

Comments:

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- o Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- o Dust particles are less than 10 micrometers (Particulate Matter - PM₁₀). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.

DEC human health soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because the inhalation of particulates is incorporated into the soil exposure equation.

Check the box if further evaluation of this pathway is needed:

☐

Comments:

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- o Climate permits recreational activities around sediment.
- o The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed:

☒

Comments:

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

APPENDIX E
IMPORTANT INFORMATION ABOUT
YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT



Date:	January 2018
To:	ADEC
	Old BIA School, Chevak, Alaska

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors which were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland

HAZARDOUS MATERIALS ASSESSMENT

OLD CHEVAK SCHOOL HAZMAT SURVEY CHEVAK, ALASKA



**Surveyed
September 05-06, 2017**

**Report Date
October 20, 2017**

EHS-ALASKA, INC.
ENGINEERING, HEALTH & SAFETY CONSULTANTS
11901 BUSINESS BLVD., SUITE 208
EAGLE RIVER, ALASKA 99577-7701

HAZARDOUS MATERIALS ASSESSMENT

OLD CHEVAK SCHOOL HAZMAT SURVEY

CHEVAK, ALASKA

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HAZARDOUS MATERIALS ASSESSMENT OLD CHEVAK SCHOOL HAZMAT SURVEY

CHEVAK, ALASKA

OVERVIEW

The Old Chevak School, located in Chevak, Alaska, was surveyed for the presence of asbestos-containing materials (ACM), and other potentially hazardous materials at the request of the Alaska Department of Environmental Conservation (ADEC). The survey also provided a "good faith" inspection for hazardous materials that may be present at the site. Mr. Chris T. Ottosen and Mr. Martin K. Schwan of EHS-Alaska, Inc. (EHS-Alaska) conducted the inspections in September 2017. It will be the contractor's responsibility to take this baseline data, and to conduct hazardous materials removal in compliance with all regulatory requirements.

A. GENERALIZED REQUIREMENTS FOR HAZARDOUS MATERIALS

Potentially hazardous materials have been identified in the Old Chevak School that will be affected by the proposed renovations. Those materials include asbestos, lead, polychlorinated bi-phenyls (PCBs), mercury, and radioactive materials. Not all materials were tested for potentially hazardous components, other potentially hazardous materials, including those exterior to the building, such as contamination from underground fuel tanks may be present, but are not part of this report.

Buildings or portions of buildings that were constructed prior to 1978 which are residences, or contain day care facilities, kindergarten classes or other activities frequently visited by children under 6 years of age are classified as *child occupied facilities*. All work classified as "renovations" or disturbing more than 6 square feet of lead-based painted surfaces per room for interior activities or more than 20 square feet for exterior activities in child occupied facilities must comply with the requirements of 40 CFR 745. This building is not currently believed to be classified as a *child occupied facility* and therefore the requirements of 40 CFR 745 are not applicable.

Only the materials that will be directly affected by any future project are required to be removed. It is the Contractor's responsibility to take this baseline data to coordinate and fully develop a hazardous materials removal design that will identify the presence, locations and quantities of asbestos and/or other hazardous materials that will be affected by this project. The removal and disposal of potentially hazardous materials are highly regulated, and it is anticipated that removal and disposal of asbestos, lead and chemical hazards will be conducted by a subcontractor to the general contractor who is qualified for such removal. It is anticipated that the general contractor and other trades will be able to conduct their work using engineering controls and work practices to control worker exposure and to keep airborne contaminants out of occupied areas of the building.

Settled and concealed dusts in areas not subject to routine cleaning are present throughout the building, including the roof, and inside and on top of architectural, mechanical, electrical, and structural elements, and those dusts are assumed to contain regulated air contaminants. This should not be read to imply that there is an existing hazard to building occupants (normal occupants of the building as opposed to construction workers working in the affected areas). However, depending on the specific work items involved and on the means and methods employed when working in the affected areas, construction workers could be exposed to regulated air contaminants from those dusts in excess of the OSHA Permissible Exposure Limits (PELs).

The settled and concealed dusts were examined by an EPA Certified Building Inspector but were not sampled. The inspector determined that the dusts are not "asbestos debris" from an asbestos-containing building material (ACBM). The inspector also determined that the dusts are unlikely to contain more than one percent (1%) asbestos by weight, and therefore are not an asbestos-containing material (ACM). Reference 40 CFR 763.83.

“Awareness training” (typically 2 hours) and possibly respiratory protection will be required for all Contractor Personnel who will be disturbing the dusts. The extent of the training and protective measures will depend upon the airborne concentrations measured during air monitoring of the contractors work force, which depends on the means and methods employed to control the dusts. The air monitoring may be discontinued following a “negative exposure assessment” showing that worker exposures are below the OSHA permissible exposure limits for the type of work and means and methods employed. Previous air monitoring from similar jobs with similar conditions may be used as historical data to establish a “negative exposure assessment”.

B. BUILDING DESCRIPTION

Building S1- Old Chevak School

The Old Chevak School, also known as Building S1, was originally constructed sometime in the mid 1970's. No as-built information was available for review, and previous reports by others indicate original construction dates ranging from 1973 to 1976. The school appeared to have undergone several minor undocumented renovations which included the addition of walls around a room behind the stage at an unknown date, HVAC upgrades during 1986-1987, restroom renovations at an unknown date, the addition of gypsum wall board during what appeared to be an upgrade relating to fire safety, and multiple roof renovations and/or repairs. One local resident reported that the City of Chevak started doing minor renovations to the school after it had been acquired by the City in the early 2000's, and there was some evidence that those renovations may have occurred in isolated areas but were never finished. Another resident reported that many of the interior partition walls had been added after the original construction, however, that could not be verified. Four rooms could not be accessed in the building because the doors were locked and keys could not be located.

The building is elevated above grade and supported by glulam beams on top of treated wooden piles. The floor assembly consists of plywood on the bottom, wood and steel floor joists supporting a plywood sheathing and plywood underlayment above, with a poly vapor barrier, and is insulated with fiberglass batts.

The semi-enclosed, dirt floor area (underside) of the building is being used as storage for abandoned appliances and unused building materials, used oil, glycol, demolished building materials, and many other miscellaneous materials. There is also rubbish throughout the majority of the underside of the building.

Floor finishes varied throughout the building with the Gym having a rubber floor over vinyl tile. Restrooms throughout had sheet vinyl. A corridor, storeroom, vestibule, and Cafeteria had vinyl tile. The classrooms and their adjacent corridors were typically carpeted, with all other areas having sheet vinyl or no finish.

Walls throughout typically consisted of wood framed construction and were finished with gypsum wall board. Many areas had “Marlite” or fiber-reinforced plastic (FRP) wall panels, while the Gym had wall carpet up to 8 feet. Portions of the Gym were finished with plywood.

Ceilings throughout the building varied between lay-in ceiling tiles, glued-on ceiling tiles, or gypsum wall board. The Gym was open to the structure above.

The exterior walls of the building had a painted plywood siding with miscellaneous trim pieces, and were insulated with fiberglass batts.

The roof was constructed out of corrugated metal sheets directly on top of plywood over the majority of the building, while the covered entrances had a felt paper between the corrugated metal sheeting and plywood.

The building was heated and ventilated by multiple fuel oil fired furnaces and associated air handling units. The Classrooms had a baseboard heating system that had been partially dismantled, however, the source of heat for that system is unknown.

Building S6- Storage Shed

Building S6 was a storage shed of simple wood framed construction, and was approximately 10' x 15'. One corner of the interior of the shed had gypsum wall board, possibly for a former heating appliance. The remainder of the interior of the shed was constructed of wood. The exterior of the shed had three broken windows and had plywood siding. The roof was constructed out of corrugated metal sheets with a felt paper directly on top of plywood.

C. SAMPLING AND ANALYSIS

1. Asbestos-Containing Materials

The survey included sampling of suspect ACM materials that had not been sampled in prior asbestos surveys, or samples of materials where previous sampling had been inconsistent. The survey relied heavily on previous sampling conducted in other areas of the school. Additional testing of materials pertinent to the project, including asbestos and lead samples was conducted and is included in this report.

The samples were analyzed for the presence of asbestos by polarized light microscopy (PLM), the method of analysis recommended by the U.S. Environmental Protection Agency (EPA) to determine the composition of suspected asbestos-containing materials (EPA method 600/M4-82-020). Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA and the Occupational Safety and Health Administration (OSHA) criteria. Samples that were analyzed to have less than 10% asbestos were "point-counted" by the laboratory for more accuracy. Samples that are listed as having a "Trace by Point Count" had asbestos fibers found in the material, but the fibers were not present at the counting grids. Table 1 in Part D below contains a summary list of the asbestos bulk samples and the applicable results.

The Bulk Asbestos samples were analyzed for asbestos content by International Asbestos Testing Laboratories (IATL), Mt. Laurel, New Jersey a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory and previously by Professional Service Industries, Inc., Pittsburgh Testing Laboratory Division of Anchorage, Alaska, which is also a NVLAP accredited laboratory.

EPA regulations under 40 CFR 763 requires the use of Polarized Light Microscopy (PLM) to determine whether or not a material contains asbestos. While PLM analysis does a good job for most materials, it does have some limitations, both in the size of the fibers that are visible under a standard optical microscope, and because the organic matrix that the fibers are bound within can obscure the fibers. At the discretion of the building inspector and the client, some types of samples may be analyzed or re-analyzed by what is called TEM NOB, or Transmission Electron Microscopy for Non-Friable Organically Bound materials. TEM NOB is the definitive method for determining if asbestos is present, but TEM NOB use is not required by the EPA. TEM NOB analysis was not done for this project.

Field survey data sheets and laboratory reports of the bulk samples are included in Appendix A. Drawings showing sample locations are included as Appendix B.

2. Lead-Containing Materials

Nearly all surfaces in the building were coated with paint and most surfaces had been repainted. EHS-Alaska had previously tested paint throughout the building using a NITON XL309 X-Ray Fluorescence (XRF) lead paint analyzer (Serial # U862NR0666 with software version 5.3). During the September 2017 inspection, EHS-Alaska tested paint throughout the building using an XLp300A X-Ray Fluorescence (XRF) lead paint analyzer (Serial # 81530 with software version 5.2F). Refer to the Lead Paint Screening

Table in Appendix B that identifies the surfaces tested, and the results. All surfaces affected by this project may not have been tested and therefore additional sampling may be required to refute the presence of lead-based paints in child occupied facilities regulated by 40 CFR 745. The Paint Test Locations are shown in Appendix C.

3. Suspect Fungal Growth

The building survey included a limited visual assessment for suspect fungal growth. Water intrusion has been occurring in several areas over the years since the building was vacated and fungal growth was noted on many surfaces throughout the building. No samples of suspect fungal growth were authorized and the use of a moisture meter to verify moisture levels in materials, and an IR camera to look for hidden moisture were not necessary to characterize the building as having a large scale mold issue. Moldy and musty odors were noted throughout and areas with carpet were especially odorous.

D. SURVEY RESULTS

1. Asbestos-Containing Materials

The following Table 1A lists the samples taken in September 2017 throughout the buildings, and the results of the laboratory analysis. Asbestos field survey data sheets and laboratory reports are included as Appendix A. Refer to Appendix C for sample locations.

TABLE 1A

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CV0917-A01	Yellow wall carpet mastic	East side of Gym – Photo 09	None Detected
CV0917-A02	(FT2) Floor tile, 12" x 12" brown & beige streaks; with black mastic	East side of Gym under rubber floor – Photo 10	FT- None Detected; Mastic- 3.3% Chrysotile
CV0917-A03	(FT2) Floor tile, 12" x 12" brown & beige streaks; with black mastic	Entrance into Room 66 – Photo 12	FT- None Detected; Mastic- 2.8% Chrysotile
CV0917-A04	Off-white "hard fitting" insulation	On large elbow leading to floor penetration on south side of Room 61-C – Photo 13	None Detected
CV0917-A05	Off-white "hard fitting" insulation	On vertical pipe run on elbow below valve on south side of Room 61-C – Photo 14	None Detected
CV0917-A06	(SV2) Sheet vinyl, white brown, and grey smear pattern; with brown mastic	Near center of Room 67 – Photo 15	None Detected Both Layers
CV0917-A07	Off-white "hard fitting" insulation	On water pipe elbow inside of pipe chase for Room 64 – Photo 16	None Detected
CV0917-A08	Tan gypsum wall board; with white joint compound; with yellow mastic for FRP wall panel	On east side of Room 57 – Photo 17	None Detected All Layers
CV0917-A09	(SV2) Sheet vinyl, white brown, and grey smear pattern; with brown mastic	Near center of Room 59 – Photo 15	None Detected Both Layers

HAZARDOUS MATERIALS ASSESSMENT

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CV0917-A10	White troweled-on ceiling texture	East side of Corridor 58 – Photo 20	1.9% Chrysotile
CV0917-A11	White troweled-on ceiling texture	Near center of Corridor 57 – Photo 21	2.0% Chrysotile
CV0917-A12	Brown mastic for carpet square	North side of Corridor 58 – Photo 22	None Detected
CV0917-A13	Tan ceiling tile on floor	East side of Corridor 62 – Photo 23	None Detected
CV0917-A14	Grey “hard fitting” insulation	On pipe closest to wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 25	None Detected
CV0917-A15	Grey “hard fitting” insulation	On 2 nd pipe from wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 26	None Detected
CV0917-A16	Grey “hard fitting” insulation	On 3 rd pipe from wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 27	None Detected
CV0917-A17	Grey “hard fitting” insulation	On 4 th pipe from wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 28	None Detected
CV0917-A18	Grey “hard fitting” insulation	On 5 th pipe from wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 29	None Detected
CV0917-A19	Dark brown sink undercoating	On bottom of stainless steel sink on east side of Kitchen – Photo M631	None Detected
CV0917-A20	(ACT1) Acoustic ceiling tile, 12” x 12” with directional fissures and pinholes and tan matrix	Southeast side of Room 31 – Photo M627	None Detected
CV0917-A21	Dark brown “puck” mastic for ACT1	Southeast side of Room 31 – Photo M625	None Detected
CV0917-A22	Grey “hard fitting” insulation	On pipe closest to wall where they turn vertical on east side of Corridor 47 – Photo M620	None Detected
CV0917-A23	Grey “hard fitting” insulation	On 2 nd pipe from wall where they turn vertical on east side of Corridor 47 – Photo M621	None Detected
CV0917-A24	Grey “hard fitting” insulation	On 3 rd pipe from wall where they turn vertical on east side of Corridor 47 – Photo M622	None Detected
CV0917-A25	Grey “hard fitting” insulation	On 4 th pipe from wall where they turn vertical on east side of Corridor 47 – Photo M623	None Detected

HAZARDOUS MATERIALS ASSESSMENT

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CV0917-A26	Tan high temperature wiring insulation	Inside of fluorescent light fixture hanging from ceiling near center of Room 4A – Photo 34	40% Chrysotile
CV0917-A27	Black penetration putty	On refrigerant line penetration thru freezer wall in Kitchen – Photo 36	20% Chrysotile
CV0917-A28	Grey “hard fitting” insulation	On pipe closest to north wall in Kitchen – Photo M643	None Detected
CV0917-A29	Grey “hard fitting” insulation	On pipe 2 nd closest to north wall in Kitchen – Photo M642	None Detected
CV0917-A30	Grey “hard fitting” insulation	On smallest pipe next to north wall in Kitchen – Photo M640	None Detected
CV0917-A31	White joint compound	South wall of Corridor 58 – Photo 45	None Detected
CV0917-A32	Tan gypsum wall board	South wall of Corridor 58 – Photo 46	None Detected
CV0917-A33	White joint compound	West wall of Room 54 – Photo 48	0.5% Chrysotile
CV0917-A34	Grey sealant on air handling unit	At flanged connection between air handling unit and ductwork in Fan Room above Room 24 – Photo 53	None Detected
CV0917-A35	White joint compound	On wall at Fan Room landing next to ladder – Photo 54	1.1% Chrysotile
CV0917-A36	White joint compound	Northeast corner of Room 01 – Photo 55	1.2% Chrysotile
CV0917-A37	White joint compound	On east wall of Fan Room access closet next to Room 40 – Photo 58	Trace Chrysotile
CV0917-A38	White joint compound	East wall of Room 06 – Photo 59	1.5% Chrysotile
CV0917-A39	Yellow wall carpet mastic; with white wall texture	West wall of Corridor 58 – Photo 60	None Detected Both Layers
CV0917-A40	(FT1) Floor tile, 12” x 12” light grey with tan streaks; with black mastic	West side of Room 31 – Photo 61	None Detected Both Layers
CV0917-A41	Grey “hard fitting” insulation	On pipe tee on west side of Room 2A – Photo M657	None Detected
CV0917-A42	Grey “hard fitting” insulation	On pipe elbow on west side of Room 2A – Photo M655	None Detected
CV0917-A43	Black high temperature wiring insulation	Inside of fluorescent light fixture near center of Room 31 – Photo 63	50% Chrysotile

HAZARDOUS MATERIALS ASSESSMENT

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CV0917-A44	Grey sealant on air handling unit	At flanged connection between air handling unit and ductwork in Fan Room above Room 40 – Photo 56	None Detected
CV0917-A45	Grey “hard fitting” insulation	On loose piping under west side of building – Photo 82	None Detected
CV0917-A46	Black felt paper	On loose rolls under west side of building – Photo 82	None Detected
CV0917-A47	Grey gummy window glazing compound	On stored windows under north side of building – Photo 89	15% Chrysotile
CV0917-A48	Black roofing tar	In 5 gallon buckets stored under east side of building – Photo 111	4.1% Chrysotile
CV0917-A49	Grey fluffy material	Under the building near the center – Photo 137	None Detected
CV0917-A50	Black roof patch tar	On ridge vent over Gym – Photo 155	12% Chrysotile
CV0917-A51	Black roof patch tar	On metal screw head on east-west roof near Gym – Photo 156	12% Chrysotile
CV0917-A52	Black roof patch tar	On rooftop vent hood on east-west roof near Gym – Photo 157	3.9% Chrysotile
CV0917-A53	Black roof patch tar	In valley at intersection between east-west roof and easternmost roof – Photo 158	4.2% Chrysotile
CV0917-A54	Black roof patch tar	On fiberglass insulated gooseneck vent on easternmost roof – Photo 159	6.7% Chrysotile
CV0917-A55	Black roof patch tar	On ridge vent on easternmost roof – Photo 160	7.1% Chrysotile
CV0917-A56	Black roof patch tar	At bottom of valley at roof edge – Photo 161	6.8% Chrysotile
CV0917-A57	Black roof felt	Under corrugated metal roofing on vestibule outside of Corridor 58 – Photo 164	None Detected
CV0917-A58	White chalky window glazing compound	On east exterior of Building S6 – Photo 170	None Detected
CV0917-A59	Black roof felt	Under corrugated metal roofing on east side of Building S6 – Photo 172	None Detected
CV0917-A60	Off-white gypsum wall board	From damaged area at northeast corner of Building S6- Photo 167	None Detected
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

Table 1B includes samples taken in December 2000 as part of an assessment for the KSD, and the results of the laboratory analysis. Asbestos field survey data sheets and laboratory reports are included in Appendix A. Refer to Appendix C for sample locations.

TABLE 1B

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CV-A01	Joint compound	Hallway S. of Rm. 46, N. wall	None Detected
CV-A02	2'x4' Lay-in ceiling tile with random ½" fissures and dots (LCT-1)	Hallway S. of Rm. 46, N. wall	None Detected
CV-A03	Wall texture	Hallway S. of Rm. 46, N. wall	None Detected
CV-A04	Hard fitting	Hallway N. of Rm. 58, SE wall	None Detected
CV-A05	Black sink undercoat	Rm. 54	None Detected
CV-A06	Tan FRP mastic	Rm. 41, SW wall	None Detected
CV-A07	Small gray-tan chip pattern sheet vinyl (SV-1)	Rm. 41, SW wall	None Detected
CV-A08	Brown (dark) cove base mastic	Rm. 41, SW wall	None Detected
CV-A09	Wall texture	Rm. 54, SE wall of entrance	None Detected
CV-A10	Dark brown carpet mastic	Rm. 54, base of sink	None Detected
CV-A11	Tan FRP mastic	Hallway NW of Rm. 40, SE wall	None Detected
CV-A12	Joint compound	Hallway NW of Rm. 40, SE wall	None Detected
CV-A13	12"x12" Light gray floor tile with gray streaks and tan mastic (FT-1)	Rm. 17, N. corner	None Detected
CV-A13a	Black sink undercoat	Rm. 50	None Detected
CV-A14	2'x4' Lay-in ceiling with aligned 1 ½" fissures and dots (LCT-3)	Rm. 50, N. corner	None Detected
CV-A15	Tan carpet mastic	Rm. 50 NE wall	None Detected
CV-A16	Brown cove base mastic	Rm. 50 NE wall	None Detected
CV-A17	Wall texture	Rm. 49, SW wall	None Detected
CV-A18	2'x4' Lay-in ceiling tile with aligned 1 ½" fissures and dots	Rm. 49, center	None Detected
CV-A19	Ceiling texture	Rm. 58 center near NE wall	None Detected
CV-A20	Tan chip pattern sheet vinyl with tan mastic (SV-2)	Hallway 57 SW edge at double doors	20% Chrysotile
CV-A21	12"x12" Light gray floor tile with gray streaks and tan mastic	Hallway 57 N. corner by double doors (near locker)	None Detected
CV-A22	Old sheet vinyl beneath FT-1	Hallway 57 N. corner by double doors (near locker)	10% Chrysotile

HAZARDOUS MATERIALS ASSESSMENT

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CV-A23	Tan FRP mastic	Hallway 57 N. corner by double doors (near locker)	NO SAMPLE
CV-A24	Hard fitting	Rm. 61-C SE wall	None Detected
CV-A25	Joint compound	Rm. 66, corner on NW wall	None Detected
CV-A26	Tan chip pattern sheet vinyl	Rm. 12 NW wall	15% Chrysotile
CV-A27	Tan, butterscotch and cream chip pattern sheet vinyl with tan mastic (SV-3)	Rm. 10, doorway to Rm. 11	10% Chrysotile
CV-A28	FT-1 over old floor tile	Rm. 8 doorway	None Detected
CV-A29	Heavy ceiling texture	Rm. 6 center	None Detected
CV-A30	Heavy ceiling texture	Rm. 4-A above doorway	None Detected
CV-A31	Tan carpet mastic over old black mastic	Rm. 4 S. corner	None Detected (analyzed as one layer)
CV-A32	Brown cove base mastic	Rm. 4, S. corner	None Detected
CV-A33	Joint compound	Hallway SW of Rm. 4, NE wall	None Detected
CV-A34	Gypsum wallboard	Hallway SW of Rm. 4, NE wall	None Detected
CV-A35	Tan marlite mastic	Hallway SW of Rm. 4, NE wall	None Detected
CV-A36	2'x4' Lay-in ceiling tile with random ½" fissures and dots	Hallway SW of Rm. 4, NE wall	None Detected
CV-A37	Hard fitting	Pipe chase in Rm. 59	None Detected
CV-A38	2'x4' Lay-in ceiling tile with random ½" fissures and dots	Rm. 43 center	None Detected
CV-A39	Wall texture	Rm. 43, just W. of door	None Detected
CV-A40	Joint compound	Rm. 43, just W. of door	None Detected
CV-A41	Tan, butterscotch and cream chip pattern sheet vinyl	Rm. 43 just E. of door	10% Chrysotile
CV-A42	Black sink undercoat	Rm. 37, NE wall	None Detected
CV-A43	Joint compound	Rm. 37, NE wall	None Detected
CV-A44	Heavy ceiling texture	Rm. 33 center	None Detected
CV-A45	Brown cove base mastic	Rm. 40, W. corner	None Detected
CV-A46	12"x12" Shotgun pattern glued-on ceiling tile with 1 ½" fissures (GCT-1)	Rm. 31 ceiling SW of light enclosures	None Detected
CV-A47	Brown glued-on ceiling tile mastic	Rm. 31 ceiling SW of light enclosures	None Detected
CV-A48	Joint compound	Rm. 31 ceiling SW of light enclosures	Trace <1% Chrysotile
CV-A49	Joint compound	Rm. 46, W. corner	None Detected
CV-A50	Tan carpet mastic	NE gym wall	None Detected
CV-A51	Wall texture	Rm. 15 E. corner	None Detected

HAZARDOUS MATERIALS ASSESSMENT

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CV-A52	Wall texture	Rm. 2A, N. corner	None Detected
CV-A53	Wall texture	S. corner of step in Rm. 31	None Detected
CV-A54	12"x12" Light gray floor tile with gray streaks and black mastic	Rm. 31, NE of Rm. 48	None Detected
CV-A55	12"x12" Light gray floor tile with gray streaks and black mastic	Rm. 31, SW of Rm. 12	None Detected
CV-A56	12"x12" Orange and rust medley floor tile with black mastic (FT-2)	Doorway to Rm. 66	Tile-None Detected Mastic-4% Chrysotile
CV-A57	Tan chip pattern sheet vinyl	Rm. 65, S. corner	None Detected
CV-A58	VOID		
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

Table 1C includes samples taken in June 1988 as part of the original AHERA inspections at the school site, and the results of the laboratory analysis. Asbestos field survey data sheets and laboratory reports are included in Appendix A. Refer to Appendix C for sample locations.

TABLE 1C

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CK-S-1	Cream colored gypsum wall board	Woodshop	None Detected
CK-S-2	Beige 2' x 4' ceiling tile	Woodshop	None Detected
CK-S-2A	Brown/white 2' x 4' ceiling tile	Woodshop	None Detected
CK-S-3	White wainscot	Woodshop	None Detected
CK-S-3A	White wainscot	Woodshop	None Detected
CK-S-4	Beige/white/orange linoleum	Home Economics	40% Chrysotile
CK-S-5	Light brown/yellow/cream linoleum	Kitchen	30% Chrysotile
CK-S-6	Light grey TSI insulation	Kitchen	None Detected
CK-S-6A	Grey TSI insulation	Kitchen	None Detected
CK-S-6B	White/yellow TSI insulation	Kitchen	None Detected
CK-S-6C	Grey TSI insulation	Kitchen, lab report lists this sample as "QC" but those results could not be located	None Detected
CK-S-7	Black and white flex gasket	Above Kitchen	None Detected
CK-S-8	Brown and white 12" x 12" ceiling tile	Room 08	None Detected
CK-S-9	Beige/white linoleum	Location not specified	None Detected

HAZARDOUS MATERIALS ASSESSMENT

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
CK-S-10	Yellow/cream/various colors of carpet mastic mixture	Room 54	None Detected
CK-S-11	Blue/white linoleum	Room 33	30% Chrysotile
CK-S-12	Cream/brown wainscot	Room 59	None Detected
N/A	Black insulation	Under School	None Detected
N/A	Metalbestos pipe	Under School	None Detected
N/A	Transite pipe	In Utilidor	85% Chrysotile
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

The following materials have been found to contain asbestos in this or previous surveys, or were assumed to contain asbestos.

1. Gypsum wall board systems (walls, ceilings, soffits, etc.) with asbestos-containing joint compound (confirmed asbestos).
2. Asbestos-containing troweled-on ceiling textures (confirmed asbestos).
3. Various colors and patterns of asbestos-containing sheet vinyl (confirmed asbestos).
4. Asbestos-containing black floor tile mastic (confirmed asbestos).
5. Asbestos-containing high temperature wiring insulation (confirmed asbestos).
6. Asbestos-containing putty on refrigerant line penetrations (confirmed asbestos).
7. Asbestos-containing roof patching tars (confirmed asbestos).
8. Asbestos-containing window putties on older stored windows (confirmed asbestos).
9. Asbestos-containing "Transite" piping (confirmed asbestos).
10. Loose vermiculite insulation on the ground under the building (assumed asbestos).

The following materials have been found to be asbestos-free in this or previous surveys, but is not to be considered a complete list of asbestos-free materials.

- "Hard and chalky" pipe fitting insulation.
- All sizes and patterns of lay-in or glued-on ceiling tiles.
- Carpeting mastics.
- "Marlite", FRP, and wall carpet mastics.

The effects of the above asbestos-containing materials on future projects are discussed below.

Gypsum Wall Board with Asbestos-containing Joint Compound

Gypsum wall board systems (walls, ceilings, soffits, etc.) with asbestos-containing joint compound were identified in the building. The exact extent of the material is unknown, and due to the lack of record drawing information or other historical data, all gypsum wall board systems in the building are assumed to be asbestos-containing. The contractor has the option to conduct extensive surface by surface testing to "prove" that some walls were installed at a later date and do not have asbestos-containing joint compound. The joint compound was generally in good condition with areas of damage due to water or vandalism. Joint compound is not considered friable but may become friable if damaged. The EPA considers gypsum wallboard with asbestos-containing joint compound a "wall system" and allows composite sampling of the joint compound and gypsum board. Since no asbestos was detected in any of the gypsum board, it is likely that the composite samples would contain <1% asbestos and the "system" would therefore not be considered an asbestos-containing material (for purposes of disposal only). Removal of gypsum wall board with asbestos-containing joint compound is regulated by OSHA. The gypsum wallboard with asbestos-containing joint compound must be removed as an asbestos-containing material, but may be disposed of as general demolition debris both if allowed by the disposal site, and if the contractor performs composite sampling which shows the "wall system" contains <1% asbestos.

Troweled-on Ceiling Texture

An asbestos-containing troweled-on ceiling texture was identified in isolated areas of the building. The material was generally in good condition with isolated areas of damaged due to water or vandalism and is considered friable. The textured material is classified as a Regulated Asbestos Containing Material.

Sheet Vinyl

Two types of asbestos-containing sheet vinyl were identified in the building. The sheet vinyl was hidden by newer floor tiles some areas. The sheet vinyl was typically in good condition. Sheet vinyl is classified as a category I non-friable material, but it may become friable during removal which would then change its classification to a regulated asbestos-containing material (RACM).

Black Floor Tile Mastic

An asbestos-containing black floor tile mastic was identified under the floor tiles in the Gym. The floor tiles are concealed by a plywood subfloor and rubber flooring material. No asbestos was detected in the floor tiles, but they are assumed to be contaminated by the asbestos-containing black mastic. The mastic was in good condition and is classified as a category II non-friable material.

High Temperature Wiring Insulation

Asbestos-containing high temperature wiring insulation was identified in light fixtures throughout the building. The wiring insulation was in good condition and is classified as a category II non-friable material.

Penetration Putty

Asbestos-containing black penetration putty was identified on the refrigerant line penetrations inside of the walk-in freezer in the Kitchen. The material was in good condition and is not friable and is classified as a category II non-friable material.

Roof Patching Tars

Asbestos-containing roof patching tars were identified on the ridge vents, at equipment penetrations (including on the equipment), screw heads, and in loose buckets under the building. These materials are not considered friable and are classified as a Category I non-friable material.

Window Putties

Asbestos-containing window glazing compounds were identified on older loose windows under the building. The windows did not appear to have been originally installed at the building and are assumed to have been stored there after being removed from a different structure. The window putties were in good condition and are classified as a category II non-friable material.

“Transite” Piping

Asbestos-containing “transite” piping was identified under the building loose on the ground. The “transite” appeared to be in good condition and is not considered friable and is classified as a category II non-friable material, but it may become friable if damaged which would then change its classification to RACM.

Vermiculite Insulation

Loose-fill vermiculite insulation was identified under the building mixed into the mud and dirt, and in accordance with EPA recommendations, is assumed to contain asbestos. This material was not identified anywhere in the building or in the underfloor soffit space under the building which was accessible due to missing plywood sheets. Previous reports indicate that another school building was in the same location which was demolished to make the current building. The vermiculite may have come from that other structure. Vermiculite is considered friable and is classified as RACM.

2. Asbestos in Dusts

The settled and concealed dusts were examined by an EPA Certified Building Inspector but no samples for asbestos in dusts were authorized for this project. Based on their visual inspection and experience from similar buildings, the inspector determined that the typical settled and concealed dusts are not “asbestos debris” from an asbestos-containing building material (ACBM). Based on similar sampling from similar buildings, the inspector also determined that the dusts are unlikely to contain more than one percent (1%) asbestos by weight, and therefore are not an asbestos-containing material (ACM). There were areas of “asbestos debris” adjacent or below damaged asbestos-containing materials.

3. Lead-Containing Materials

Lead-Testing

EHS-Alaska tested paint and other materials throughout the building using a NITON XRF lead paint analyzer. Lead in paints tested varied from a trace amount to 0.5 mg/cm². Lead in other materials tested varied from a trace amount to 0.12 mg/cm². Refer to the Lead Paint Screening Table in Appendix B that identifies the surfaces tested, and the results. The Paint Test Locations are shown in the Drawings in Appendix C.

Paints

There were varying lead contents found in the paints, based on what surfaces they are on, with most surfaces containing little lead (but are still classified as lead-containing materials by OSHA). The highest levels of lead were found on painted “Marlite” wall panels, with lower levels on walls and other painted surfaces, and lowest levels on pre-finished materials.

Lead based paints (paint containing more than 1.0 mg/cm² of lead) were not identified in the building. Lead was detected at very low levels in most of the painted floor, wall and ceiling surfaces. Low levels of lead found by XRF testing does not mean that the paints are free of lead, the paints may contain lead. However, these paints may not present a hazard to occupants or workers performing renovation or demolition if lead-safe work practices are followed.

Ceramic Wall Tile and Glazing

Only traces amounts of lead were found in the ceramic fixtures tested. The concentrations of lead in ceramic glazing compounds should not be compared to lead-based paint criteria, as the glazing is inherently less likely to cause lead to be present in dusts or on surfaces, where it can be ingested. Lead in ceramic tile glazing may not pose a hazard to occupants, or workers performing renovation or demolition if lead-safe work practices are followed. All ceramic fixtures in the facility should be assumed to contain lead.

Plastic Components

Low concentrations of lead were found in plastic components, such as the FRP wall panels. The concentrations of lead in plastic compounds should not be compared to lead-based paint criteria. Lead in plastic compounds may have surface deterioration and if not cleaned regularly, lead may be present in dusts or on surfaces, where it can be ingested. Lead in plastic compounds may not pose a hazard to occupants, or workers performing renovation or demolition if good work practices are followed.

Metallic Lead in Batteries, Pipe Solder and Flashing

Metallic lead items identified in the building included lead solder at copper piping, poured lead sealants at bell and spigot joints of waste and vent piping, lead acid batteries in emergency lights and other battery backup equipment, and older cathode-ray computer monitors with lead components. If removed during renovation or demolition they should be recycled or disposed of as hazardous waste.

4. PCB-Containing Materials

Light Ballasts

Older fluorescent lights typically have PCB-containing ballasts. PCB-containing ballasts in fluorescent lights were banned in 1978, but manufacturers were allowed to use up existing stocks, and lights may have been reused from other facilities. The survey included examination of what were considered to be representative light fixtures, but not all fixtures were able to be accessed. All lights shall be inspected during removal or relocation. Unless ballasts were marked "No PCBs," they must be assumed to contain PCBs and must be disposed of as a hazardous waste when removed for disposal. Fluorescent light fixtures with PCB-containing ballasts were found in the building.

Older HID lights may have PCB-containing ballasts. Due to height restrictions and sealed ballast enclosures, the HID fixtures were not able to be accessed. All HID lights shall be inspected during removal or relocation. If ballasts are not marked "No PCBs," we suggest contacting the manufacturer of the lights to determine if the ballasts contain PCB's, or assume that they contain PCB's and be disposed of as a hazardous waste.

Bulk Products

Some older paints, sealants and other building materials may contain measurable amounts of PCB's. PCB use in paints and sealants was supposed to have been discontinued in 1979. The EPA does not require the sampling of bulk products, and no sampling of "Bulk Products" were authorized for this project.

5. Mercury-Containing Materials

Fluorescent Lamps

Fluorescent lamps use mercury to excite the phosphor crystals that coat the inside of the lamp. These lamps contain from 15 to 48 milligrams of mercury depending on their age and manufacturer.

High Intensity Discharge Lamps

High Intensity Discharge (HID) lamps use mercury and sodium vapors in the lamp, and also typically have lead-containing solders at the bases. These lamps contain varying amounts of mercury depending on their age and manufacturer.

All mercury-containing items being removed by any future project are required to be disposed of as hazardous waste or recycled.

6. Other Hazardous Materials

Self-Illuminating Exit Signs

Several radioactive, self-illuminating exit signs and smoke detectors were found in the building. If any radioactive items are removed by any future project, they are required be disposed of as hazardous waste or recycled.

Household Chemicals

Common household chemicals, such as quantities of construction repair materials, acids, paint products, paint thinners, caustics, cleaners, pesticides, herbicides, disinfectants, poisons, printing and photographic chemicals, glycols (antifreeze), floor or furniture wax, furniture or paint strippers, solvents, fuel, new or used lubrication products, wood preservatives, old medications, resins, adhesives were present in the building. These loose containers were present in scattered throughout the inside and underside of the building.

Soil Contamination

The scope of work for EHS-Alaska, Inc. did not include investigation of soils for petroleum or other contaminations.

Refrigerants

Refrigerators and freezers were identified in the inside and underside of the building that may contain ozone depleting refrigerants. Ozone depleting substances (ODS) are regulated by the EPA and must be removed by certified technicians prior to equipment disposal.

Glycol

The existing heating system contains or contained heating system glycol. Portions of the heating system have been drained and miscellaneous open containers of used glycol are present inside and outside of the building. Any glycol removed from the site shall be recovered and properly disposed of, or recycled.

7. Suspect Fungal Growth

The investigation included a visual examination of the building for suspect fungal growth. Based on previous testing and experience, the suspect fungal growth was characterized as mold. Because of the long term water intrusion which had been occurring for over a decade, mainly through the roof and at exterior wall penetrations, it is highly likely that *Stachybotrys* and *Chaetomium* are present.

Seasonal re-wetting of building materials such as ceiling tiles, carpet, wall finishes, wood doors, books, tables and chairs, and sheetrock has resulted in mold growth throughout the building. Those materials which do not contain asbestos or lead, or any other regulated material, should be discarded in the local landfill as there are no special requirements for the disposal of mold contaminated materials. It is highly likely that hidden mold will also be found in wall cavities, under flooring, and in inaccessible spaces.

E. REGULATORY CONSTRAINTS**1. Asbestos-Containing Materials**

The Federal Occupational Safety and Health Administration (29 CFR 1926.1101) and the State of Alaska Department of Labor (8 AAC 61) have promulgated regulations requiring testing for airborne asbestos fibers; setting allowable exposure limits for workers potentially exposed to airborne asbestos fibers; establishing contamination controls, work practices, and medical surveillance; and setting worker certification and protection requirements. These regulations apply to all workplace activities involving asbestos-containing materials.

The EPA regulations, issued as Title 40 of the Code of Federal Regulations, Part 61 (40 CFR 61) under the National Emission Standards for Hazardous Air Pollutants (NESHAP) established procedures for handling ACM during asbestos removal and waste disposal. These regulations required an owner (or the owner's contractor) to notify the EPA of asbestos removal operations and to establish responsibility for the removal, transportation, and disposal of asbestos. It is recommended that clearance sampling which complies with the EPA's Asbestos Hazard Emergency Response Act (AHERA) protocol be required following removal of asbestos-containing materials to document that the asbestos has been properly removed should the building be renovated by a future project.

The EPA regulations, 40 CFR 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), established procedures for handling ACM during removal and disposal. The NESHAP regulations address three categories of ACM in a building being demolished:

1. Friable, or regulated ACM (RACM) which must be removed from a building before the building is demolished
2. Category I non-friable ACM (resilient flooring, asphalt roofing products, packing and gaskets)
3. Category II non-friable ACM (non-friable ACM other than Category I ACM).

If allowed by the disposal site, the EPA allows Category I and II non-friable ACM to remain in a building during demolition if: (1) Category I ACM is not in poor condition and is not friable and (2) the probability is low that Category II ACM will become crumbled, pulverized or reduced to powder during demolition. The condition of the ACM and method of demolition will generally determine if Category I and II non-friable

ACM may be left in the building during demolition. This EPA standard also requires that no visible emissions be generated from the ACM during removal and transportation and does not allow intentional burning of any building containing ACM.

The EPA regulations require an owner (or the owner's contractor) to notify the EPA of asbestos removal operations and to establish responsibility for the removal, transportation, and disposal of asbestos-containing materials.

The disposal of asbestos waste is regulated by the EPA, the Alaska Department of Environmental Conservation, and the disposal site operator. Wastes being transported to the disposal site must be sealed in leak tight containers prior to disposal and must be accompanied by disposal permits and waste manifests.

2. Dusts with Asbestos

Settled and concealed dusts above ceilings, and at other areas that are not routinely cleaned (such as inside ducts and at roofs, etc.) are assumed to have measurable concentrations of asbestos. Based on sampling of similar settled and concealed dusts at similar buildings, those dusts are assumed to contain less than 1 percent asbestos. Normal settled and concealed dusts are distinct and treated differently from debris resulting from damaged asbestos-containing materials.

Background levels of asbestos in dusts for a particular location will depend on many factors, including whether or not asbestos occurs naturally in soils in the area.

Likely sources of asbestos in dusts include natural occurrences of asbestos

The types of asbestos found in settled and concealed dusts often contain actinolite, anthophyllite, and tremolite forms of asbestos which are not commonly found in bulk samples taken of materials from buildings. Those forms of asbestos may come from natural occurrences of asbestos in an outside source, such as rock or ore deposits, which appear to be common in Alaska.

Because the type of disturbance, concentration of asbestos in the dusts, cohesiveness of the dusts and room sizes will change, the airborne asbestos levels expected during the project will depend on the contractor's means and methods of conducting the work. The mere presence of asbestos in the dusts does not necessarily imply that a "hazard" exists which would require the use of specially trained workers to "abate" the "hazard". All dusts will likely be required to be removed from the areas where asbestos-containing materials are being removed (abatement areas) in order to achieve clearances. The dusts in the other areas are to be controlled so as to limit worker exposures and prevent contamination of occupied areas of the building.

There is no established correlation between settled or adhered dusts with measureable concentrations of asbestos and airborne concentrations. The definition in the OSHA regulations of asbestos-containing materials as those materials that contain 1 percent or more asbestos by weight, apply to cohesive materials and not to dusts. The OSHA regulations are essentially "performance based", if workers are exposed above the permissible exposure limits, then all of the requirements in the regulations become effective.

3. Lead-Containing Materials

The EPA Standard 40 CFR 745, Lead-Based Paint Poisoning Prevention in Certain Residential Structures, defines lead-based paint hazards and regulates lead based paint activities in target housing and child-occupied facilities. The requirements of this regulation include training certification, pre-work notifications, work practice standards and record keeping. Areas typically classified as child occupied facilities may include but are not limited to: day care facilities, preschools, kindergarten classrooms, restrooms, multipurpose rooms, cafeterias, gyms, libraries and other areas routinely used by children under 6 years of age. New training requirements for Firms (Contractors) and Renovators (Workers)

became effective on April 22, 2010. The building is not currently believed to be classified as a child occupied facility, therefore the requirements of 40 CFR 745 do not apply.

Federal OSHA (29 CFR 1926.62) and the State of Alaska (8 AAC Chapter 61) have promulgated regulations that apply to all construction work where employees may be exposed to lead. The disturbance of any surfaces painted with lead-containing paint requires lead-trained personnel, personnel protective procedures, and air monitoring until exposure levels can be determined. If initial monitoring verifies that the work practices being used are not exposing workers, monitoring and protection procedures may be relaxed. Experience has shown that some paints in most buildings will contain low concentrations of lead and disturbance of those paints are still regulated under the OSHA lead standard, 29 CFR 1926.62. Low levels of lead found by XRF testing does not mean that the paints are free of lead, the paints may contain lead, and OSHA regulations apply anytime measurable amounts of lead are present in paints.

Settled and concealed dust above ceilings, and at other areas that are not routinely cleaned are assumed to have measurable concentrations of lead. Background levels of lead in dusts for a particular location will depend on many factors, including whether or not engines utilizing leaded gasoline were run in or near a building, and upon the age of the building, and thus the age of the dusts. Because the type of disturbance, quantity of lead dusts, cohesiveness of the dusts and room sizes will change, the airborne lead levels expected during the project will depend on the contractor's means and methods of conducting the work. The mere presence of lead in the dusts does not necessarily imply that a "hazard" exists which would require the use of specially trained workers to "abate" the "hazard".

There is no established correlation between settled or adhered lead dust concentrations and airborne concentrations. The OSHA regulations are essentially "performance based", if workers are exposed above the permissible exposure limits, then all of the requirements in the regulations become effective.

The EPA requires that actual construction or demolition debris that contains lead or lead-containing paint or other heavy metals be tested using the TCLP test to determine if the waste must be treated as hazardous waste. All federal, state and local standards regulating lead and lead-containing wastes are required to be followed during the renovation or demolition of portions of this building.

There are no hazardous waste landfills in Alaska and the lead-containing wastes (if shown to be hazardous waste) will have to be packaged for shipping and disposal. This report assumes that disposal will take place in Seattle or elsewhere in the Pacific Northwest.

4. PCB-Containing Materials

The EPA has promulgated regulations (40 CFR Part 761) that cover the proper handling and disposal of PCB-containing materials. PCB-containing equipment was found by this survey, and any removed PCB-containing equipment is required to be disposed of at fully permitted hazardous waste facilities. The EPA regulates liquid PCBs differently from non-liquid materials. Workers who remove or handle PCB-containing or PCB-contaminated materials or who transport or dispose of PCB wastes must be trained and certified in hazardous waste operations and emergency response (HAZWOPER) as required by 29 CFR 1910.120 and the State of Alaska Department of Labor (8 AAC 61). The Department of Transportation under 49 CFR Parts 100-199 regulates the marking, packaging, handling and transportation of hazardous materials. All federal, state and local standards regulating PCBs and PCB waste must be followed during this project.

5. Mercury-Containing Materials

Thermostats and mercury-containing lamps are classified by the EPA as Universal Wastes. The EPA encourages that all Universal Wastes be recycled in accordance with 40 CFR 273. Mercury and mercury-containing products are considered hazardous waste if TCLP testing of the waste for mercury confirms the mercury content to be greater than the EPA criteria of 0.2 mg/l.

6. Other Hazardous Materials

Refrigerants

Refrigerators and freezers were present in the inside and underside of the building. Typically, refrigeration systems with ODS shall be maintained in order to prevent discharge of ODS. Systems that are to be removed, or dismantled shall have refrigerants containing ODS recovered and disposed of or recycled in accordance with 40 CFR 82.

Chemical Hazards

The EPA has promulgated regulations (40 CFR Parts 260 to 299 amongst others) that cover the proper handling and disposal of waste chemicals, including listed wastes, which are ignitable, corrosive, reactive, toxic, or an acute hazardous waste or wastes that exhibit the characteristics of toxicity. All construction workers who are required to remove or handle chemical hazards or to transport or dispose of chemical wastes shall be trained and certified as required by the U.S. Department of Labor (29 CFR 1910.120) and the State of Alaska Department of Labor (8 AAC 61). Transportation of chemical hazards are regulated by Department of Transportation regulations under 49 CFR Parts 171 to 178 amongst others.

Radioactive Materials

Self-luminous products that contain Tritium, Krypton-85, or Promethium-147 are considered radioactive. There are special disposal requirements for products that contain Tritium, Krypton-85, or Promethium-147 that are generally licensed. Data from the Nuclear Regulatory Commission (NRC) indicates that most all Tritium powered exit signs are generally licensed and therefore must be disposed of at a licensed disposal facility or returned to the manufacturer/distributor for disposal. Licensed radioactive products are regulated by Nuclear Regulatory Commission standard 10 CFR 20 and 10 CFR 32. There are no licensed disposal facilities for radioactive wastes in Alaska.

7. Suspect Fungal Growth

Molds are found in virtually every environment and can be detected, indoors and outdoors, year round. Molds reproduce by means of tiny spores, which are extremely small and usually not visible to the naked eye. Mold spores spread by floating through outdoor and indoor air. Outdoors, molds play a part in nature by breaking down organic matter such as fallen leaves and dead trees. Mold may begin growing indoors when mold spores land on surfaces that are wet. Although there are thousands of types (genus-species) of molds, a relatively small number account for most indoor and water damage situations. Some mold are considered worse (more allergenic or toxic) than others. The most "common" mold *Cladosporium* is widespread inside and outside and is typically not considered as bad as some other molds. The wet "black" molds *Stachybotrys* and *Chaetomium* often occur on sheetrock and are considered problem molds. They have large spores and tend not to occur at high levels in the air unless disturbed. They require very damp conditions for growth. The most common "problem" molds are *Aspergillus-Penicillium*. They are considered "opportunistic" molds and require only moderately damp conditions for growth. They have very small spores which easily become airborne.

Currently, there are no federal standards or recommendations for acceptable exposures to airborne concentrations of mold or mold spores. Research on the health effects of mold exposure is ongoing. According to the Occupational Safety and Health Administration (OSHA), most typical indoor air exposures to mold do not present a risk of adverse health effects. Molds can cause adverse effects by producing allergens (substances that can cause allergic reactions). For those people who are sensitive to molds, exposure can cause symptoms such as nasal stuffiness, eye irritation, wheezing, or skin irritation. Severe reactions may occur among workers exposed to large amounts of molds in occupational settings, such as farmers working around moldy hay. Severe reactions may include fever and shortness of breath. Potential health concerns as well as building damage are important reasons to prevent mold growth and to remediate existing problem areas. The advice of a medical professional should always be sought if there are any emerging health issues.

Since mold spores are ever-present in the environment, it is virtually impossible to make a building mold-free. The goal of any remediation effort is to remove the mold "growth" after ensuring all moisture

intrusion problems have been corrected. Workers who may disturb mold spores should use good work practices and follow the guidelines in IICRC S520, Standard and Reference Guide for Professional Mold Remediation and the ASTM D7338 Standard Guide for Assessment of Fungal growth in Buildings.

F. ESTIMATED HAZARDOUS MATERIALS QUANTITIES

The following table summarizes the asbestos-containing materials and other hazardous materials that have been identified in building S1. No asbestos-containing materials were found in building S6.

Material	Content	Location	Estimated Quantity
Asbestos-Containing Materials in Building S1			
Gypsum board systems with asbestos-containing joint compound	Chrysotile	Throughout	60,000 Square Feet
Troweled-on ceiling textures	Chrysotile	Interior, varies	2,600 Square Feet
Various colors and patterns of sheet vinyl	Chrysotile	Interior, varies	4,600 Square Feet
Black floor tile mastic	Chrysotile	Gym	5,875 Square Feet
High temperature wiring insulation in light fixtures	Chrysotile	Throughout	500 Light fixtures
Refrigerant line penetration putty	Chrysotile	Walk-in freezer in Kitchen	3 Each Penetrations
Roof patching tars	Chrysotile	Roof and under building	37,100 Square Feet of roofing and 5 Each loose 5-gallon buckets
Window putties	Chrysotile	Under building	50 Cubic Feet
"Transite" piping	Chrysotile	Under building	50 Linear Feet
Loose-fill vermiculite insulation	Assumed	Under building	5,500 Square Feet of ground area
Lead-Containing Materials in Building S1			
Paints and Ceramic	Lead	Throughout interior	1 Lot
Lead-acid batteries in exit signs and other battery backup equipment	Lead	Throughout interior	40 Each
Loose automotive type lead-acid batteries	Lead	Exterior	10 Each
Older computer monitors	Lead	Throughout interior	30 Each
PCB-Containing Materials in Building S1			
Fluorescent light ballasts	PCB	Throughout interior	500 Each
HID light ballasts	PCB	Throughout exterior and Gym	28 Each
Mercury-Containing Materials in Building S1			
Fluorescent Bulbs	Hg	Throughout interior	1,450 Each
Compact Fluorescent Bulbs	Hg	Throughout interior	18 Each
HID Light Bulbs	Hg	Throughout exterior and Gym	28 Each

Material	Content	Location	Estimated Quantity
Other Potential Hazardous Materials in Building S1			
Refrigeration equipment with ODS	ODS, varies	Interior and under building	2 Each inside and 15 each under building
Self-illuminating exit signs	Tritium	Throughout interior	15 Each
Heating system glycol	Glycols	Interior and exterior	1 Lot
Miscellaneous stored chemicals	Varies	Interior and exterior	1 Lot

G. RECOMMENDATIONS

Disposal of hazardous materials is often difficult and expensive in Rural Alaska. It is possible to obtain a one-time permit to dispose of non-friable, non-RACM asbestos materials from the Alaska Department of Environmental Conservation, however that process is neither fast nor inexpensive, and is highly dependent on getting permission for an asbestos monofill from a landowner, and may not be financially feasible at many locations. Because Chevak receives barge services, it is likely to be less expensive to barge out asbestos materials. Lead-containing materials, if they are not also asbestos-containing materials are often possible to dispose of locally, but in general, painted materials, with lead at measurable concentrations, are not allowed to be burned. Lead-containing materials which have been classified as hazardous waste, and chemical hazards are required to be disposed of at permitted landfills, which will require air freight or barge for disposal.

1. Asbestos-Containing Materials

The asbestos-containing materials identified in the building are typically in intact condition and are classified as both friable and non-friable ACM. All asbestos-containing materials that will be disturbed by the planned renovation work are required to be removed by trained asbestos workers.

2. Dusts with Asbestos

Dusts with measurable concentrations of asbestos are assumed to be present, but are not classified as asbestos-containing materials, or as debris from asbestos-containing materials. Workers disturbing dusts are required to have hazard communication training in accordance with OSHA regulations, but are not required to receive 40 hours of training, which is required for asbestos workers. The contractor will need to choose means and methods to control worker exposures to airborne contaminants. At least an initial exposure assessment or data from previous air monitoring is needed to show that worker exposures are maintained below the OSHA permissible exposure limits (PELs).

3. Lead-Containing Materials

Federal OSHA (29 CFR 1926.62) and the State of Alaska (8 AAC Chapter 61) have promulgated regulations that apply to all construction work where employees may be exposed to lead, including disturbance of paints with low concentrations of lead.

Worker exposure to lead may be able to be controlled below the OSHA permissible exposure limit if proper engineering controls and procedures are used during renovation. Lead is a potentially hazardous waste and the EPA requires that all wastes that contains lead be tested to determine if they must be treated as hazardous waste. A TCLP test of the waste stream(s) produced by the Contractor's means and methods are required to be performed to determine if those wastes will be hazardous or non-hazardous.

4. PCB-Containing Materials

PCB-containing ballasts scheduled for removal will need to be removed, handled, packaged and disposed of in accordance with all regulations.

5. Mercury-Containing Materials

Mercury-containing materials scheduled for removal will need to be removed, handled, packaged and disposed of in accordance with all regulations. If mercury-containing lamps and thermostats are handled and disposed of in accordance with the Universal Waste Regulations, no TCLP test is required. If the Contractor chooses to perform a TCLP test of fluorescent lamps, the test shall be conducted in accordance with the requirements of ANSI/NEMA Standard Procedure for Fluorescent Lamp Sample Preparation and Toxicity Characteristic Leaching Procedure, C78.LL 1256-2003 or latest version.

6. Other Hazardous Materials

Radioactive materials scheduled for removal will need to be removed, handled, packaged and disposed of in accordance with all regulations.

Refrigeration units with ODS scheduled for removal will need to be removed, handled, packaged and disposed of in accordance with all regulations.

The common household chemicals shall be properly disposed of in accordance with all regulations and the requirements of the disposal site. These chemicals may alternatively be utilized or recycled by the contractor.

7. Suspect Fungal Growth

EPA guide EPA 402-K-01-001, Mold Remediation in Schools and Commercial Buildings, sets forth recommendations regarding mold remediation and worker protection. It is recommended that an experienced, qualified contractor be hired to perform the work at the site in accordance with this guide, amongst other publications regarding mold remediation.

H. LIMITATIONS

The conclusions and recommendations contained in this report are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted environmental consulting and engineering standards and practices and are subject to the following inherent limitations:

1. Accuracy of Information

The laboratory reports utilized in this assessment were provided by the accredited laboratories cited in this report. Although the conclusions, opinions, and recommendations are based in part, on such information, our services did not include the verification of accuracy or authenticity of such reports. Should such information provided be found to be inaccurate or unreliable, EHS-Alaska, Inc. reserves the right to amend or revise its conclusions, opinions, and/or recommendations.

2. Site Conditions

This limited survey did not include investigation of the entire site and may not be valid outside the survey area. The intent of this survey was to identify common hazardous materials that may be disturbed during future renovation or demolition projects. This survey is not intended to be utilized as the sole design document for abatement. This survey was conducted while the site was occupied. All inspections were performed with furniture, equipment and/or stored items in place. The scope of work for this survey did not include identification of all potentially hazardous materials that may be present at this site, and was

limited to the scope of work agreed upon with our client. Although a concerted effort was made to identify those common hazardous materials likely to be affected by this project, some hazardous materials may have been hidden by furniture, equipment or stored items and may not have been identified. The survey investigated representative materials and items, such as lights and mechanical components. Variations may occur between materials and items that appear to be the same, but are actually of different construction or materials. Other asbestos-containing or potentially hazardous materials may be present in the facilities that were concealed by structural members, walls, ceilings or floor coverings, or in materials where testing was not conducted.

3. Changing Regulatory Constraints

The regulations concerning hazardous materials are constantly changing, including the interpretations of the regulations by the local and national regulating agencies. Should the regulations or their interpretation be changed from our current understanding, EHS-Alaska, Inc. reserves the right to amend or revise its conclusions, opinions, and/or recommendations.

APPENDIX A

Asbestos Bulk Sample Field Survey Data Sheets and Laboratory Reports



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PROJECT NO: 7559-01	PROJECT NAME: Chevak BIA Hazmat Survey, S1 and S6	FACILITY: S1- Old School and S6- Shed to south	COLLECTION DATE: 09/05/2017
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CHAIN OF CUSTODY RECORD

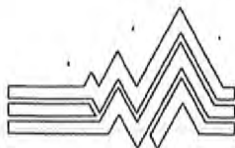
ANALYSIS REQUESTED:	☒ PLM BULK ☐ LEAD DUST ☐ TEM MICROVAC DUST (ASTM 5756)	☐ PLM DUST ☐ LEAD TCLP	☐ TEM BULK ☐ LEAD PPM	TYPE: ☒ ASBESTOS ☐ LEAD	TURNAROUND: 3 DAY	DISPOSAL: NORMAL	QUANTITY: 60
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COLLECTED BY (signature) Christopher Ottosen PRINTED NAME 20110972/TBI4-117-10505 CERT# / AHERA# Fed Ex SHIPPING METHOD 7702 0784 9373 COURIER (signature) 09/08/2017 11:00 AM DATE/TIME	IATL SELECTED LABORATORY SAMPLES ACCEPTED BY DATE/TIME SEP 11 2017 ANALYST'S SIGNATURE DATE SEP 11 2017	SPECIAL INSTRUCTIONS / COMMENTS: LAB: RETURN A SIGNED COPY OF THIS FORM WITH THE FINAL REPORT TO EHS-ALASKA, INC. **DO NOT ANALYZE FOAM, PAINTS, OR WOOD** See sample location drawing for more detailed explanation of exact locations. V&S 9/15/17 ND= None Detected 09/18/17
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FIELD SURVEY DATA

EHS SAMPLE NO. LAB ID NO	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS FOR EHS-ALASKA USE ONLY
CV0917-A01 6339473	Yellow wall carpet mastic	East side of Gym – Photo 09	ND
CV0917-A02	(FT2) Floor tile, brown & beige streaks; with black mastic	East side of Gym under rubber floor – Photo 10	FT-ND; Mastic-3.3% Chrysotile
CV0917-A03 6339474	(FT2) Floor tile, brown & beige streaks; with black mastic	Entrance into Room 66 – Photo 12	FT-ND; Mastic-2.8% Chrysotile
CV0917-A04 6339475	Off-white "hard fitting" insulation	On large elbow leading to floor penetration on south side of Room 61-C – Photo 13	ND
CV0917-A05 6339476	Off-white "hard fitting" insulation	On vertical pipe run on elbow below valve on south side of Room 61-C – Photo 14	ND
CV0917-A06 6339477	(SV2) Sheet vinyl, white brown, and grey smear pattern; with brown mastic	Near center of Room 67 – Photo 15	ND Both Layers
CV0917-A07 6339478	Off-white "hard fitting" insulation	On water pipe elbow inside of pipe chase for Room 64 – Photo 16	ND
CV0917-A08 6339479	Tan gypsum wall board; with white joint compound; with yellow mastic for FRP wall panel	On east side of Room 57 – Photo 17	ND All Layers
CV0917-A09 6339480	(SV2) Sheet vinyl, white brown, and grey smear pattern; with brown mastic	Near center of Room 59 – Photo 15	ND Both Layers

6339481



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PROJECT NO: 7559-01	PROJECT NAME: Chevak BIA Hazmat Survey, S1 and S6	FACILITY: S1- Old School and S6- Shed to south	COLLECTION DATE: 09/05/2017
FIELD SURVEY DATA			
EHS SAMPLE NO. LAB ID NO	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS FOR EHS-ALASKA USE ONLY
CV0917-A10 6339482	White troweled-on ceiling texture	East side of Corridor 58 – Photo 20	1.9% Chrysotile
CV0917-A11 6339483	White troweled-on ceiling texture	Near center of Corridor 57 – Photo 21	2.0% Chrysotile
CV0917-A12 6339484	Brown mastic for carpet square	North side of Corridor 58 – Photo 22	ND
CV0917-A13 6339485	Tan ceiling tile on floor	East side of Corridor 62 – Photo 23	ND
CV0917-A14 6339486	Grey "hard fitting" insulation	On pipe closest to wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 25	ND
CV0917-A15 6339487	Grey "hard fitting" insulation	On 2 nd pipe from wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 26	ND
CV0917-A16 6339488	Grey "hard fitting" insulation	On 3 rd pipe from wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 27	ND
CV0917-A17 6339489	Grey "hard fitting" insulation	On 4 th pipe from wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 28	ND
CV0917-A18 6339490	Grey "hard fitting" insulation	On 5 th pipe from wall where they penetrate into the ceiling on east side of Corridor 62 – Photo 29	ND
CV0917-A19 6339491	Dark brown sink undercoating	On bottom of stainless steel sink on east side of Kitchen – Photo M631	ND
CV0917-A20 6339492	(ACT1) Acoustic ceiling tile, 12" x 12" with directional fissures and pinholes and tan matrix	Southeast side of Room 31 – Photo M627	ND
CV0917-A21 6339493	Dark brown "puck" mastic for ACT1	Southeast side of Room 31 – Photo M625	ND
CV0917-A22 6339494	Grey "hard fitting" insulation	On pipe closest to wall where they turn vertical on east side of Corridor 47 – Photo M620	ND
CV0917-A23 6339495	Grey "hard fitting" insulation	On 2 nd pipe from wall where they turn vertical on east side of Corridor 47 – Photo M621	ND



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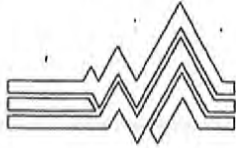
PROJECT NO: 7559-01	PROJECT NAME: Chevak BIA Hazmat Survey, S1 and S6	FACILITY: S1- Old School and S6- Shed to south	COLLECTION DATE: 09/05/2017
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FIELD SURVEY DATA

EHS SAMPLE NO. LAB ID NO	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/REF)	RESULTS FOR EHS-ALASKA USE ONLY
CV0917-A24 6339496	Grey "hard fitting" insulation	On 3 rd pipe from wall where they turn vertical on east side of Corridor 47 – Photo M622	ND
CV0917-A25 6339497	Grey "hard fitting" insulation	On 4 th pipe from wall where they turn vertical on east side of Corridor 47 – Photo M623	ND
CV0917-A26 6339498	Tan high temperature wiring insulation	Inside of fluorescent light fixture hanging from ceiling near center of Room 4A – Photo 34	40% Chrysotile
CV0917-A27 6339499	Black penetration putty	On refrigerant line penetration thru freezer wall in Kitchen – Photo 36	20% Chrysotile
CV0917-A28 6339500	Grey "hard fitting" insulation	On pipe closest to north wall in Kitchen – Photo M643	ND
CV0917-A29 6339501	Grey "hard fitting" insulation	On pipe 2 nd closest to north wall in Kitchen – Photo M642	ND
CV0917-A30 6339502	Grey "hard fitting" insulation	On smallest pipe next to north wall in Kitchen – Photo M640	ND
CV0917-A31 6339503	White joint compound	South wall of Corridor 58 – Photo 45	ND
CV0917-A32 6339504	Tan gypsum wall board	South wall of Corridor 58 – Photo 46	ND
CV0917-A33 6339505	White joint compound	West wall of Room 54 – Photo 48	0.5% Chrysotile
CV0917-A34 6339506	Grey sealant on air handling unit	At flanged connection between air handling unit and ductwork in Fan Room above Room 24 – Photo 53	ND
CV0917-A35 6339507	White joint compound	On wall at Fan Room landing next to ladder – Photo 54	1.1% Chrysotile
CV0917-A36 6339508	White joint compound	Northeast corner of Room 01 – Photo 55	1.2% Chrysotile
CV0917-A37 6339509	White joint compound	On east wall of Fan Room access closet next to Room 40 – Photo 58	Trace Chrysotile

START

Finalized B 9/15/17



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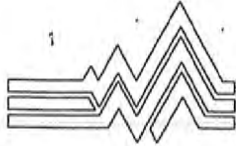
e-mail • ehsak@ehs-alaska.com

PROJECT NO: 7559-01	PROJECT NAME: Chevak BIA Hazmat Survey, S1 and S6	FACILITY: S1- Old School and S6- Shed to south	COLLECTION DATE: 09/05/2017
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FIELD SURVEY DATA

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CV0917-A38 6339510	White joint compound	East wall of Room 06 – Photo 59	1.5% Chrysotile
CV0917-A39 6339511	Yellow wall carpet mastic; with white wall texture	West wall of Corridor 58 – Photo 60	ND Both Layers
CV0917-A40 6339512	(FT1) Floor tile, 12" x 12" light grey with tan streaks; with black mastic	West side of Room 31 – Photo 61	ND Both Layers
CV0917-A41 6339513	Grey "hard fitting" insulation	On pipe tee on west side of Room 2A – Photo M657	ND
CV0917-A42 6339514	Grey "hard fitting" insulation	On pipe elbow on west side of Room 2A – Photo M655	ND
CV0917-A43 6339515	Black high temperature wiring insulation	Inside of fluorescent light fixture near center of Room 31 – Photo 63	50% Chrysotile
CV0917-A44 6339516	Grey sealant on air handling unit	At flanged connection between air handling unit and ductwork in Fan Room above Room 40 – Photo 56	ND
CV0917-A45 6339517	Grey "hard fitting" insulation	On loose piping under west side of building – Photo 82	ND
CV0917-A46 6339518	Black felt paper	On loose rolls under west side of building – Photo 82	ND
CV0917-A47 6339519	Grey gummy window glazing compound	On stored windows under north side of building – Photo 89	15% Chrysotile
CV0917-A48 6339520	Black roofing tar	In 5 gallon buckets stored under east side of building – Photo 111	4.1% Chrysotile
CV0917-A49 6339521	Grey fluffy material	Under the building near the center – Photo 137	ND
CV0917-A50 6339522	Black roof patch tar	On ridge vent over Gym – Photo 155	12% Chrysotile
CV0917-A51 6339523	Black roof patch tar	On metal screw head on east-west roof near Gym – Photo 156	12% Chrysotile

9/15/17



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PROJECT NO: 7559-01	PROJECT NAME: Chevak BIA Hazmat Survey, S1 and S6	FACILITY: S1- Old School and S6- Shed to south	COLLECTION DATE: 09/05/2017
FIELD SURVEY DATA			
EHS SAMPLE NO. LAB ID NO	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS FOR EHS-ALASKA USE ONLY
CV0917-A52 6339524	Black roof patch tar	On rooftop vent hood on east-west roof near Gym – Photo 157	3.9% Chrysotile
CV0917-A53 6339525	Black roof patch tar	In valley at intersection between east-west roof and easternmost roof – Photo 158	4.2% Chrysotile
CV0917-A54 6339526	Black roof patch tar	On fiberglass insulated gooseneck vent on easternmost roof – Photo 159	6.7% Chrysotile
CV0917-A55 6339527	Black roof patch tar	On ridge vent on easternmost roof – Photo 160	7.1% Chrysotile
CV0917-A56 6339528	Black roof patch tar	At bottom of valley at roof edge – Photo 161	6.8% Chrysotile
CV0917-A57 6339529	Black roof felt	Under corrugated metal roofing on vestibule outside of Corridor 58 – Photo 164	ND
CV0917-A58 6339530	White chalky window glazing compound	On east exterior of Building S6 – Photo 170	ND
CV0917-A59 6339531	Black roof felt	Under corrugated metal roofing on east side of Building S6 – Photo 172	ND
CV0917-A60 6339532	Off-white gypsum wall board	From damaged area at northeast corner of Building S6- Photo 167	ND
--END--	--END--	--END--	

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339473
Client No.: CV0917-A01

Description: Yellow Mastic
Facility:

Location: East Side Of Gym

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339474
Client No.: CV0917-A02

Description: Brown Floor Tile
Facility:

Location: East Side Of Gym Under Rubber Floor

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339474(L2)
Client No.: CV0917-A02

Description: Black Mastic
Facility:

Location: East Side Of Gym Under Rubber Floor

Percent Asbestos:
PC 3.3 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
96.7

Lab No.: 6339475
Client No.: CV0917-A03

Description: Brown Floor Tile
Facility:

Location: Entrance To Room 66

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339475(L2)
Client No.: CV0917-A03

Description: Black Mastic
Facility:

Location: Entrance To Room 66

Percent Asbestos:
PC 2.8 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
97.2

Lab No.: 6339476
Client No.: CV0917-A04

Description: Grey Insulation
Facility:

Location: On Large Elbow Leading to Floor
Penetration On South Side Of Room

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

Percent Non-Fibrous Material:
85

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

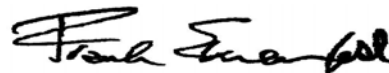
Date Received: 9/11/2017

Date Analyzed: 09/15/2017

Signature:

Analyst: Vane Smith

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339477 Client No.: CV0917-A05	Description: Grey Insulation Facility:	Location: On Vertical Pipe Run On Elbow Below Valve On South Side Of Room 61-C
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> 10 Cellulose 5 Mineral Wool	<u>Percent Non-Fibrous Material:</u> 85

Lab No.: 6339478 Client No.: CV0917-A06	Description: Off-White Vinyl Sheet Flooring Facility:	Location: Near Center Of Room 67
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Lab No.: 6339478(L2) Client No.: CV0917-A06	Description: Brown Mastic Facility:	Location: Near Center Of Room 67
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Lab No.: 6339479 Client No.: CV0917-A07	Description: Grey Insulation Facility:	Location: On Water Pipe Elbow Inside Of Pipe Chase For Room 64
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> 10 Cellulose 5 Mineral Wool	<u>Percent Non-Fibrous Material:</u> 85

Lab No.: 6339480 Client No.: CV0917-A08	Description: Brown/Grey Sheetrock Facility:	Location: On East Side Of Room 57
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> 10 Cellulose	<u>Percent Non-Fibrous Material:</u> 40

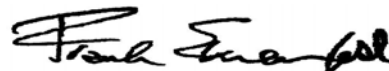
Lab No.: 6339480(L2) Client No.: CV0917-A08	Description: White Joint Compound Facility:	Location: On East Side Of Room 57
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Lab No.: 6339480(L3) Client No.: CV0917-A08	Description: Tan Mastic Facility:	Location: On East Side Of Room 57
<u>Percent Asbestos:</u> None Detected	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/11/2017
Date Analyzed: 09/15/2017
Signature: 
Analyst: Vane Smith

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339481 Client No.: CV0917-A09	Description: Off-White Vinyl Sheet Flooring Facility:	Location: Near Center Of Room 59
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Lab No.: 6339481(L2) Client No.: CV0917-A09	Description: Brown Mastic Facility:	Location: Near Center Of Room 59
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Lab No.: 6339482 Client No.: CV0917-A10	Description: Off-White Texture Facility:	Location: East Side Of Corridor 58
<u>Percent Asbestos:</u> <i>PC 1.9 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 98.1

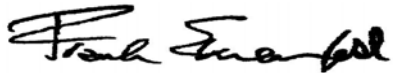
Lab No.: 6339483 Client No.: CV0917-A11	Description: Off-White Texture Facility:	Location: Near Center Of Corridor 57
<u>Percent Asbestos:</u> <i>PC 2.0 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 98

Lab No.: 6339484 Client No.: CV0917-A12	Description: Brown Mastic Facility:	Location: North Side Of Corridor 58
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100

Lab No.: 6339485 Client No.: CV0917-A13	Description: White/Grey Ceiling Tile Facility:	Location: East Side Of Corridor 62
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 45 Cellulose 15 Mineral Wool	<u>Percent Non-Fibrous Material:</u> 40

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/11/2017
Date Analyzed: 09/15/2017
Signature: 
Analyst: Vane Smith

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339486
Client No.: CV0917-A14

Description: Grey Insulation
Facility:

Location: On Pipe Closest To Wall Where They
Penetrate Into The Ceiling On East Side Of Corridor
62

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

Percent Non-Fibrous Material:
85

Lab No.: 6339487
Client No.: CV0917-A15

Description: Grey Insulation
Facility:

Location: On 2nd Pipe From Wall Where They
Penetrate Into The Ceiling On East Side Of Corridor
62

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

Percent Non-Fibrous Material:
85

Lab No.: 6339488
Client No.: CV0917-A16

Description: Grey Insulation
Facility:

Location: On 3rd Pipe From Wall Where They
Penetrate Into The Ceiling On East Side Of Corridor
62

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

Percent Non-Fibrous Material:
85

Lab No.: 6339489
Client No.: CV0917-A17

Description: Grey Insulation
Facility:

Location: On 4th Pipe From Wall Where They
Penetrate Into The Ceiling On East Side Of Corridor
62

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
10 Mineral Wool

Percent Non-Fibrous Material:
80

Lab No.: 6339490
Client No.: CV0917-A18

Description: Grey Insulation
Facility:

Location: On 5th Pipe From Wall Where They
Penetrate Into The Ceiling On East Side Of Corridor
62

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

Percent Non-Fibrous Material:
85

Lab No.: 6339491
Client No.: CV0917-A19

Description: Dk Brown Insulation
Facility:

Location: On Bottom Of Stainless Steel Sink On
East Side Of Kitchen

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/11/2017

Date Analyzed: 09/15/2017

Signature:

Vane Smith III

Analyst: Vane Smith

Approved By:

Frank E. Ehrenfeld, III

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339492
Client No.: CV0917-A20

Description: White/Brown Insulation
Facility:

Location: Southeast Side Of Room 31

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
95 Cellulose

Percent Non-Fibrous Material:
5

Lab No.: 6339493
Client No.: CV0917-A21

Description: Dk Brown Mastic
Facility:

Location: Southeast Side Of Room 31

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339494
Client No.: CV0917-A22

Description: Grey Insulation
Facility:

Location: On Pipe Closest To Wall Where They
Turn Vertical On East Side Of Corridor 47

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

Percent Non-Fibrous Material:
85

Lab No.: 6339495
Client No.: CV0917-A23

Description: Grey Insulation
Facility:

Location: On 2nd Pipe From Wall Where They Turn
Vertical On East Side Of Corridor 47

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

Percent Non-Fibrous Material:
85

Lab No.: 6339496
Client No.: CV0917-A24

Description: Grey Insulation
Facility:

Location: On 3rd Pipe From Wall Where They Turn
Vertical On East Side Of Corridor 47

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

Percent Non-Fibrous Material:
85

Lab No.: 6339497
Client No.: CV0917-A25

Description: Grey Insulation
Facility:

Location: On 4th Pipe From Wall Where They Turn
Vertical On East Side Of Corridor 47

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
5 Mineral Wool

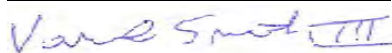
Percent Non-Fibrous Material:
85

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/11/2017

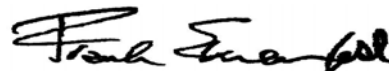
Date Analyzed: 09/15/2017

Signature:



Analyst: Vane Smith

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339498
Client No.: CV0917-A26

Description: Tan Insulation
Facility:
Percent Non-Asbestos Fibrous Material:
30 Synthetic

Location: Inside Of Fluorescent Light Fixture
Hanging From Ceiling Near Center Of Room 4A
Percent Non-Fibrous Material:
30

Percent Asbestos:
40 Chrysotile

Lab No.: 6339499
Client No.: CV0917-A27

Description: Black Putty
Facility:
Percent Non-Asbestos Fibrous Material:
None Detected

Location: On Refrigerant Line Penetration Thru
Freezer Wall In Kitchen
Percent Non-Fibrous Material:
80

Percent Asbestos:
20 Chrysotile

Lab No.: 6339500
Client No.: CV0917-A28

Description: Grey Insulation
Facility:
Percent Non-Asbestos Fibrous Material:
10 Cellulose
10 Mineral Wool

Location: On Pipe Closest To North Wall In Kitchen
Percent Non-Fibrous Material:
80

Percent Asbestos:
None Detected

Lab No.: 6339501
Client No.: CV0917-A29

Description: Grey Insulation
Facility:
Percent Non-Asbestos Fibrous Material:
10 Cellulose
10 Mineral Wool

Location: On Pipe 2nd Closest To North Wall In
Kitchen
Percent Non-Fibrous Material:
80

Percent Asbestos:
None Detected

Lab No.: 6339502
Client No.: CV0917-A30

Description: Grey Insulation
Facility:
Percent Non-Asbestos Fibrous Material:
10 Cellulose
10 Mineral Wool

Location: On Smallest Pipe Next To North Wall In
Kitchen
Percent Non-Fibrous Material:
80

Percent Asbestos:
None Detected

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

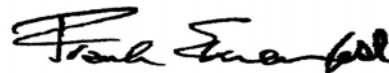
Date Received: 9/11/2017

Date Analyzed: 09/15/2017

Signature:

Analyst: Vane Smith

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339503
Client No.: CV0917-A31

Description: White Joint Compound
Facility:

Location: South Wall Of Corridor 58

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339504
Client No.: CV0917-A32

Description: Tan Sheetrock
Facility:

Location: South Wall Of Corridor 58

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Fibrous Glass

Percent Non-Fibrous Material:
90

Lab No.: 6339505
Client No.: CV0917-A33

Description: White Joint Compound
Facility:

Location: West Wall Of Room 54

Percent Asbestos:
PC 0.5 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
99.5

Lab No.: 6339506
Client No.: CV0917-A34

Description: Grey Sealant
Facility:

Location: At Flanged connection Between Air
Handling Unit And Ductwork In Fan Room Above
Room 24

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339507
Client No.: CV0917-A35

Description: White Joint Compound
Facility:

Location: On Wall At Fan Room Landing Next To
Ladder

Percent Asbestos:
PC 1.1 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
98.9

Lab No.: 6339508
Client No.: CV0917-A36

Description: White Joint Compound
Facility:

Location: Northeast Corner Of Room 01

Percent Asbestos:
PC 1.2 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
98.8

Lab No.: 6339509
Client No.: CV0917-A37

Description: White Joint Compound
Facility:

Location: On East Wall Of Fan Room Access Closet
Next To Room 40

Percent Asbestos:
PC Trace Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

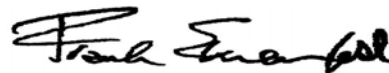
Date Received: 9/11/2017

Date Analyzed: 09/15/2017

Signature:

Analyst: Tom Barkley

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339510
Client No.: CV0917-A38

Description: White Joint Compound
Facility:

Location: East Wall Of Room 06

Percent Asbestos:
PC 1.5 Chrysotile

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
98.5

Lab No.: 6339511
Client No.: CV0917-A39

Description: Yellow Mastic
Facility:

Location: West Wall Of Corridor 58

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339511(L2)
Client No.: CV0917-A39

Description: White Wall Texture
Facility:

Location: West Wall Of Corridor 58

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339512
Client No.: CV0917-A40

Description: Off-White Floor Tile
Facility:

Location: West Side Of Room 31

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339512(L2)
Client No.: CV0917-A40

Description: Black Mastic
Facility:

Location: West Side Of Room 31

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
None Detected

Percent Non-Fibrous Material:
100

Lab No.: 6339513
Client No.: CV0917-A41

Description: Grey Insulation
Facility:

Location: On Pipe Tee On West Side Of Room 2A

Percent Asbestos:
None Detected

Percent Non-Asbestos Fibrous Material:
10 Cellulose
10 Fibrous Glass

Percent Non-Fibrous Material:
80

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

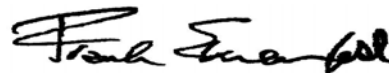
Date Received: 9/11/2017

Date Analyzed: 09/15/2017

Signature:

Analyst: Randy Caran

Approved By:



Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

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11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
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-Shed To South
Project No.: 7559-01

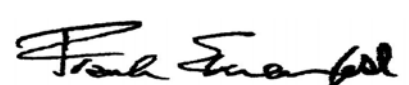
Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339514 Client No.: CV0917-A42	Description: Grey Insulation Facility:	Location: On Pipe Elbow On West Side Of Room 2A
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 10 Cellulose 10 Fibrous Glass	<u>Percent Non-Fibrous Material:</u> 80
Lab No.: 6339515 Client No.: CV0917-A43	Description: Grey/Black Wire/ Wrap Facility:	Location: Inside Of Fluorescent Light Fixture Near Center Of Room 31
<u>Percent Asbestos:</u> <i>50 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 20 Synthetic	<u>Percent Non-Fibrous Material:</u> 30
Lab No.: 6339516 Client No.: CV0917-A44	Description: Grey Caulk Facility:	Location: At Flanged Connection Between Air Handling Unit And Ductwork In Fan Room Above Room 40
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6339517 Client No.: CV0917-A45	Description: Grey Insulation Facility:	Location: On Loose Piping Under West Side Of Building
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 15 Cellulose	<u>Percent Non-Fibrous Material:</u> 85
Lab No.: 6339518 Client No.: CV0917-A46	Description: Black Tar Paper Facility:	Location: On Loose Rolls Under West Side Of Building
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 90 Cellulose	<u>Percent Non-Fibrous Material:</u> 10
Lab No.: 6339519 Client No.: CV0917-A47	Description: Grey Caulk Facility:	Location: On Stored Windows Under North Side Of Building
<u>Percent Asbestos:</u> <i>15 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 85
Lab No.: 6339520 Client No.: CV0917-A48	Description: Black Tar Facility:	Location: In 5 Gallon Bucked Stored Under East Side Of Building
<u>Percent Asbestos:</u> <i>PC 4.1 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 95.9

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/11/2017
Date Analyzed: 09/15/2017
Signature: 
Analyst: Randy Caran

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

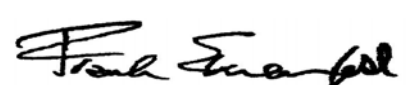
Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339521 Client No.: CV0917-A49	Description: Grey Insulation Facility:	Location: Under The Building Near The Center
<u>Percent Asbestos:</u> <i>None Detected</i>	<u>Percent Non-Asbestos Fibrous Material:</u> 3 Cellulose 12 Fibrous Glass	<u>Percent Non-Fibrous Material:</u> 85
Lab No.: 6339522 Client No.: CV0917-A50	Description: Black Tar Facility:	Location: On Ridge Vent Over Gym
<u>Percent Asbestos:</u> <i>12 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 88
Lab No.: 6339523 Client No.: CV0917-A51	Description: Black Tar Facility:	Location: On Metal Screw Head On East -West Roof Near Gym
<u>Percent Asbestos:</u> <i>12 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 88
Lab No.: 6339524 Client No.: CV0917-A52	Description: Black Tar Facility:	Location: On Rooftop Vent Hood On East-West Roof Near Gym
<u>Percent Asbestos:</u> <i>PC 3.9 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 96.1
Lab No.: 6339525 Client No.: CV0917-A53	Description: Black Tar Facility:	Location: in Valley At Intersection Between East- West Roof And Easternmost Roof
<u>Percent Asbestos:</u> <i>PC 4.2 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 95.8
Lab No.: 6339526 Client No.: CV0917-A54	Description: Black Tar Facility:	Location: On Fiberglass Insulation Gooseneck Vent On Easternmost Roof
<u>Percent Asbestos:</u> <i>PC 6.7 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 93.3
Lab No.: 6339527 Client No.: CV0917-A55	Description: Black Tar Facility:	Location: On Ridge Vent On Easternmost Roof
<u>Percent Asbestos:</u> <i>PC 7.1 Chrysotile</i>	<u>Percent Non-Asbestos Fibrous Material:</u> None Detected	<u>Percent Non-Fibrous Material:</u> 92.9

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/11/2017
Date Analyzed: 09/15/2017
Signature: 
Analyst: Randy Caran

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And S6
-Shed To South
Project No.: 7559-01

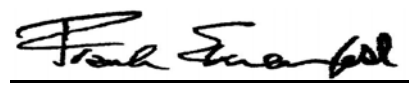
Client: EHS511

PLM BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 6339528 Client No.: CV0917-A56 <u>Percent Asbestos:</u> PC 6.8 Chrysotile	Description: Black Tar Facility: <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: At Bottom Of Valley At Roof Edge <u>Percent Non-Fibrous Material:</u> 93.2
Lab No.: 6339529 Client No.: CV0917-A57 <u>Percent Asbestos:</u> None Detected	Description: Black Fibrous Facility: <u>Percent Non-Asbestos Fibrous Material:</u> 95 Cellulose	Location: Under Corrugated Metal Roofing On Vestibule Outside Of Corridor 58 <u>Percent Non-Fibrous Material:</u> 5
Lab No.: 6339530 Client No.: CV0917-A58 <u>Percent Asbestos:</u> None Detected	Description: White Glazing Facility: <u>Percent Non-Asbestos Fibrous Material:</u> None Detected	Location: On East Exterior Of Building S6 <u>Percent Non-Fibrous Material:</u> 100
Lab No.: 6339531 Client No.: CV0917-A59 <u>Percent Asbestos:</u> None Detected	Description: Black Fibrous Facility: <u>Percent Non-Asbestos Fibrous Material:</u> 95 Cellulose	Location: Under Corrugated Metal Roofing On East Side Of Building S6 <u>Percent Non-Fibrous Material:</u> 5
Lab No.: 6339532 Client No.: CV0917-A60 <u>Percent Asbestos:</u> None Detected	Description: White Sheetrock Facility: <u>Percent Non-Asbestos Fibrous Material:</u> 1 Fibrous Glass	Location: From Damaged Area At Northeast Corner Of Building S6 <u>Percent Non-Fibrous Material:</u> 99

Analytical Method -US EPA 600, R93-116. Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 9/11/2017
Date Analyzed: 09/15/2017
Signature: 
Analyst: Randy Caran

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And
S6-Shed To South
Project No.: 7559-01

Client: EHS511

Appendix to Analytical Report

Customer Contact: EHS Reports
Analysis: US EPA 600, R93-116

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com
iATL Office Manager: cdavis@iatl.com
iATL Account Representative: Cassie Doherty
Sample Login Notes: See Batch Sheet Attached
Sample Matrix: Bulk Building Materials
Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and in our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

This report shall not be reproduced except in full, without written approval of the laboratory.

Information Pertinent to this Report:

Analysis by US EPA 600 93-116: Determination of Asbestos in Bulk Building Materials by Polarized Light Microscopy (PLM).

Certifications:

- NIST-NVLAP No. 101165-0
- NY-DOH No. 11021
- AIHA-LAP, LLC No. 100188

Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analytical Methodology Alternatives: Your initial request for analysis may not have accounted for recent advances in regulatory requirements or advances in technology that are routinely used in similar situations for other qualified projects. You may have the option to explore additional analysis for further information. Below are a few options, listed as the matrix followed by the appropriate methodology. Also included are links to more information on our website.

Bulk Building Materials that are Non-Friable Organically Bound (NOB) by Gravimetric Reduction techniques employing PLM and TEM: ELAP 198.6 (PLM-NOB), ELAP 198.4 (TEM-NOB)

Loose Fill Vermiculite Insulation, Attic Insulation, Zonolite (copyright), etc.: US EPA 600 R-4/004 (multi-tiered analytical process)
Sprayed On Insulation/Fireproofing with Vermiculite (SOF-V): ELAP 198.8 (PLM-SOF-V)>

Soil, sludge, sediment, aggregate, and like materials analyzed for asbestos or other elongated mineral particles (ex. erionite, etc.): ASTM D7521, CARB 435, and other options available

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
11901 Business Blvd., Ste 208
Eagle River AK 99577

Report Date: 9/15/2017
Report No.: 546181 - PLM
Project: Chevak BIA Hazmat Survey, S1-Old School And
S6-Shed To South
Project No.: 7559-01

Client: EHS511

Asbestos in Surface Dust according to one of ASTM's Methods (very dependent on sampling collection technique – by TEM): ASTM D 5755, D5756, or D6480

Various other asbestos matrices (air, water, etc.) and analytical methods are available.

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a list with highlighted disclaimers that may be pertinent to this project. For a full explanation of these and other disclaimers, please inquire at customerservice@iatl.com.

- 1) Note: No mastic provided for analysis.
- 2) Note: Insufficient mastic provided for analysis.
- 3) Note: Insufficient material provided for analysis.
- 4) Note: Insufficient sample provided for QC reanalysis.
- 5) Note: Different material than indicated on Sample Log / Description.
- 6) Note: Sample not submitted.
- 7) Note: Attached to asbestos containing material.
- 8) Note: Received wet.
- 9) Note: Possible surface contamination.
- 10) Note: Not building material. 1% threshold may not apply.
- 11) Note: Recommend TEM-NOB analysis as per EPA recommendations.
- 12) Note: Asbestos detected but not quantifiable.
- 13) Note: Multiple identical samples submitted, only one analyzed.
- 14) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.080%.
- 15) Note: Analyzed by EPA 600/R-93/116. Point Counting detection limit at 0.125%.

Recommendations for Vermiculite Analysis:

Several analytical protocols exist for the analysis of asbestos in vermiculite. These analytical approaches vary depending upon the nature of the vermiculite mineral being tested (e.g. un-processed gangue, homogeneous exfoliated books of mica, or mixed mineral composites). Please contact your client representative for pricing and turnaround time options available.

iATL recommends initial testing using the EPA 600/R-93/116 method. This method is specifically designed for the analysis of asbestos in bulk building materials. It provides an acceptable starting point for primary screening of vermiculite for possible asbestos.

Results from this testing may be inconclusive. EPA suggests proceeding to a multi-tiered analysis involving wet separation techniques in conjunction with PLM and TEM gravimetric analysis (EPA 600/R-04/004).

Further information on this method and other vermiculite and asbestos issues can be found at the following: Agency for Toxic Substances and Disease Registry (ATSDR) www.atsdr.cdc.gov, United States Geological Survey (USGS) www.minerals.usgs.gov/minerals/, US EPA www.epa.gov/asbestos. The USEPA also has an informative brochure "Current Best Practices for Vermiculite Attic Insulation" EPA 747F03001 May 2003, that may assist the health and remediation professional.

The following is a summary of the analytical process outlines in the EPA 600/R-04/004 Method:

- 1) **Analytical Step/Method:** Initial Screening by PLM, EPA 600R-93/116
Requirements/Comments: Minimum of 0.1 g of sample. ~0.25% LOQ for most samples.
- 2) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.
- 3) **Analytical Step/Method:** Wet Separation by PLM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Floats" only.
- 4) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Sinks" only.
- 5) **Analytical Step/Method:** Wet Separation by TEM Gravimetric Technique, EPA R-04/004
Requirements/Comments: Minimum 50g** of dry sample. Analysis of "Suspension" only.

LOQ, Limit of Quantitation estimates for mass and volume analyses.

*With advance notice and confirmation by the laboratory.

**Approximately 1 Liter of sample in double-bagged container (~9x6 inch bag of sample).



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CHAIN OF CUSTODY RECORD/FIELD SURVEY DATA

Page 2 of 6

FIELD COLLECTION DATE: <u>12-20-00</u>		JOB #: <u>5423-01</u>	BULK ANALYSIS REQUESTED: (check) <u>(PLM)</u> TEM BULK / LEAD TCLP / LEAD PPM	
PROJECT NAME: <u>CHEVAL SCHOOL REPLACEMENT</u>			MATERIAL TYPE: (Circle) <u>ASBESTOS</u>	TOTAL LEAD QUANTITIES: <u>58</u>
FACILITY: <u>CHEVAL SCHOOL</u>		DISPOSAL: <u>ROUTINE</u>	TURNAROUND: <u>72 HRS</u>	
SPECIAL INSTRUCTIONS:				
COLLECTED BY: <u>[Signature]</u> PRINTED NAME: <u>T-7577-B</u> CERT: <u>HERAN</u> SHIPPING METHOD: <u>6231 2900 7374</u> COURIER (signature): <u>[Signature]</u> DATE/TIME: <u>12/22/00 10:30</u>		COMMENTS: <u>V65 12/29/00</u> <u>Log 12/27 2130</u> <u>DEC 26 2000</u> SELECTED LABORATORY: <u>IATL</u> SAMPLES ACCEPTED: <u>DEC 26 2000</u> DATE/TIME: <u>12/27/00</u> ANALYST'S SIGNATURE: <u>[Signature]</u> DATE: <u>12/27/00</u>		
SAMPLE ID	SAMPLE DESCRIPTION (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION / COMMENTS (INCLUDING PHOTO / XREF)	RESULTS	
1. <u>CV-A01</u> <u>1201055</u> MATERIAL CONDITION: <u>GOOD FAIR POOR</u>	<u>J.C</u> DAMAGE POTENTIAL: (LO, MED, HI) WATER: <u> </u> AIR: <u> </u> VIBRATION: <u> </u> CONTACT: <u> </u>	<u>HALLWAY, SO OF RM 46, NO WALL</u>	<u>ND</u>	
2. <u>CV-A02</u> <u>1201056</u> MATERIAL CONDITION: <u>GOOD FAIR POOR</u>	<u>2x4 LAY IN CEILING & TILE W/ RAND 1/2" FISS & DOTS (LCT-1)</u> DAMAGE POTENTIAL: (LO, MED, HI) WATER: <u> </u> AIR: <u> </u> VIBRATION: <u> </u> CONTACT: <u> </u>	<u> </u>	<u>ND</u>	
3. <u>CV-A03</u> <u>1201057</u> MATERIAL CONDITION: <u>GOOD FAIR POOR</u>	<u>WALL TEXTURE</u> DAMAGE POTENTIAL: (LO, MED, HI) WATER: <u> </u> AIR: <u> </u> VIBRATION: <u> </u> CONTACT: <u> </u>	<u> </u>	<u>ND</u>	
4. <u>CV-A04</u> <u>1201058</u> MATERIAL CONDITION: <u>GOOD FAIR POOR</u>	<u>H.F.</u> DAMAGE POTENTIAL: (LO, MED, HI) WATER: <u> </u> AIR: <u> </u> VIBRATION: <u> </u> CONTACT: <u> </u>	<u>HALLWAY, NO OF RM 58, SE WALL</u>	<u>ND</u>	
5. <u>CV-A05</u> <u>1201059</u> MATERIAL CONDITION: <u>GOOD FAIR POOR</u>	<u>BLACK SINK 4/c</u> DAMAGE POTENTIAL: (LO, MED, HI) WATER: <u> </u> AIR: <u> </u> VIBRATION: <u> </u> CONTACT: <u> </u>	<u>ROOM 54</u>	<u>ND</u>	
6. <u>CV-A06</u> <u>1201060</u> MATERIAL CONDITION: <u>GOOD FAIR POOR</u>	<u>TAN MARLITE MASTIC</u> DAMAGE POTENTIAL: (LO, MED, HI) WATER: <u> </u> AIR: <u> </u> VIBRATION: <u> </u> CONTACT: <u> </u>	<u>ROOM 41, S.W. WALL</u>	<u>ND</u>	
7. <u>CV-A07</u> <u>1201061</u> MATERIAL CONDITION: <u>GOOD FAIR POOR</u>	<u>SMALL GRN-TAN CHIP TATT. S.V. (SV-1)</u> DAMAGE POTENTIAL: (LO, MED, HI) WATER: <u> </u> AIR: <u> </u> VIBRATION: <u> </u> CONTACT: <u> </u>	<u> </u>	<u>ND</u>	
8. <u>CV-A08</u> <u>1201062</u> MATERIAL CONDITION: <u>GOOD FAIR POOR</u>	<u>BRN (DK) C.B. MAST.</u> DAMAGE POTENTIAL: (LO, MED, HI) WATER: <u> </u> AIR: <u> </u> VIBRATION: <u> </u> CONTACT: <u> </u>	<u> </u>	<u>ND</u>	

****RETURN A SIGNED COPY OF THIS FORM WITH THE FINAL REPORT TO EHS-ALASKA****

EHS-10/98



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FIELD SURVEY DATA (continued)

Page 2 of 6

PROJECT NAME: CHEVAK SCHOOL REAR		FACILITY: CHEVAK SCHOOL	
JOB NUMBER: SF23-01		DATE: 12-20-00	COLLECTED BY: B. [Signature]
SAMPLE ID	SAMPLE DESCRIPTION (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/REF)	RESULTS
CV-A09 1201063 MATERIAL CONDITION: GOOD FAIR POOR	WALL TEX DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Rm 54, S.E WALL OF ENTRANCE	ND
CV-A10 1201064 MATERIAL CONDITION: GOOD FAIR POOR	DK BEN CPT MASTIC. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Rm 54, BASE OF SINK.	ND
CV-A11 1201065 MATERIAL CONDITION: GOOD FAIR POOR	TAN W-C MASTIC DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	HALLWAY NW OF Rm 40, SE. WALL	ND
CV-A12 1201066 MATERIAL CONDITION: GOOD FAIR POOR	J.C. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	↓ ↓	ND
CV-A13 1201067 MATERIAL CONDITION: GOOD FAIR POOR	12X12 LT GRAY W/GRAY STREAKS WITH TAN MASTIC - (FT-1) DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Rm 17. N. CORNER.	ND
CV-A13 A 1201068 MATERIAL CONDITION: GOOD FAIR POOR	BLK SINK W/C. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Room 50	ND
CV-A14 1201069 MATERIAL CONDITION: GOOD FAIR POOR	RED 2X4 LAY-IN CLNG TILE - W/ ALIGNED 1 1/2" FIB. DOTS. LCT-3 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Room 50 N. CORNER.	ND
CV-A15 1201070 MATERIAL CONDITION: GOOD FAIR POOR	TAN CPT MASTIC. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Rm 50 N.E. WALL	ND
CV-A16 1201071 MATERIAL CONDITION: GOOD FAIR POOR	BEN CS MASTIC. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	↓ ↓	ND
CV-A17 1201072 MATERIAL CONDITION: GOOD FAIR POOR	WALL TEX DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Rm 49, S.W WALL	ND
CV-A18 1201073 MATERIAL CONDITION: GOOD FAIR POOR	LCT-3 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Rm 49, CENTER	ND
CV-A19 1201074 MATERIAL CONDITION: GOOD FAIR POOR	CEILING TEX. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	Rm 58 CENTER NEAR N.E. WALL.	ND



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FIELD SURVEY DATA (continued)

Page 3 of 6

PROJECT NAME: CHEVAK SCHOOL REPLACEMENT FACILITY: CHEVAK SCHOOL

JOB NUMBER: 5423-01

DATE: 12-20-00

COLLECTED BY: B. L.

SAMPLE ID	SAMPLE DESCRIPTION (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/REF)	RESULTS
CU-A20 1201075 MATERIAL CONDITION: GOOD FAIR POOR	TAN CHIP PART. SU, W/TAN MASTIC. (SV-2) DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	HALLWAY S7. SW EDGE AT DOUBLE DOORS	20% C
CU-A21 1201076 MATERIAL CONDITION: GOOD FAIR POOR	FFI W/TAN MAST. FT-1 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	HALLWAY S7. N. CORNER BY DOUBLE DOORS (HEAT LOCKER)	ND
CU-A22 1201077 MATERIAL CONDITION: GOOD FAIR POOR	OLD FLOORING BENEATH FT-1 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	↓ ↓	10% C
NOT REC CU-A23 1201078 MATERIAL CONDITION: GOOD FAIR POOR	TAN WAINSCOT MASTIC DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	↓ ↓	NO SAMPLE
CU-A24 1201079 MATERIAL CONDITION: GOOD FAIR POOR	H.F. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	RM 61-C S.E. WALL	ND
CU-A25 1201080 MATERIAL CONDITION: GOOD FAIR POOR	J.C. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	RM 66, CORNER ON N.W. WALL.	ND
CU-A26 1201081 MATERIAL CONDITION: GOOD FAIR POOR	SU-2 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	RM 12 N.W. WALL	15% C
CU-A27 1201082 MATERIAL CONDITION: GOOD FAIR POOR	TAN, BUTTERSCOTCH & CEM CHIP PART. (SV-5) W/TAN MAST. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	RM 10, DOORWAY TO RM 11	10% C
CU-A28 1201083 MATERIAL CONDITION: GOOD FAIR POOR	FFI OVER OLD FT. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	RM 8 - DOORWAY	ND
CU-A29 1201084 MATERIAL CONDITION: GOOD FAIR POOR	HEAVY CEILING TEX DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	RM 6 - CENTER	ND
CU-A30 1201085 MATERIAL CONDITION: GOOD FAIR POOR	HEAVY CEILING TEX DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	RM 4-A - ABOVE DOORWAY	ND
CU-A31 1201086 MATERIAL CONDITION: GOOD FAIR POOR	TAN CARPET MASTIC OVER OLD BLUE MASTIC. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	RM 4 S. CORNER.	ND



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FIELD SURVEY DATA (continued)				Page 4 of 6
PROJECT NAME: CHEVAK SCHOOL REPL.		FACILITY: CHEVAK SCHOOL		
JOB NUMBER: 5423-01		DATE: 12-20-00	COLLECTED BY: [Signature]	
SAMPLE ID	SAMPLE DESCRIPTION (COLOR, MATERIAL TYPE, LAYERS, PRIORITIVITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS	
CV-A32 1201087	TREN CTS MASTIC.	Rm 4, SO CORNER	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A33 1201088	J.C.	HALLWAY S.W OF Rm 4, NE WALL	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A34 1201089	GWTS	↓ ↓	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A35 1201090	TAN MARLITE MASTIC	↓ ↓	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A36 1201091	LCT-1	↓ ↓	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A37 1201092	HF	PIPE CHASE IN Rm 59	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A38 1201093	LCT-1	Rm 43, CENTER	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A39 1201094	WALL TEX	Rm 43, JUST W. OF DOOR	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A40 1201095	J.C.	↓ ↓	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A41 1201096	SU-3	Rm 43, JUST E OF DOOR	10% C	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A42 1201097	BLK SINK w/c.	Rm 37- N.E. WALL	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			
CV-A43 1201098	J.C.	"	ND	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:			



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FIELD SURVEY DATA (continued)				Page 5 of 6
PROJECT NAME: CHEVAK SCHOOL REPR		FACILITY: CHEVAK SCHOOL		
JOB NUMBER: 5423-01		DATE: 12-20-00	COLLECTED BY: [Signature]	
SAMPLE ID	SAMPLE DESCRIPTION (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS	
CU-A44 1201099 MATERIAL CONDITION: GOOD FAIR POOR	HEAVY CLNG TEX WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	RM 33 CENTER.	ND	
CU-A45 1201100 MATERIAL CONDITION: GOOD FAIR POOR	BRN CTS MAST. WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	RM 40 W CORNER.	ND	
CU-A46 1201101 MATERIAL CONDITION: GOOD FAIR POOR	12X12. SHOTGUN W/ 1 1/2" FISSURE. GET-1 WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	RM 31 CEILING SW OF LIGHT ENCLOSURES	ND	
CU-A47 1201102 MATERIAL CONDITION: GOOD FAIR POOR	BRN CT MAST. WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	↓ ↓	ND	
CU-A48 1201103 MATERIAL CONDITION: GOOD FAIR POOR	J.C. WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:		0.590 C	
CU-A49 1201104 MATERIAL CONDITION: GOOD FAIR POOR	J.C. WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	RM 46, W. CORNER	ND	
CU-A50 1201105 MATERIAL CONDITION: GOOD FAIR POOR	CPT MASTIC, TAN WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	N.E GYM WALL	ND	
CU-A51 1201106 MATERIAL CONDITION: GOOD FAIR POOR	WALL TEX WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	RM 15 E CORNER	ND	
CU-A52 1201107 MATERIAL CONDITION: GOOD FAIR POOR	WALL TEX WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	RM 2A, N. CORNER.	ND	
CU-A53 1201108 MATERIAL CONDITION: GOOD FAIR POOR	WALL TEX. WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	S. CORNER OF STEP IN RM. 31	ND	
CU-A54 1201109 MATERIAL CONDITION: GOOD FAIR POOR	FR W/ BLK MASTIC. WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	RM 31, NE OF RM. 48	ND	
CU-A55 1201110 MATERIAL CONDITION: GOOD FAIR POOR	↓ ↓ WATER: DAMAGE POTENTIAL: (LO, MED, HI) AIR: VIBRATION: CONTACT:	RM 31, SW OF RM 12	ND	



10928 Eagle River Road, Suite 202, Eagle River, AK 99577-8052
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Page 6 of 6

FACILITY: CHEYNE SCHOOL

DATE: 12-20-00

COLLECTED BY:

B-ly

[illegible]

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/29/2000
Project: Chevach School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201055	Material Description:	Off White JtCompound		
Client No.:	CV-A01	Location:	Hallway, S Of Rm46 N Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201056	Material Description:	LtBrown Ceiling Tile		
Client No.:	CV-A02	Location:	LCT-1; Hallway S Of Rm 46; N Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	40	Cellulose	30	
		30	Fibrous Glass		

Lab No.	1201057	Material Description:	Gray Wall Texture		
Client No.:	CV-A03	Location:	Hallway; S Of Rm 46 N Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201058	Material Description:	Gray Insulation		
Client No.:	CV-A04	Location:	H.F.;Hallway; N Of Rm 58; SE Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	15	Fibrous Glass	80	
		5	Cellulose		

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NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Vane G. Smith, III, AIHA-AAR 4719

Date: DEC 29 2000**Approved By:**

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/29/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201059	Material Description:	Black Tar	
Client No.:	CV-A05	Location:	Sink Undercoat; Rm 54	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.	1201060	Material Description:	Tan Marlite Mastic	
Client No.:	CV-A06	Location:	Rm 41; SW Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	35	Fibrous Glass	65

Lab No.	1201061	Material Description:	White Floor Material	
Client No.:	CV-A07	Location:	SV-1; Rm 41; SW Wall Tan Mastic	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.	1201061	Material Description:	White Floor Material	
Client No.:	CV-A07	Location:	SV-1; Rm 41; SW Wall Tan Mastic	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100
Tan Mastic				
From Above				

RECEIVED

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Analysis Performed By: *Vane G. Smith, III*
Date: DEC 29 2000
Vane G. Smith, III, AIHA-AAR 4719

Approved By:*Frank E. Ehrenfeld, III*
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/29/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201062	Material Description:	DkBrown Mastic		
Client No.:	CV-A08	Location:	C.B. Mastic Rm 41; SW Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201063	Material Description:	White Texture		
Client No.:	CV-A09	Location:	Wall; Rm 54; SE Wall Of Entrance		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201064	Material Description:	DkBrown Mastic		
Client No.:	CV-A10	Location:	Carpet; Rm 54 Base Of Sink		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201065	Material Description:	Tan Mastic		
Client No.:	CV-A11	Location:	W-C Mastic; Hallway NW Of Rm 40; SE Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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Analysis Performed By: Vane G. Smith, III
Date: DEC 29 2000 Vane G. Smith, III, AIHA-AAR 4719

Approved By:

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/29/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201066	Material Description:	White Joint Compound		
Client No.:	CV-A12	Location:	Hallway,Nw Of Rm 40 SE Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201067	Material Description:	LtGray Floor Tile		
Client No.:	CV-A13	Location:	FT-1; Rm 17;N Corner LtTan Mastic		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201067	Material Description:	LtGray Floor Tile		
Client No.:	CV-A13	Location:	FT-1; Rm 17;N Corner LtTan Mastic		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	
Lt Tan Mastic					
From Above					

Lab No.	1201068	Material Description:	Black Tar		
Client No.:	CV-A13A	Location:	Sink Undercoat Rm 60		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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Analysis Performed By: Vane G. Smith, III**Date:** DEC 29 2000

Vane G. Smith, III, AIHA-AAR 4719

Approved By:Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201069	Material Description:	Gray Ceiling Tile		
Client No.:	CV-A14	Location:	LCT-3; Rm 50	N Corner	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	55	Cellulose	35	
		10	Fibrous Glass		

Lab No.	1201070	Material Description:	Tan Mastic		
Client No.:	CV-A15	Location:	Carpet, Rm 50	NE Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201071	Material Description:	Brown Mastic		
Client No.:	CV-A16	Location:	CB; Rm 50 NE Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	Trace	Wollastonite	100	

Lab No.	1201072	Material Description:	White Wall Texture		
Client No.:	CV-A17	Location:	Rm 49; SW Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

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Analysis Performed By: Vane G. Smith, III

Date: DEC 29 2000

Vane G. Smith, III, AIHA-AAR 4719

Approved By:

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/29/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201073	Material Description:	Gray Ceiling Tile		
Client No.:	CV-A18	Location:	LCT-3;Rm 49;Center		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	40	Cellulose	40	
		20	Fibrous Glass		

Lab No.	1201074	Material Description:	Gray Ceiling Texture		
Client No.:	CV-A19	Location:	Rm 58;Center	Near NE Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201075	Material Description:	Tan Linoleum		
Client No.:	CV-A20	Location:	SV-2;Hallway 57	SW Edge At Dbl Doors	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
20	Chrysotile	Trace	Cellulose	80	

Lab No.	1201076	Material Description:	LtGray Floor Tile		
Client No.:	CV-A21	Location:	FT-1;Hallway 57 N	Tan Mastic	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Performed By: Vane G. Smith, III

Vane G. Smith, III, AIHA-AAR 4719

Date: DEC 29 2000

Approved By:

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/29/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201076	Material Description:	LtGray Floor Tile		
Client No.:	CV-A21	Location:	FT-1;Hallway 57 N	Tan Mastic	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	
Tan Mastic					
From Above					

Lab No.	1201077	Material Description:	Tan Linoleum		
Client No.:	CV-A22	Location:	Old Flring;Bnth FT-1	Tan Mastic	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
10	Chrysotile	5	Cellulose	85	

Lab No.	1201077	Material Description:	Tan Linoleum		
Client No.:	CV-A22	Location:	Old Flring;Bnth FT-1	Tan Mastic	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	
Tan Mastic					
From Above					

Lab No.	1201078	Material Description:	Sample Not Received		
Client No.:	CV-A23	Location:			
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
Sample Not Received		Sample Not Received			

RECEIVED

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444***This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government*

Analysis Method: EPA 600/R-93/116

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Analysis Performed By: *Vane G. Smith, III*
Vane G. Smith, III, AIHA-AAR 4719

Approved By:*Frank E. Ehrenfeld*
Frank E. Ehrenfeld, III
Laboratory Director**Date:** DEC 29 2000

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/29/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201079	Material Description:	Gray Insulation	
Client No.:	CV-A24	Location:	HLF.;Rm 61C;SE Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	15	Fibrous Glass	83
		2	Cellulose	

Lab No.	1201080	Material Description:	White Joint Compound	
Client No.:	CV-A25	Location:	Rm 66;Corner On NW Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.	1201081	Material Description:	Brown Linoleum	
Client No.:	CV-A26	Location:	SV-2;Rm 12;NW Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
15	Chrysotile	2	Cellulose	83

RECEIVED

EHS-ALASKA, INC.

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Performed By:

Vane G. Smith, III
Vane G. Smith, III, AIHA-AAR 4719

Approved By:

Frank E. Ehrenfeld
Frank E. Ehrenfeld, III
Laboratory Director

Date: DEC 29 2000

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201082	Material Description:	OffWhite Linoleum	
Client No.:	CV-A27	Location:	SV-3;Rm 10;Doorway To Rm 11	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
10	Chrysotile	5	Cellulose	85

Lab No.	1201083	Material Description:	Gray Floor Tile	
Client No.:	CV-A28	Location:	FT-1 Over Old FT Rm 8;Tan Mastic	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.	1201083	Material Description:	Gray Floor Tile	
Client No.:	CV-A28	Location:	FT-1 Over Old FT Rm 8;Tan Mastic	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100
Tan Mastic				
From Above				

Lab No.	1201084	Material Description:	White CeilingTexture	
Client No.:	CV-A29	Location:	Rm 6; Center	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

RECEIVED

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Analysis Performed By: *Vane G. Smith, III*
Vane G. Smith, III, AIHA-AAR 4719

Approved By:

Frank E. Ehrenfeld, III
Frank E. Ehrenfeld, III
Laboratory Director

Date: DEC 29 2000

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201085	Material Description:	White Ceiling Texture		
Client No.:	CV-A30	Location:	Rm 4A; Above Doorway		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201086	Material Description:	Tan/Black Mastic		
Client No.:	CV-A31	Location:	Carpet, Rm 4 S Corner		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201087	Material Description:	Brown Mastic		
Client No.:	CV-A32	Location:	CB; Rm 4; S Corner		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	Trace	Wollastonite	100	

Lab No.	1201088	Material Description:	White Joint Compound		
Client No.:	CV-A33	Location:	Hallway SW Of Rm 4 NE Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

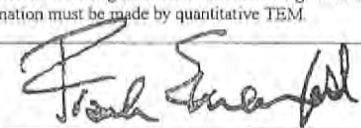
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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Vane G. Smith, IIIDate: DEC 29 2000 Vane G. Smith, III, AIHA-AAR 4719

Approved By:


Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevach School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201089	Material Description:	Brown/White	
Client No.:	CV-A34	Location:	Sheetrock;GWB	Hallway SW Of Rm4
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	20	Cellulose	80
		Trace	Fibrous Glass	

Lab No.	1201090	Material Description:	Tan Mastic	
Client No.:	CV-A35	Location:	Marlite; Hallway	SW Of Rm 4;NE Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.	1201091	Material Description:	Brown Ceiling Tile	
Client No.:	CV-A36	Location:	LCT-1; Hallway	SW Of Rm 4;NE Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	40	Cellulose	30
		30	Fibrous Glass	

Lab No.	1201092	Material Description:	Gray Insulation	
Client No.:	CV-A37	Location:	HF;Pipe Chase In	Rm 59
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	10	Fibrous Glass	87
		3	Cellulose	

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

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Analysis Performed By: Vane G. Smith, III

Vane G. Smith, III, AIHA-AAR 4719

Date: DEC 29 2000Approved By: Frank E. Ehrenfeld, IIIFrank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201093	Material Description:	Brown Ceiling Tile		
Client No.:	CV-A38	Location:	LCT-1; Rm 43 Center		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	40	Cellulose	30	
		30	Fibrous Glass		

Lab No.	1201094	Material Description:	White Joint Compound		
Client No.:	CV-A39	Location:	Wall Tex; Rm 43 Just W Of Door		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201095	Material Description:	White Joint Compound		
Client No.:	CV-A40	Location:	Rm 43; Just W Of Door		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201096	Material Description:	LtGreen Linoleum		
Client No.:	CV-A41	Location:	SV-3; Rm 43; Just E Of Door		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
10	Chrysotile	5	Cellulose	85	

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NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

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Analysis Performed By: Vane G. Smith, II
Vane G. Smith, III, AIHA-AAR 4719

Date: DEC 29 2000**Approved By:**

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 1201097 **Material Description:** Black Tar
Client No.: CV-A42 **Location:** Sink Undercoat Rm 37; NE Wall

<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No. 1201098 **Material Description:** White Joint Compound
Client No.: CV-A43 **Location:** Rm 37; NE Wall

<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No. 1201099 **Material Description:** White Joint Compound
Client No.: CV-A44 **Location:** Heavy Ceiling Texture Rm 33; Center

<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No. 1201100 **Material Description:** Brown Mastic
Client No.: CV-A45 **Location:** CTS Mastic; Rm 40 W Corner

<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

RECEIVED

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Vane G. Smith, III
Date: DEC 29 2000
Vane G. Smith, III, AIHA-AAR 4719

Approved By:

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201101	Material Description:	Brown Ceiling Tile		
Client No.:	CV-A46	Location:	GCT-1; Rm 31	SW Of Lt Enclosures	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	95	Cellulose	5	

Lab No.	1201102	Material Description:	Dk Brown Mastic		
Client No.:	CV-A47	Location:	CT; Rm 31		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201103	Material Description:	Gray Joint Compound		
Client No.:	CV-A48	Location:	Rm 31 Ceiling		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
PC 0.5	Chrysotile	None Detected	None Detected	PC 99.5	

Lab No.	1201104	Material Description:	White Joint Compound		
Client No.:	CV-A49	Location:	Rm 46; W Corner		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

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Analysis Performed By: *Wane G. Smith, III*
Date: DEC 29 2000
Wane G. Smith, III, AIHA-AAR 4719

Approved By:

Frank E. Ehrenfeld, III
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201105	Material Description:	Tan Mastic		
Client No.:	CV-A50	Location:	Carpet, NE Gym Wall		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201106	Material Description:	Lt Gray Wall Texture		
Client No.:	CV-A51	Location:	Rm 15; E Corner		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201107	Material Description:	White Wall Texture		
Client No.:	CV-A52	Location:	Rm 2A; N Corner		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201108	Material Description:	White Wall Texture		
Client No.:	CV-A53	Location:	S Corner Of Step In Rm 31		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Performed By: Vane G. Smith, III
Vane G. Smith, III, AIHA-AAR 4719

Date: DEC 29 2000**Approved By:**

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/30/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201109	Material Description:	LtGray Floor Tile		
Client No.:	CV-A54	Location:	FT-1;Rm31;NE Of Rm48 M1:Gray; M2:Black		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201109	Material Description:	LtGray Floor Tile		
Client No.:	CV-A54	Location:	FT-1;Rm31;NE Of Rm48 M1:Gray; M2:Black		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	
Grey Mastic					
From Above					

Lab No.	1201109	Material Description:	LtGray Floor Tile		
Client No.:	CV-A54	Location:	FT-1;Rm31;NE Of Rm48 M1:Gray; M2:Black		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	10	Cellulose	90	
Black Mastic					
From Above					

Lab No.	1201110	Material Description:	LtGray Floor Tile		
Client No.:	CV-A55	Location:	FT-1;Rm31;SW Of RM12 Tan/Black Mastic		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

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Analysis Performed By: *Vane G. Smith, III*
Vane G. Smith, III, AIHA-AAR 4719

Approved By:

Frank E. Ehrenfeld, III
Frank E. Ehrenfeld, III
Laboratory Director

Date: DEC 29 2000

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/31/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201110	Material Description:	LtGray Floor Tile		
Client No.:	CV-A55	Location:	FT-1;Rm31;SW Of RM12 Tan/Black Mastic		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	Trace	Cellulose	100	
Tan/Black Mastic					
From Above					

Lab No.	1201111	Material Description:	Brown Floor Tile		
Client No.:	CV-A56	Location:	FT-2;Doorway To Rm66 Tan/Black Mastic		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1201111	Material Description:	Brown Floor Tile		
Client No.:	CV-A56	Location:	FT-2;Doorway To Rm66 Tan/Black Mastic		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
PC 4.0	Chrysotile	Trace	Cellulose	96	
Tan/Black Mastic					
From Above					

Lab No.	1201112	Material Description:	LtGray Floor Tile		
Client No.:	CV-A57	Location:	SV-1;Rm65;S Corner		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

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NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Vane G. Smith, III
Vane G. Smith, III, AIHA-AAR 4719
Date: DEC 29 2000

Approved By:

Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 12/31/2000
Project: Chevac School, 12-20-00
Project No.: 5423-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1201112	Material Description:	LtGray Floor Tile		
Client No.:	CV-A57	Location:	SV-1;Rm65;S Corner		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
Single Layer Sample		Single Layer Sample			

Lab No.	1201113	Material Description:	Tan Mastic		
Client No.:	CV-A58	Location:	Hallway 57;N Corner		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

RECEIVED

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

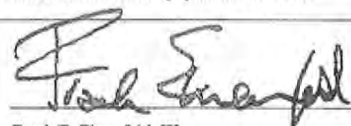
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Analysis Performed By: Vane G. Smith, Jr.

Vane G. Smith, III, AIHA-AAR 4719

Date: DEC 29 2000

Approved By:

Frank E. Ehrenfeld, III
Laboratory Director



Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

700 W 58th Avenue
Anchorage, Alaska 99518-1632
907/561-2400

CLIENT: Kashunaiut School District
985 KSD Way
Chevak, Alaska 99563

BULK SAMPLE ANALYSIS FOR ASBESTOS
ANALYTICAL METHOD: EPA recommended
PLM (Polarized Light Microscopy)
with dispersion staining.

89114

REPORT #: 2

PROJECT: Asbestos Survey
LOCATION: School Buildings
SAMPLED BY: D. Lundine/T. Tessier

LAB #S: B88-0621--0672/B88-0680--

PSI LAB NO.	B88-0621	B88-0622	B88-0623
Date Sampled/Received:	6/22/24/88	6/22/24/88	6/22/24/88
Additional Identification	CK-S-1	CK-S-2	CK-S-3
Information (sample	Sheetrock	2'x4' Ceiling tile	Mainscoat
location; Client ID)	Woodshop	Woodshop	Woodshop
Gross Sample Appearance	Sample homogenous? No	No	No
	Obvious layers? Yes	Yes	Yes
	Color? Cream	Beige	White
	Is sample fibrous? Yes	Yes	Yes
	Sample contain asbestos? None Detected	None Detected	None Detected
Type and percentage of asbestos present:	1. Chrysotile None	None	None
	2. Amosite None	None	None
	3. Other (Specify) None	None	None
Total percent asbestos present in sample:	None	None	None
Other fibrous material present:	1. Fibrous Glass 5-10%	25-35%	35-45%
(Type and Percentage)	2. Cellulose 25-30%	35-45%	<1%
	3. Other (Specify) None	None	None
Percentage of nonfibrous material present:	Not Analyzed	Not Analyzed	Not Analyzed
REMARKS	with paper backing	with white paint	

REVIEWED AND APPROVED BY:

Gracita O. Torrijos
ANALYST

June 27, 1988
DATE

John A. Buzdor
District Manager



Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

700 W 58th Avenue
Anchorage, Alaska 99518-1632
907/561 2400

CLIENT: Kashunaiut School District
985 KSD Way
Chevak, Alaska 99563

BULK SAMPLE ANALYSIS FOR ASBESTOS
ANALYTICAL METHOD: EPA recommended
PLM (Polarized Light Microscopy)
with dispersion staining.

89114

REPORT #: 2

LAB #S: B88-0621--0672/B88-0680--(

PROJECT: Asbestos Survey
LOCATION: School Buildings
SAMPLED BY: D. Lundine/T. Tessier

PSI LAB NO.	B88-0624	B88-0625	B88-0626
Date Sampled/Received:	6/22/24/88	6/22/24/88	6/22/24/88
Additional Identification	CK-S-4	CK-S-5	CK-S-6
Information (sample	Linoleum	Linoleum	T.S.I. (joint)
location; Client ID)	Home Economics	Kitchen	Kitchen
Gross Sample	Sample homogenous?	No	No
Appearance	Obvious layers?	Yes	Yes
	Color?	Beige/White/Orange	Lt. Brown/Yellow/Cream
	Is sample fibrous?	Yes	Yes
	Sample contain asbestos?	Yes	None Detected
Type and percentage of asbestos present:	1. Chrysotile 30-40%	25-30%	None
	2. Amosite None	None	None
	3. Other (Specify) None	None	None
Total percent asbestos present in sample:	30-40%	25-30%	None
Other fibrous material present:	1. Fibrous Glass None	None	5-10%
(Type and Percentage)	2. Cellulose 1-3%	2-4%	20-30%
	3. Other (Specify) None	<1% synthetic	None
Percentage of nonfibrous material present:	Not Analyzed	Not Analyzed	Not Analyzed
REMARKS	with yellow mastic		with paper backing

Gracita D. Morris
Gracita D. Morris
ANALYST

June 27, 1988
DATE

REVIEWED AND APPROVED BY:
John A. Buzdor
John A. Buzdor
District Manager



Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

700 W 58th Avenue
Anchorage, Alaska 99518-1632
907/561-2400

CLIENT: Kashunaiut School District
985 KSD Way
Chevak, Alaska 99563

BULK SAMPLE ANALYSIS FOR ASBESTOS
ANALYTICAL METHOD: EPA recommended
PLM (Polarized Light Microscopy)
with dispersion staining.

89114

REPORT #: 2

PROJECT: Asbestos Survey
LOCATION: School Buildings
SAMPLED BY: D. Lundine/T. Tessier

LAB #S: B88-0621--0672/B88-0680--

PSI LAB NO.	B88-0627	B88-0628	B88-0629
Date Sampled/Received:	6/22/24/88	6/22/24/88	6/22/24/88
Additional Identification	CK-S-7	CK-S-6A	CK-S-8
Information (sample location; Client ID)	Flex Basket Above Kitchen	T.S.I.	12"x12" Ceiling tile
Gross Sample Appearance	Sample homogenous?	No	No
	Obvious layers?	Yes	No
	Color?	Black/White	Gray
	Is sample fibrous?	Yes	Yes
	Sample contain asbestos?	None Detected	None Detected
Type and percentage of asbestos present:	1. Chrysotile	None	None
	2. Amosite	None	None
	3. Other (Specify)	None	None
Total percent asbestos present in sample:	None	None	None
Other fibrous material present:	1. Fibrous Glass	None	None
(Type and Percentage)	2. Cellulose	1-2%	20-25%
	3. Other (Specify)	45-55% synthetic	None
Percentage of nonfibrous material present:	Not Analyzed	Not Analyzed	Not Analyzed
REMARKS		with paper backing	with white paint

REVIEWED AND APPROVED BY:

Gracita O. Torres
ANALYST

June 27, 1988
DATE

John A. Buzdor
DIRECTOR



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ANALYTICAL METHOD: EPA recommended
PLM (Polarized Light Microscopy)
with dispersion staining.

89114

REPORT #: 2

PROJECT: Asbestos Survey
LOCATION: School Buildings
SAMPLED BY: D. Lundine/T. Tessier

LAB #S: B88-0621--0672/B88-0680--

PSI LAB NO.	B88-0630	B88-0631	B88-0632
Date Sampled/Received:	6/22/24/88	6/22/24/88	6/22/24/88
Additional Identification	CK-S-9	CK-S-2A	CK-S-10
Information (sample location; Client ID)	Linoleum	12'x4' Ceiling tile	Carpet
Gross Sample Appearance	Sample homogenous? No	No	No
	Obvious layers? Yes	Yes	Yes
	Color? Beige/White	Brown/White	Yellow/Cream/Various color
	Is sample fibrous? No	Yes	Yes
	Sample contain asbestos? None Detected	None Detected	None Detected
Type and percentage of asbestos present:	1. Chrysotile None	None	None
	2. Amosite None	None	None
	3. Other (Specify) None	None	None
Total percent asbestos present in sample:	None	None	None
Other fibrous material present:	1. Fibrous Glass None	35-40%	1-3%
(Type and Percentage)	2. Cellulose 1-2%	40-50%	1-2%
	3. Other (Specify) None	None	55-65% synthetic
Percentage of nonfibrous material present:	Not Analyzed	Not Analyzed	Not Analyzed
REMARKS	ashed with a piece of wood	with white paint	with yellow mastic with pieces of wood ashed

REVIEWED AND APPROVED BY:

Gracita D. Torrijos
ANALYST

June 27, 1988
DATE

John A. Buzdor
District Manager



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BULK SAMPLE ANALYSIS FOR ASBESTOS
ANALYTICAL METHOD: EPA recommended
PLM (Polarized Light Microscopy)
with dispersion staining.

89114

REPORT #: 2

PROJECT: Asbestos Survey
LOCATION: School Buildings
SAMPLED BY: D. Lundine/T. Tessier

LAB #S: 888-0621--0672/888-0680--

PSI LAB NO.	888-0633	888-0634	888-0635
Date Sampled/Received:	6/22/24/88	6/22/24/88	6/22/24/88
Additional Identification	CK-S-11	CK-S-6B	CK-S-6C (RC)
Information (sample	Linoleum	T.S.I.	T.S.I.
location; Client ID)			Side x Side
Gross Sample	Sample homogenous?	No	No
Appearance	Obvious layers?	Yes	Yes
	Color?	Blue/White	Gray
	Is sample fibrous?	Yes	Yes
	Sample contain asbestos?	Yes	None Detected
		None Detected	None Detected
Type and percentage of asbestos present:	1. Chrysotile 20-30%	None	None
	2. Amosite None	None	None
	3. Other (Specify) None	None	None
Total percent asbestos present in sample:	20-30%	None	None
Other fibrous material present:	1. Fibrous Glass None	15-20%	13-8%
(Type and Percentage)	2. Cellulose None	10-15%	15-25%
	3. Other (Specify) None	None	None
Percentage of nonfibrous material present:	Not Analyzed	Not Analyzed	Not Analyzed
REMARKS			with paper backing

Gracita O. Torrijos
Gracita O. Torrijos
ANALYST

June 27, 1988
DATE

REVIEWED AND APPROVED BY:
John A. Buzdor
John A. Buzdor
District Manager



Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

700 W 58th Avenue
Anchorage, Alaska 99518-1612
907/561-2400

001

REPORT

CLIENT: Kashunaut School District
985 KSD Way
Chevak, Alaska 99563

BULK SAMPLE ANALYSIS FOR ASBESTOS
ANALYTICAL METHOD: EPA recommended
PLM (Polarized Light Microscopy)
with dispersion staining.

89114

REPORT #: 2

LAB #S: B88-0621--0672/B88-0680--

PROJECT: Asbestos Survey
LOCATION: School Buildings
SAMPLED BY: D. Lundine/T. Tessier

6D

PSI LAB NO. B88-0636

Date Sampled/Received: 6/22-24/88

Additional Identification: CK-S-60 (WC)
Information (sample): T.S.I.
Location; Client ID:

Gross Sample homogenous?

Sample

Appearance Obvious layers?

Color?

Is sample fibrous?

Sample contain asbestos?

Type and percentage of asbestos present: 1. Chrysotile

2. Amosite

3. Other (Specify)

Total percent asbestos present in sample:

Other fibrous material present: 1. Fibrous Glass

(Type and Percentage) 2. Cellulose

3. Other (Specify)

Percentage of nonfibrous material present:

REMARKS: sent to Spokane for Q.C.
see attached Spokane's
Q.C. Results

Gracita D. Torrijos
ANALYST

June 27, 1988

DATE

REVIEWED AND APPROVED BY:

John A. Buzdor
District Manager



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Chevak, Alaska 99563

BULK SAMPLE ANALYSIS FOR ASBESTOS
ANALYTICAL METHOD: EPA recommended
PLM (Polarized Light Microscopy)
with dispersion staining.

89114

PROJECT: Asbestos Survey
LOCATION: School Buildings
SAMPLED BY: D. Lundine/T. Tessier

REPORT #: 2

LAB #S: B88-0621--0672/B88-0680--

PSI LAB NO.	B88-0637	B88-0638	B88-0639
Date Sampled/Received:	6/22/24/88	6/22/24/88	6/22/24/88
Additional Identification	CK-S-3A	CK-S-12	CK-S-6D
Information (sample	Wainscoat	Wainscoat	T.S.I.
location; Client ID)			Boiler Room
Gross Sample	Sample homogenous?	No	No
Appearance	Obvious layers?	Yes	No
	Color?	White	Gray/Yellow
	Is sample fibrous?	Yes	Yes
	Sample contain asbestos?	None Detected	None Detected
Type and percentage of asbestos present:	1. Chrysotile	None	None
	2. Amosite	None	None
	3. Other (Specify)	None	None
Total percent asbestos present in sample:	None	None	None
Other fibrous material present:	1. Fibrous Glass	45-55%	15-15%
(Type and Percentage)	2. Cellulose	<1%	15-15%
	3. Other (Specify)	None	None
Percentage of nonfibrous material present:	Not Analyzed	Not Analyzed	Not Analyzed
REMARKS			

REVIEWED AND APPROVED BY:

John A. Buzdor
District Manager

June 27, 1988

DATE

Teresa Evanow
ANALYST



Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division

700 W 58th Avenue
Anchorage, Alaska 99518-1632
907/561 2400

CLIENT: Kashunaiut School District
985 KSD Way
Chevak, Alaska 99563

BULK SAMPLE ANALYSIS FOR ASBESTOS
ANALYTICAL METHOD: EPA recommended
PLM (Polarized Light Microscopy)
with dispersion staining.

89114

REPORT #: 2

LAB #S: B88-0621--0672/B88-0680--(

PROJECT: Asbestos Survey
LOCATION: School Buildings
SAMPLED BY: D. Lundine/T. Tessier

PSI LAB NO.	B88-0680	B88-0681	B88-0682
Date Sampled/Received:	6/22/24/88	6/22/24/88	6/22/24/88
Additional Identification Information (sample location; Client ID)	Block Insulation Under School	Metalbestos Pipe Under School	Transite Pipe in Utilidor System
Gross Sample Appearance	Sample homogenous? Obvious layers? Color? Is sample fibrous? Sample contain asbestos?	No No White Yes None Detected	No No Gray Yes None Detected
Type and percentage of asbestos present:	1. Chrysotile 2. Amosite 3. Other (Specify)	None None None	75-85% None None
Total percent asbestos present in sample:	None	None	75-85%
Other fibrous material present: (Type and Percentage)	1. Fibrous Glass 2. Cellulose 3. Other (Specify)	None 40-50% 1-2% synthetic	75-85% None None
Percentage of nonfibrous material present:	Not Analyzed	Not Analyzed	Not Analyzed
REMARKS			

Gracita Torrijos
ANALYST

June 29, 1988

DATE

REVIEWED AND APPROVED BY:

John A. Buzdor
District Manager

APPENDIX B

Lead Analyzer Test Results

LEAD PAINT SCREENING SUMMARY

NITON XLP-300A, Serial No. 81530

NO.	SITE	INSPECTOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	DURATION	TIME	DEPTH INDEX	RESULTS		
											LBP	mg/cm ²	+/- ERROR
1	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	SHUTTER CAL	-	-	-	146.83	9/5/2017 12:57	-	-	1.92	0
2	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	SHUTTER CAL	-	-	-	148.85	9/5/2017 13:05	-	-	2.06	0
3	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	SHUTTER CAL	-	-	-	146.82	9/5/2017 13:09	-	-	1.97	0
4	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	20.26	9/5/2017 13:13	1.12	Positive	1.1	0.1
5	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	21.04	9/5/2017 13:14	2.57	Positive	1	0.1
6	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	20.69	9/5/2017 13:15	1.11	Positive	1.1	0.1
7	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	GYM	WALL	WOOD	INTACT	WHITE	2.75	9/5/2017 17:40	3.23	Negative	0.04	0.08
8	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	VOID	VOID	VOID	VOID	VOID	VOID	9/5/2017 17:41	VOID	VOID	VOID	VOID
9	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	GYM	DOOR	METAL	POOR	BEIGE	1.69	9/5/2017 17:41	1	Negative	0	0.02
10	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	GYM	DOOR FRAME	METAL	POOR	BEIGE	1.9	9/5/2017 17:42	1	Negative	0	0.02
11	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	66	FLOOR	WOOD	POOR	GRAY	1.9	9/5/2017 17:43	1	Negative	0	0.02
12	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	66	ELEC PANEL	METAL	INTACT	GRAY	2.74	9/5/2017 17:43	1	Negative	0	0.02
13	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	61-C	CEILING	DRYWALL	INTACT	WHITE	2.52	9/5/2017 17:44	1	Negative	0	0.02
14	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	67	LOCKER	METAL	INTACT	BEIGE	2.73	9/5/2017 17:45	1.33	Negative	0.06	0.06
15	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	67	WALL	PLASTIC	INTACT	WHITE	3.8	9/5/2017 17:46	1	Negative	-0.11	0.77
16	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	64	PARTITION	METAL	INTACT	BEIGE	2.74	9/5/2017 17:47	1	Negative	0.26	0.11
17	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	64	SINK	CERAMIC	INTACT	BEIGE	3.59	9/5/2017 17:48	1	Negative	0.01	0.02
18	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	64	COUNTERTOP	WOOD	INTACT	WHITE	2.75	9/5/2017 17:48	1	Negative	0	0.02
19	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	64	DOOR FRAME	METAL	INTACT	BEIGE	2.74	9/5/2017 17:49	1	Negative	0	0.02
20	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	61-A	EQUIPMENT	METAL	INTACT	GRAY	2.73	9/5/2017 17:50	1.95	Negative	0.03	0.06
21	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	67	LOCKER	METAL	FAIR	BLUE	2.73	9/5/2017 17:51	1.33	Negative	0	0.02
22	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	56	WALL	WOOD	INTACT	ORANGE	2.75	9/5/2017 17:52	1.05	Negative	0.5	0.2
23	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	57	WALL	DRYWALL	POOR	WHITE	3.16	9/5/2017 17:53	1	Negative	0.01	0.02
24	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	57	DOOR	METAL	POOR	BEIGE	2.74	9/5/2017 17:53	1	Negative	0	0.02
25	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	57	DOOR FRAME	METAL	POOR	BEIGE	2.75	9/5/2017 17:54	1	Negative	0	0.02
26	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	57	FLOOR	WOOD	POOR	GRAY	2.75	9/5/2017 17:55	3.09	Negative	0.04	0.09
27	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	VOID	VOID	VOID	VOID	VOID	VOID	9/5/2017 17:55	VOID	VOID	VOID	VOID
28	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	57	WALL	WOOD	INTACT	RED	3.8	9/5/2017 17:55	1	Negative	0	0.02
29	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	46	WALL	DRYWALL	INTACT	WHITE	2.74	9/5/2017 17:58	1	Negative	0	0.02
30	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	47	WALL	PLASTIC	INTACT	WHITE	5.27	9/5/2017 17:59	1	Negative	0.12	0.61
31	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	VOID	VOID	VOID	VOID	VOID	VOID	9/5/2017 18:00	VOID	VOID	VOID	VOID
32	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	48	FACP	METAL	INTACT	RED	2.95	9/5/2017 18:00	1.42	Negative	0	0.02
33	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	48	COUNTERTOP	WOOD	INTACT	YELLOW	2.73	9/5/2017 18:01	1	Negative	0	0.02
34	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	51	FIN TUBE	METAL	FAIR	BEIGE	3.36	9/5/2017 18:02	3.56	Negative	0.01	0.03
35	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	20.28	9/5/2017 18:04	1.06	Positive	1	0.1
36	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	20.46	9/5/2017 18:06	2.74	Positive	1.1	0.1
37	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	20.29	9/5/2017 18:07	1.04	Positive	1	0.1
38	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	SHUTTER CAL	-	-	-	146.84	9/6/2017 9:22	-	-	1.93	0
39	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	21.53	9/6/2017 9:27	1.1	Positive	1.1	0.1
40	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	21.43	9/6/2017 9:28	2.53	Positive	1	0.1
41	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	CALIBRATION CK	-	-	RED	20.67	9/6/2017 9:30	1.09	Positive	1	0.1
42	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	SHUTTER CAL	-	-	-	146.84	9/6/2017 9:38	-	-	2.04	0
43	OLD CHEVAK SCHOOL, BUILDING S1	OTTOSEN	-	SHUTTER CAL	-	-	-	146.79	9/6/2017 9:43	-	-	1.99	0

Table Heading Descriptions: See next page.

LEAD PAINT SCREENING SUMMARY

Duration:	This is the nominal time in seconds that each sample was analyzed.
Depth Index:	Indicates the relative depth of the lead. A Depth Index (DI) of less than 1.5 indicates lead very near the surface layer of paint. A DI between 1.5 and 4.0 indicates moderately covered lead. A DI greater than 4.0 indicates the lead paint is deeply buried beneath multiple layers of paint.
LBP:	Results are shown as positive (POS ≥ 1.0 mg/cm ²), inconclusive (INC) or negative (NEG < 1.0 mg/cm ²). The results are based on the combined results of the K and L shell readings. L shell and K shell readings are not provided, but are available. Positive results are shown in bold print.
mg/cm ² :	This is the testing results produced by the NITON XLP-300A instrument in milligrams of lead per square centimeter (mg/cm ²). The EPA defines lead based paint as paint containing lead at 1.0 mg/cm ² or greater. A negative number is a result of an internal computation made by the instrument and should be interpreted as zero. Even though paint may be termed negative (less than 1.0 mg/cm ²) by EPA definition, disturbance of the paint may still be regulated by OSHA under 29 CFR 1926.62. Where lead is present at any level, appropriate engineering controls, work practices and personal protective equipment should be used until a negative exposure assessment can be determined. <LOD indicates that the lead present was less than the limits of detection of the instrument (very little or no lead present).
VOID:	This indicates that the test was intentionally terminated by the operator due to operator error (e.g. - operator moved analyzer while testing).
Substrate:	Where ceramic is shown as a substrate, lead content is typically from the glazing on the tile unless the tile is painted.

LEAD PAINT SCREENING SUMMARY

NITON XL-309, Serial No. U862NR0666

NO.	SITE	INSPECTOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	DURATION	TIME	DEPTH INDEX	RESULTS		
											LBP	mg/cm ²	+/- ERROR
62	CHEVAK SCHOOL BUILDING	MORGAN	-	SHUTTER CAL	-	-	-	53.1	12/19/2000 20:33	-	-	-	-
63	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	3.1	12/19/2000 20:34	1.8	NEG	0.01	0.04
64	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	3.1	12/19/2000 20:34	1.1	NEG	0.3	0.2
65	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	20.1	12/19/2000 20:34	1	NEG	0.93	0.11
66	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	7.1	12/19/2000 20:35	1.1	POS	1.58	0.27
67	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	12.6	12/19/2000 20:35	1.2	POS	3.41	0.36
68	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Door	Metal	Intact	Tan	3.2	12/19/2000 20:37	1	NEG	0	0.08
69	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Door Casing	Metal	Intact	Tan	3.3	12/19/2000 20:37	2	NEG	0.01	0.14
70	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Wood	Intact	Tan	3.2	12/19/2000 20:38	3.8	NEG	0.04	0.09
71	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Wood	Intact	Tan	3.2	12/19/2000 20:38	2	NEG	0.04	0.37
72	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Wood	Intact	Tan	3.1	12/19/2000 20:39	1	NEG	0	0.01
73	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	22	12/19/2000 20:40	1	NEG	0.01	0.03
74	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	17.3	12/19/2000 20:41	1	NEG	0.03	0.73
75	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Metal	Intact	Blue	3	12/19/2000 20:43	1	NEG	0	0.02
76	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Metal	Intact	Blue	4.9	12/19/2000 20:43	1.5	NEG	0.02	0.16
77	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Metal	Intact	Blue	4.8	12/19/2000 20:43	1.6	NEG	0.01	0.18
78	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	19.7	12/19/2000 20:45	1	NEG	0.16	0.62
79	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Door	Metal	Intact	Tan	3.2	12/19/2000 20:47	1	NEG	0	0.11
80	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Door Jamb	Metal	Intact	Tan	3.1	12/19/2000 20:47	1	NEG	0	0.01
81	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	19.7	12/19/2000 20:48	1	NEG	0.16	0.64
82	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	5.6	12/19/2000 20:50	1	NEG	0	0.01
83	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	12.6	12/19/2000 20:50	1	NEG	-0.06	0.78
84	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	3.3	12/19/2000 20:52	1	NEG	0.01	0.17
85	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	12.7	12/19/2000 20:52	1	NEG	-0.44	0.95
86	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Window Sash	Wood	Intact	White	3.2	12/19/2000 20:54	1	NEG	0	0.02
87	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Window Sash	Wood	Intact	Tan	3.2	12/19/2000 20:55	1	NEG	0	0.01
88	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall Register	Metal	Intact	Tan	5	12/19/2000 20:56	1.3	NEG	0.01	0.18
89	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	10.2	12/19/2000 20:57	1.3	NEG	0.01	0.11
90	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Window Sash	Wood	Intact	Tan	3.2	12/19/2000 21:01	1	NEG	0	0.02
91	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall Register	Metal	Intact	Tan	5	12/19/2000 21:01	1	NEG	0.01	0.07
92	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	8	12/19/2000 21:02	5.7	NEG	0.02	0.07
93	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	5.6	12/19/2000 21:03	1	NEG	0	0.02
94	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	22	12/19/2000 21:03	1	NEG	0	0.02
95	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	10.2	12/19/2000 21:04	2.1	NEG	0.07	0.1
96	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Floor	Drywall	Fair	Grey	3.2	12/19/2000 21:06	1	NEG	0	0.01
97	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	3.2	12/19/2000 21:06	1	NEG	0	0.02
98	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	5.6	12/19/2000 21:07	1	NEG	0	0.01
99	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	19.7	12/19/2000 21:17	1	NEG	0.02	0.7
100	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Window Sash	Wood	Intact	Tan	3.2	12/19/2000 21:18	1	NEG	0	0.01
101	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	19.6	12/19/2000 21:19	1.8	NEG	0.08	0.66
102	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	12.7	12/19/2000 21:20	1	NEG	-0.23	0.75
103	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	12.6	12/19/2000 21:22	1	NEG	-0.38	0.66
104	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	Tan	21.9	12/19/2000 21:23	1	NEG	0	0
105	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Stair Tread	Wood	Intact	Brown	3.1	12/19/2000 21:25	1	NEG	0.02	0.08
106	CHEVAK SCHOOL BUILDING	MORGAN	-	SHUTTER CAL	-	-	-	53.1	12/20/2000 11:41	-	-	-	-
107	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	3.2	12/20/2000 11:42	1	NEG	0	0.02
108	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	3.1	12/20/2000 11:42	1.1	NEG	0.29	0.18
109	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	20.2	12/20/2000 11:42	1	NEG	0.92	0.11
110	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	11.3	12/20/2000 11:44	1.1	POS	1.48	0.2
111	CHEVAK SCHOOL BUILDING	MORGAN	-	CALIBRATION CK	-	-	-	6.7	12/20/2000 11:44	1.2	POS	3.47	0.51
112	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Wood	Intact	Red	3.1	12/20/2000 11:47	5.3	NEG	0.05	0.14
113	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Wall	Wood	Intact	Red	3.1	12/20/2000 11:48	1	NEG	0	0.13
114	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Stair Tread	Wood	Intact	Grey	3.2	12/20/2000 11:49	6.5	NEG	0.06	0.18
115	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Ext Wall	Wood	Intact	Red	3.1	12/20/2000 11:50	1	NEG	0	0.01
116	CHEVAK SCHOOL BUILDING	MORGAN	INTERIOR	Ext Wall	Wood	Intact	Red	3.1	12/20/2000 11:50	1	NEG	0	0.1
117	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall Lower Trim	Wood	Intact	White	3.2	12/20/2000 11:51	1	NEG	0	0.01
118	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Stair Tread	Wood	Intact	Grey	3.2	12/20/2000 11:52	1	NEG	0	0.02

LEAD PAINT SCREENING SUMMARY

NO.	SITE	INSPECTOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	DURATION	TIME	DEPTH INDEX	RESULTS		
											LBP	mg/cm ²	+/- ERROR
119	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Stair Tread	Wood	Intact	Grey	3.2	12/20/2000 11:53	1	NEG	0	0.07
120	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Red	3.1	12/20/2000 11:53	1	NEG	0	0.11
121	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Red	3.2	12/20/2000 11:54	1	NEG	0	0.01
122	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Wall	Wood	Intact	Grey	3.2	12/20/2000 11:54	1	NEG	0	0.01
123	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Grey	3.1	12/20/2000 11:55	1	NEG	0	0.01
124	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Red	3.1	12/20/2000 11:56	1	NEG	0	0.02
125	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall Lower Trim	Wood	Intact	White	3.2	12/20/2000 11:57	1	NEG	0	0.01
126	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Red	3.1	12/20/2000 11:58	1	NEG	0	0.01
127	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Grey	3.1	12/20/2000 11:59	1	NEG	0	0.01
128	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Grey	3.1	12/20/2000 11:59	1	NEG	0	0.01
129	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Grey	3.2	12/20/2000 12:00	1	NEG	0	0.02
130	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Red	3.1	12/20/2000 12:01	1	NEG	0	0.11
131	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Red	3.1	12/20/2000 12:01	1	NEG	0	0.02
132	CHEVAK SCHOOL BUILDING	MORGAN	VOID	VOID	VOID	VOID	VOID	VOID	12/20/2000 12:02	VOID	VOID	VOID	VOID
133	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Red	3.1	12/20/2000 12:02	1	NEG	0	0.01
134	CHEVAK SCHOOL BUILDING	MORGAN	EXTERIOR	Ext Wall	Wood	Intact	Grey	3.2	12/20/2000 12:03	1.5	NEG	0.01	0.03
135	BOILER UTILITY BUILDING	MORGAN	EXTERIOR	Wall	Wood	Intact	White	5.2	12/20/2000 12:05	2.4	POS	3.21	0.89
136	BOILER UTILITY BUILDING	MORGAN	EXTERIOR	Ext Wall Lower Trim	Wood	Intact	White	2.9	12/20/2000 12:06	1.4	POS	2.7	0.75
137	BOILER UTILITY BUILDING	MORGAN	EXTERIOR	Wall	Wood	Intact	Grey	7.3	12/20/2000 12:07	1.8	POS	2.07	0.44
138	BOILER UTILITY BUILDING	MORGAN	EXTERIOR	Wall	Wood	Intact	Grey	3.1	12/20/2000 12:07	1	NEG	0	0.02
139	BOILER UTILITY BUILDING	MORGAN	EXTERIOR	Wall	Wood	Intact	White	14.1	12/20/2000 12:08	2	NEG	0.7	0.18
140	BOILER UTILITY BUILDING	MORGAN	EXTERIOR	Wall	Wood	Intact	White	7.3	12/20/2000 12:10	2.6	POS	5.77	1.85
141	BOILER UTILITY BUILDING	MORGAN	EXTERIOR	Wall	Wood	Intact	White	5	12/20/2000 12:11	2.9	POS	8.84	2.79
142	BOILER UTILITY BUILDING	MORGAN	EXTERIOR	Wall	Wood	Intact	Grey	5	12/20/2000 12:11	2	POS	3.35	0.82
143	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	White	3.3	12/20/2000 12:14	7.9	NEG	0.15	0.27
144	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	White	3.3	12/20/2000 12:15	1	NEG	0	0.01
145	BOILER UTILITY BUILDING	MORGAN	VOID	VOID	VOID	VOID	VOID	VOID	12/20/2000 12:15	VOID	VOID	VOID	VOID
146	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	White	12.7	12/20/2000 12:15	10	NEG	-0.16	0.8
147	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Wall	Drywall	Intact	White	7.9	12/20/2000 12:16	1	NEG	0.01	0.03
148	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Oil Tank	Metal	Intact	Orange	2.9	12/20/2000 12:18	1.3	POS	2.56	0.67
149	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Oil Tank	Metal	Intact	Red	2.8	12/20/2000 12:18	1.6	POS	5.1	1.56
150	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Oil Tank	Metal	Intact	Blue	4.8	12/20/2000 12:19	1.4	NEG	0.02	0.11
151	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Floor	Wood	Intact	Grey	3.2	12/20/2000 12:20	1	NEG	0.03	0.03
152	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Floor	Wood	Intact	Grey	3.1	12/20/2000 12:20	1	NEG	0.1	0.05
153	BOILER UTILITY BUILDING	MORGAN	INTERIOR	Door	Metal	Intact	Grey	4.1	12/20/2000 12:21	1	NEG	0.02	0.02

Table Heading Descriptions:

Duration: This is the nominal time in seconds that each sample was analyzed.

Depth Index: Indicates the relative depth of the lead. A Depth Index (DI) of less than 1.5 indicates lead very near the surface layer of paint. A DI between 1.5 and 4.0 indicates moderately covered lead. A DI greater than 4.0 indicates the lead paint is deeply buried beneath multiple layers of paint.

LBP: Results are shown as positive (POS ≥ 1.0 mg/cm²), inconclusive (INC) or negative (NEG < 1.0 mg/cm²). The results are based on the combined results of the K and L shell readings. L shell and K shell readings are not provided, but are available. Positive results are shown in bold print.

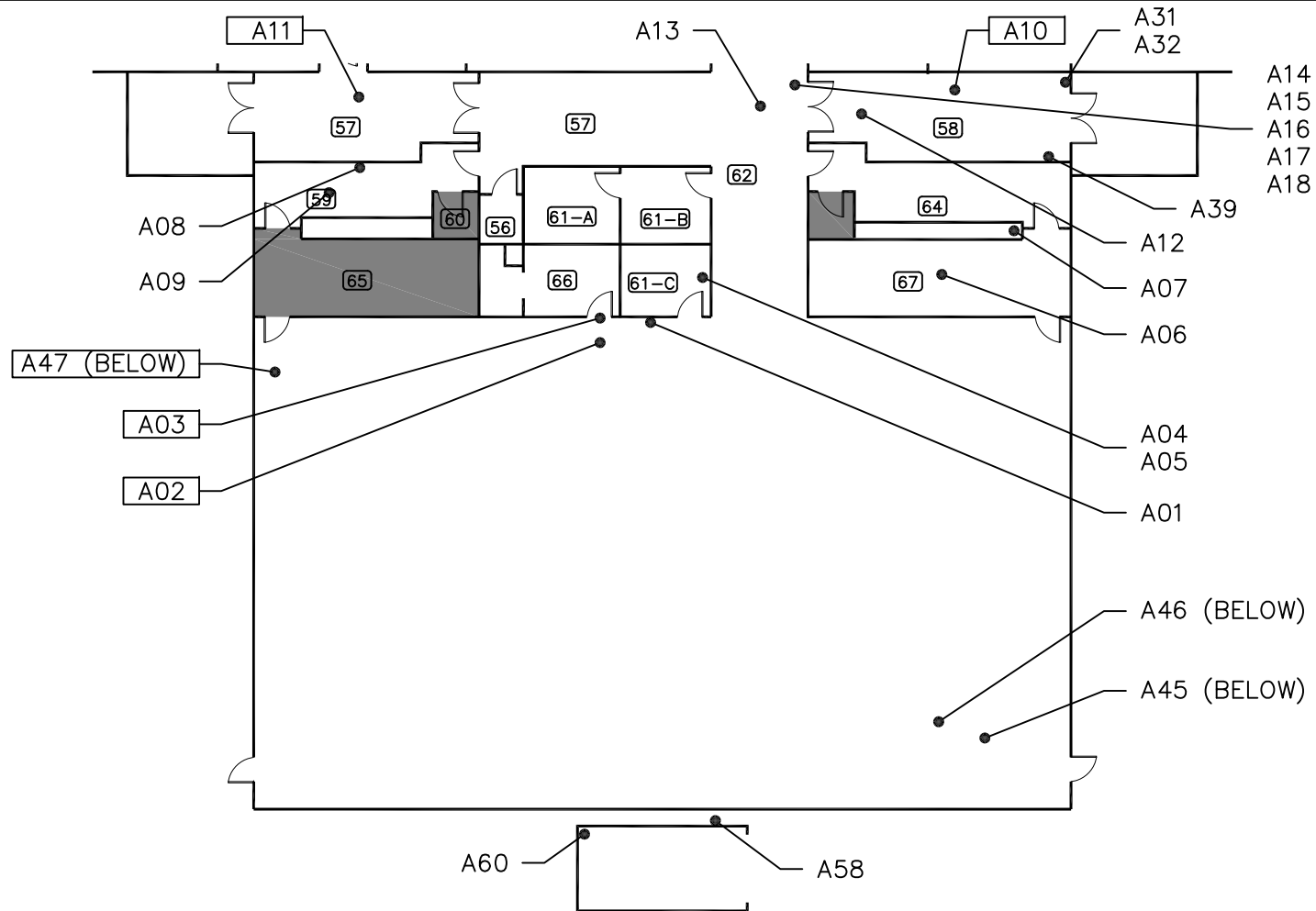
mg/cm²: This is the testing results produced by the NITON XL-309 instrument in milligrams of lead per square centimeter (mg/cm²). The EPA defines lead based paint as paint containing lead at 1.0 mg/cm² or greater. A negative number is a result of an internal computation made by the instrument and should be interpreted as zero. Even though paint may be termed negative (less than 1.0 mg/cm²) by EPA definition, disturbance of the paint may still be regulated by OSHA under 29 CFR 1926.62. Where lead is present at any level, appropriate engineering controls, work practices and personal protective equipment should be used until a negative exposure assessment can be determined. <LOD indicates that the lead present was less than the limits of detection of the instrument (very little or no lead present).

VOID: This indicates that the test was intentionally terminated by the operator due to operator error (e.g. - operator moved analyzer while testing).

Substrate: Where ceramic is shown as a substrate, lead content is typically from the glazing on the tile unless the tile is painted.

APPENDIX C

Drawings of Sample Locations



1
C-1

GYM AREA
NTS



NOT SURVEYED, NO
ACCESS TO THESE AREAS

YUKON RIVER INTER-TRIBAL
WATERSHED COUNCIL -
CITY OF CHEVAK

OLD CHEVAK SCHOOL
CHEVAK, ALASKA
ASBESTOS SAMPLE LOCATIONS



EHS ALASKA
INCORPORATED

ENGINEERING, HEALTH & SAFETY CONSULTANTS

DRAWN: CTO

DATE:

CHECK: RAF

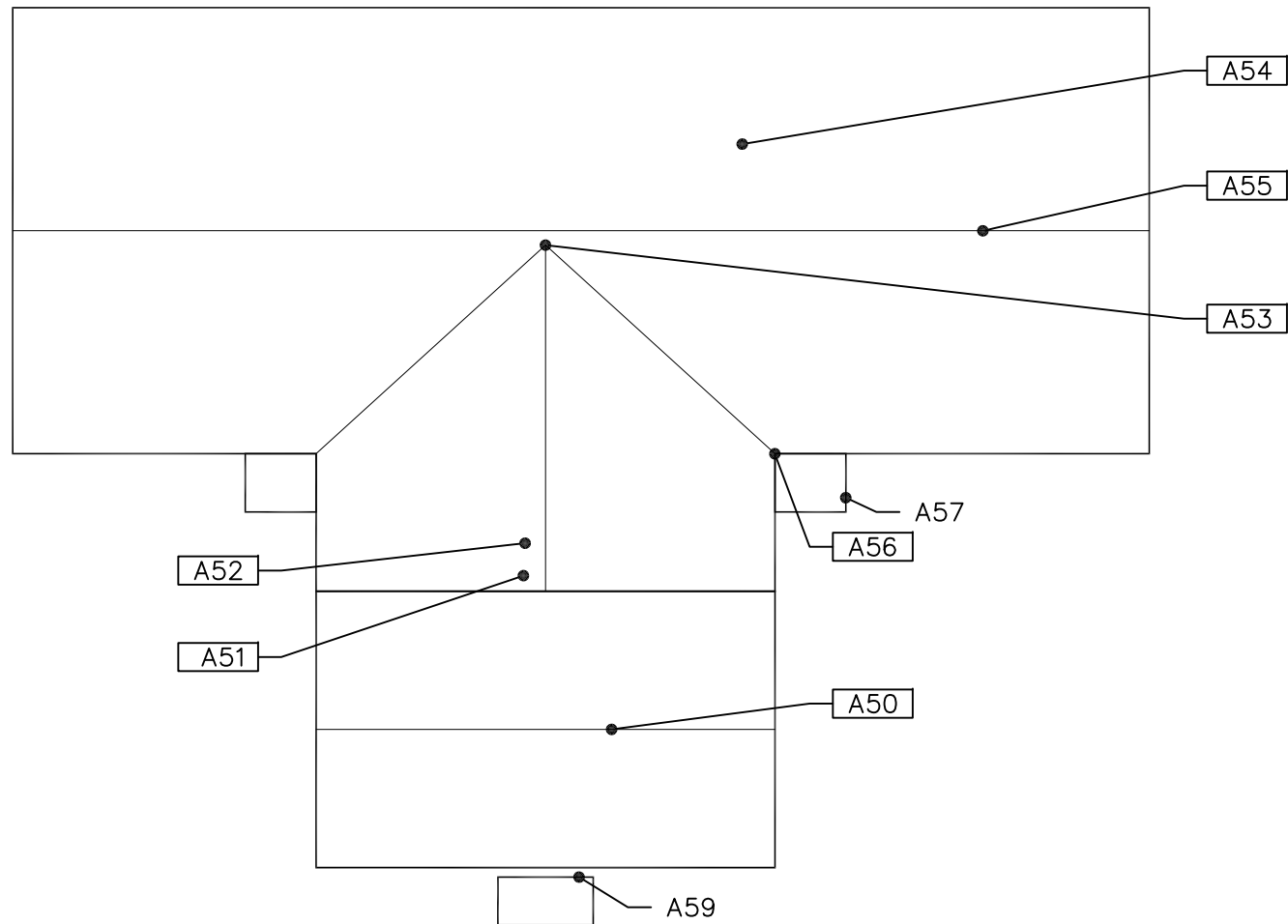
09/05/2017

FILE #:

DWG.NO:

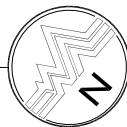
7559-SL

C-1



1
C-3

ROOF
NTS



NOT SURVEYED, NO
ACCESS TO THESE AREAS

LEGEND

- AXX ASBESTOS TEST LOCATION
 - AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS
- REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL
SAMPLES HAVE CV0917- PREFIX.

YUKON RIVER INTER-TRIBAL
WATERSHED COUNCIL -
CITY OF CHEVAK

OLD CHEVAK SCHOOL
CHEVAK, ALASKA
ASBESTOS SAMPLE LOCATIONS



EHS ALASKA
INCORPORATED

ENGINEERING, HEALTH & SAFETY CONSULTANTS

DRAWN: CTO

CHECK: RAF

FILE #:

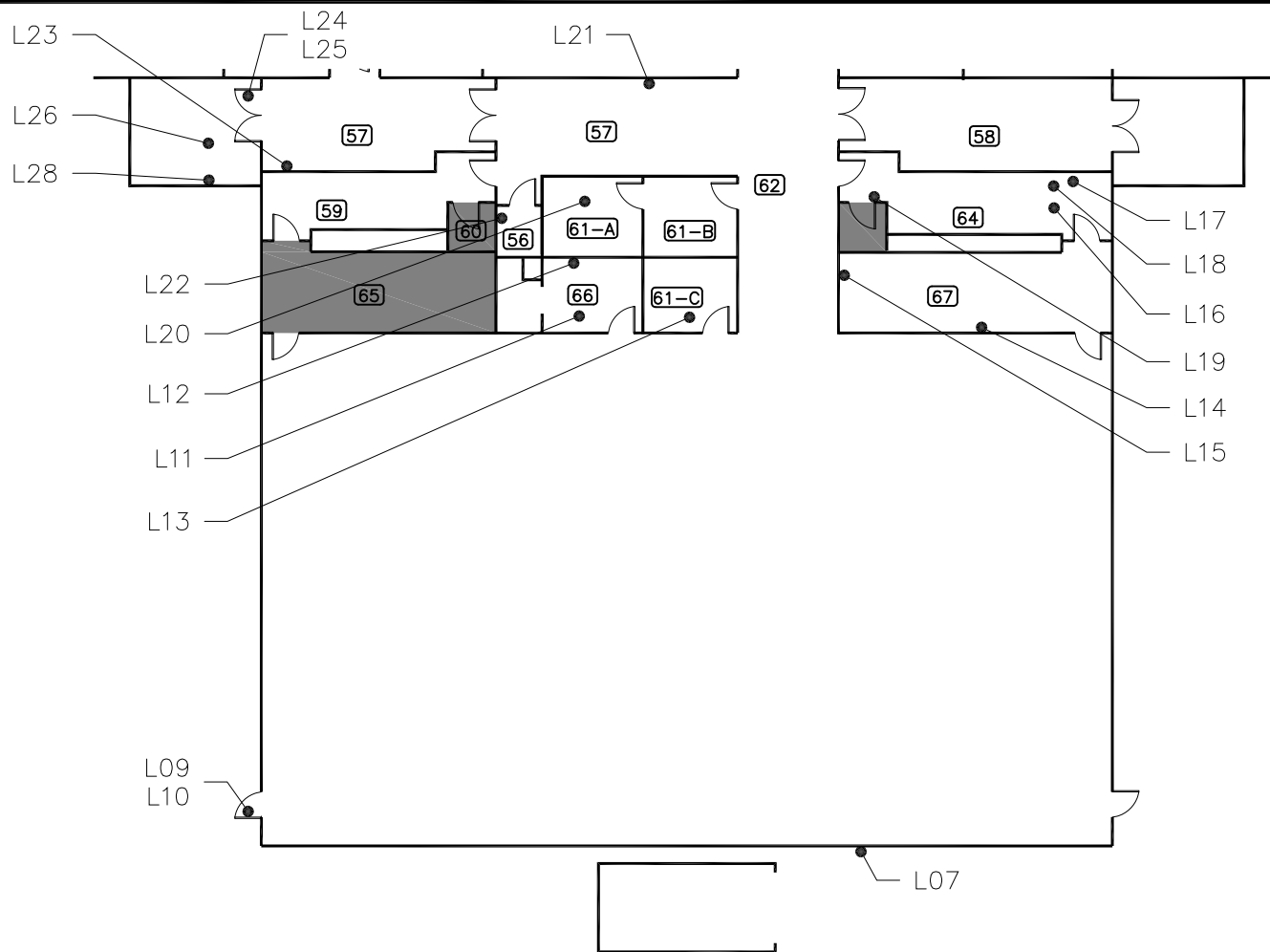
7559-SL

DATE:

09/05/2017

DWG.NO:

C-3

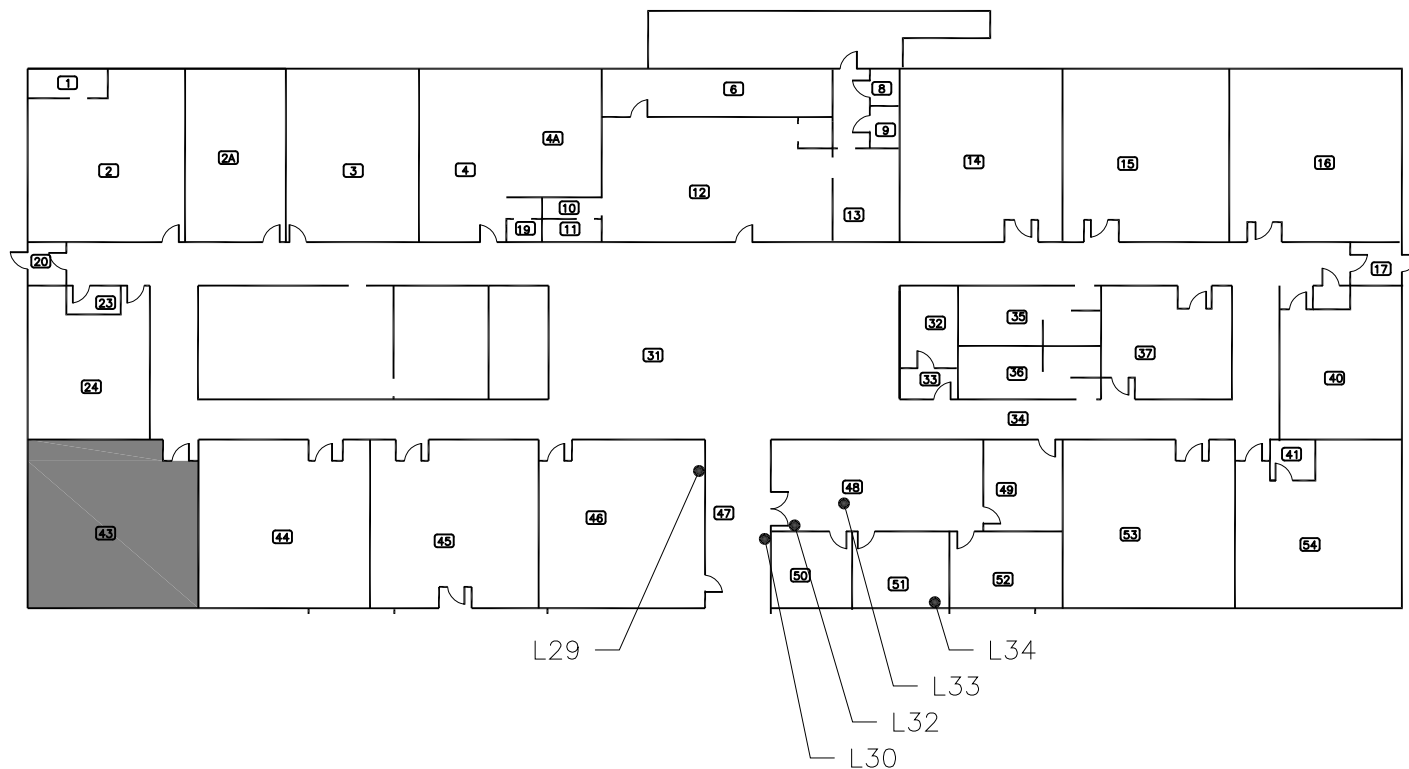


YUKON RIVER INTER-TRIBAL
WATERSHED COUNCIL -
CITY OF CHEVAK

OLD CHEVAK SCHOOL
CHEVAK, ALASKA
LEAD SAMPLE LOCATIONS



DRAWN: CTO	DATE: 09/05/2017
CHECK: RAF	DWG.NO:
FILE #:	C-4
7559-SL	



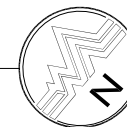
LEGEND

- LXX LEAD TEST LOCATION
 - LXX LEAD TEST CLASSIFIED AS LEAD BASED PAINT
- REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

NOT SURVEYED, NO
ACCESS TO THESE AREAS

1
C-5

CLASSROOM AREA
NTS

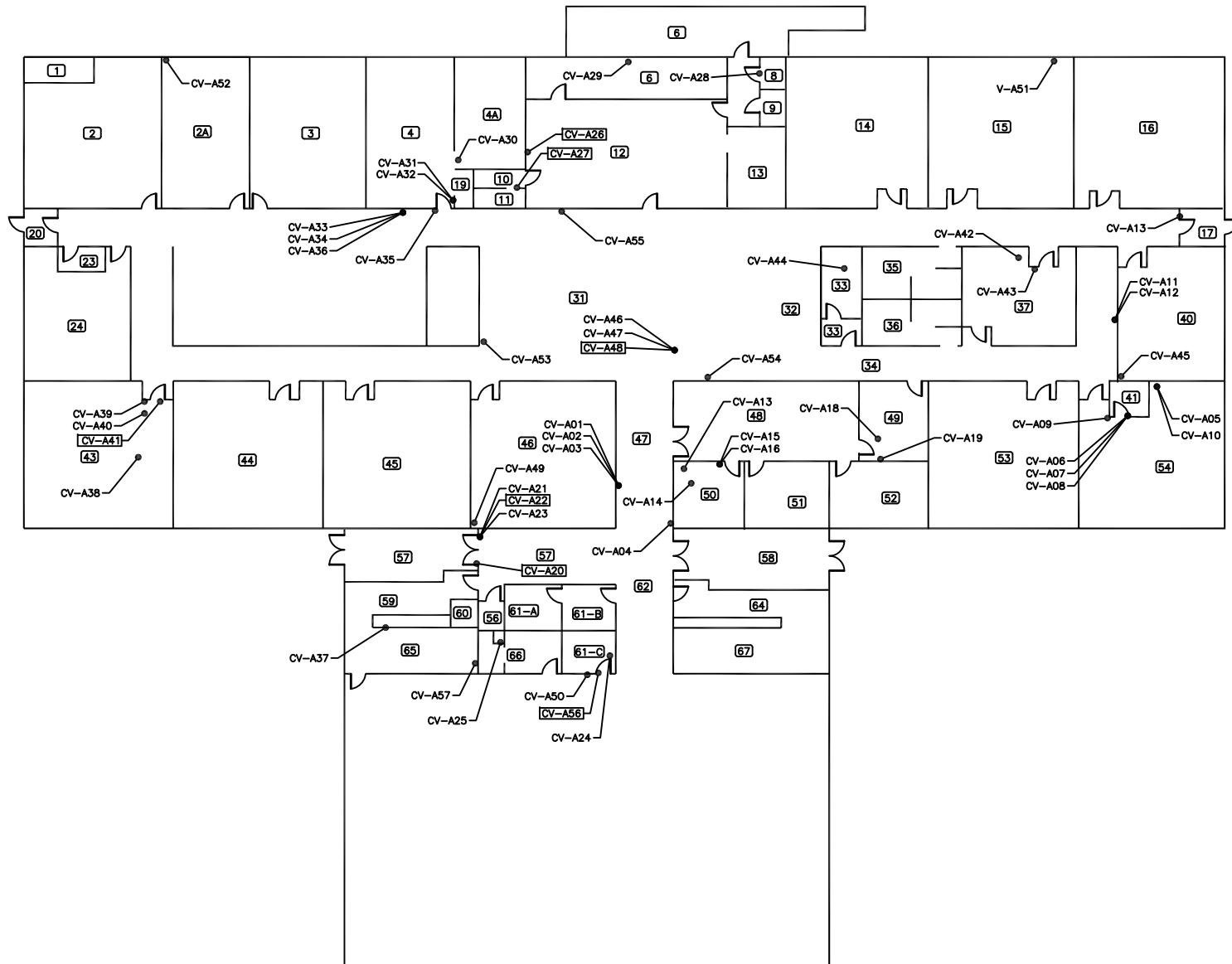


YUKON RIVER INTER-TRIBAL
WATERSHED COUNCIL -
CITY OF CHEVAK

OLD CHEVAK SCHOOL
CHEVAK, ALASKA
LEAD SAMPLE LOCATIONS



DRAWN: CTO	DATE: 09/05/2017
CHECK: RAF	DWG.NO:
FILE #:	C-5
7559-SL	



CHEVAK SCHOOL FLOOR PLAN
Scale: 3/64" = 1'-0"

LEGEND

- CV-AXX ASBESTOS SAMPLE LOCATIONS
- CV-AXX POSITIVE ASBESTOS SAMPLE LOCATIONS
- XX ROOM NUMBERS USED FOR SURVEY PURPOSES

**CHEVAK SCHOOL
CHEVAK, ALASKA
ASBESTOS
SAMPLE LOCATIONS**

PROJECT NO.
5423

DESIGNED:
BLM

DRAWN:
RJV

CHECKED:
TBS

SCALE:
3/64" = 1'-0"

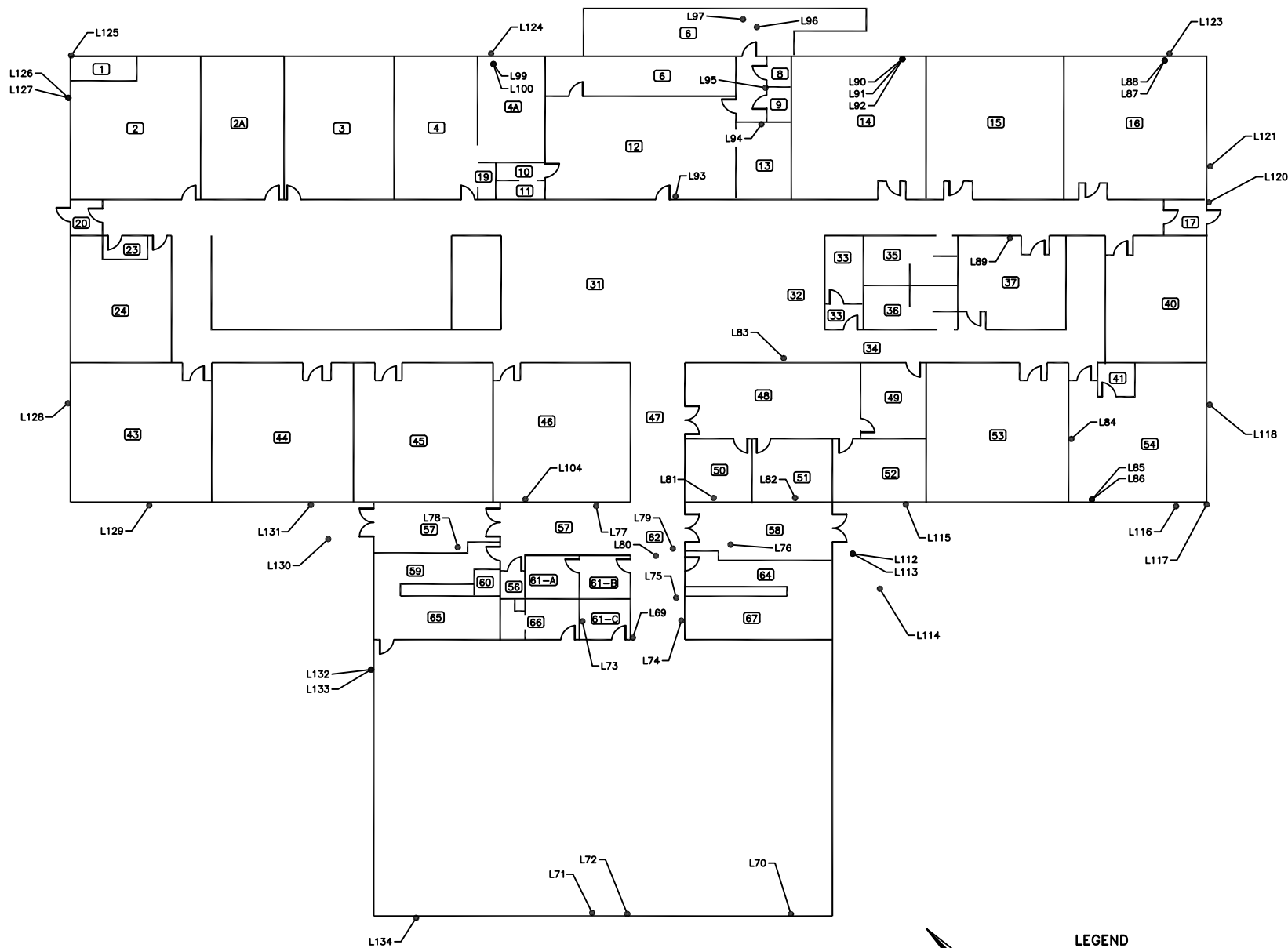
DWG. TITLE:
SAMPLES

JOB No.
5423

DATE:
1/8/00

SA-1

of 2



CHEVAK SCHOOL FLOOR PLAN
Scale: 3/64" = 1'-0"

LEGEND

- LXX PAINT TEST LOCATIONS
- XX ROOM NUMBERS USED FOR SURVEY PURPOSES

**CHEVAK SCHOOL
CHEVAK, ALASKA
LEAD PAINT
TEST LOCATIONS**

PROJECT NO.
5423

DESIGNED:
BLM

DRAWN:
RJV

CHECKED:
TBS

SCALE:
3/64" = 1'-0"

DWG. TITLE:
SAMPLES

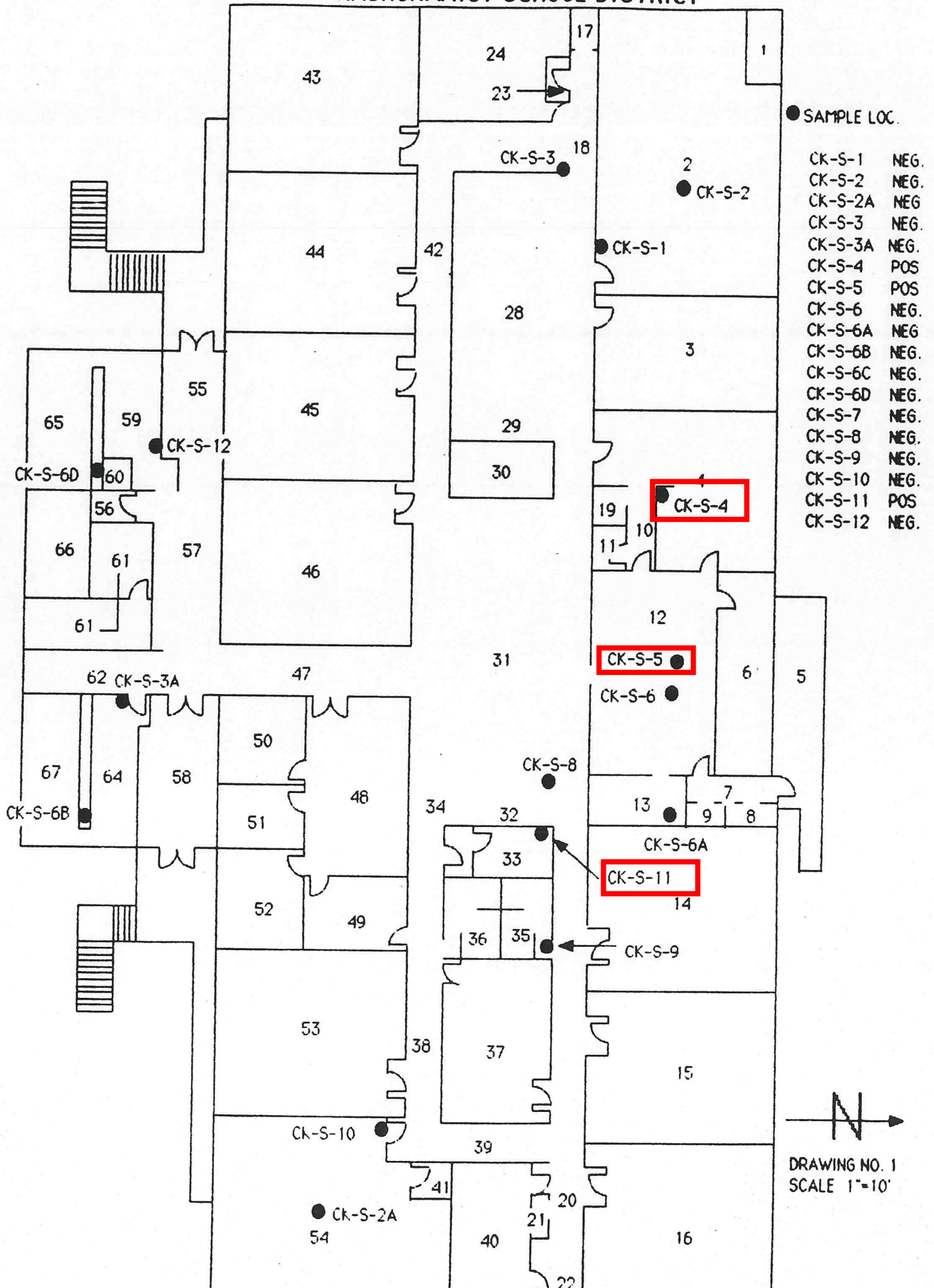
JOB No.
5423

DATE:
1/8/01

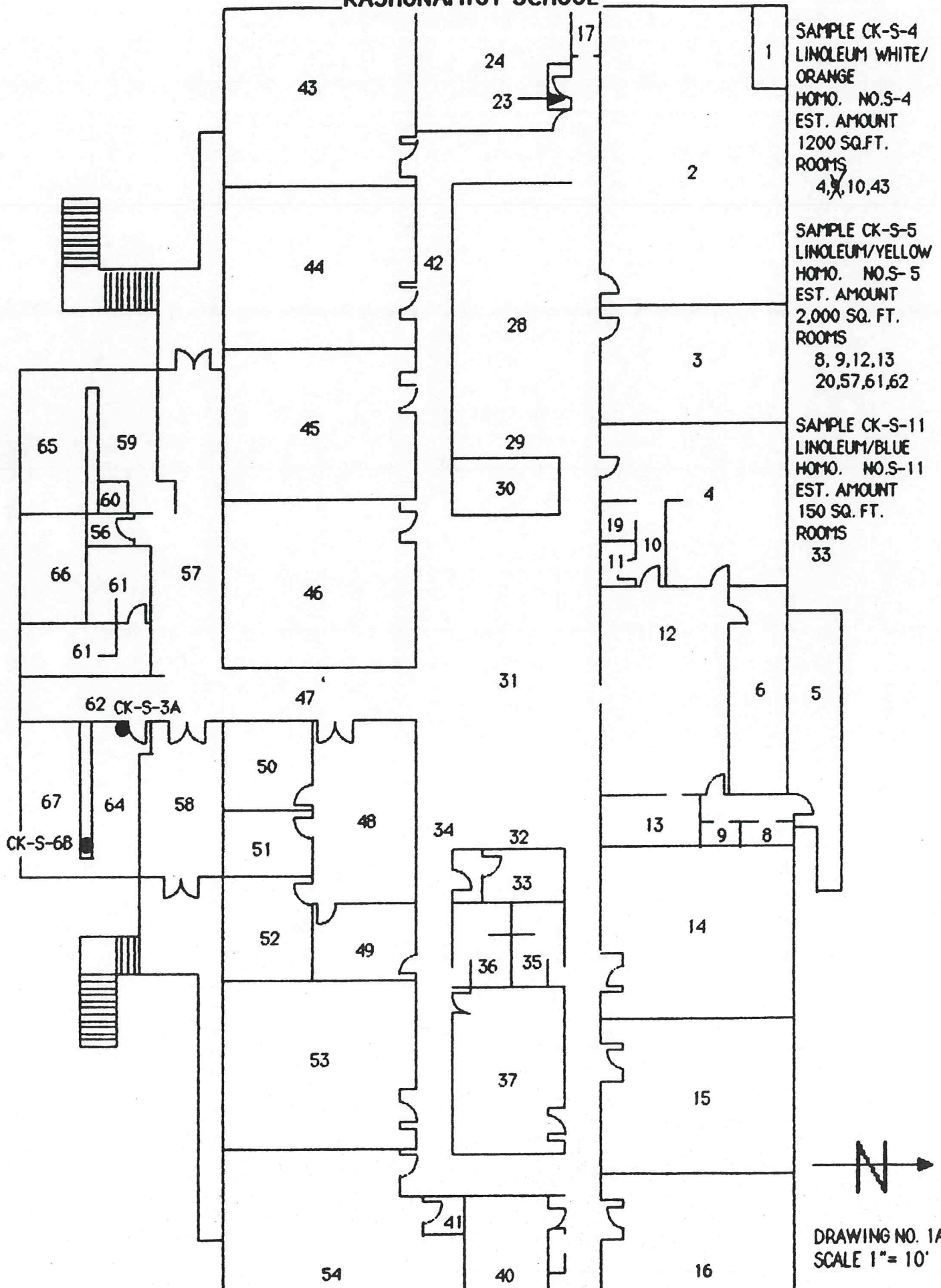
SL-1

of 2

KASHUNAMIUT SCHOOL DISTRICT



KASHUNAMIUT SCHOOL



APPENDIX D

Key Photos



Photo 1: View of Gym showing typical conditions and stored materials in the interior of the building.



Photo 2: View under Gym showing typical condition of the underside of the building.



Photo 3: View under "Classroom Wing" showing typical condition of the underside of the building.



Photo 4: Asbestos-containing troweled-on ceiling texture.



Photo 5: One pattern of asbestos-containing sheet vinyl.



Photo 6: Another pattern of asbestos-containing sheet vinyl.



Photo 7: Asbestos-containing black floor tile mastic under vinyl floor tiles under rubber floor in Gym.



Photo 8: Asbestos-containing high temperature wiring insulation in light fixture.



Photo 9: Asbestos-containing penetration putties on refrigerant lines in walk-in freezer in Kitchen.



Photo 10: Asbestos-containing patch tars on ridge vent, equipment, and screw heads.



Photo 11: Loose 5-gallon bucket of asbestos-containing roof patching tar under building.



Photo 12: Loose pile of old windows with asbestos-containing window putties under building.



Photo 13: Close-up view of asbestos-containing window putties and sealants



Photo 14: Loose pile of asbestos-containing "Transite" piping under building.



Photo 15: Close-up of loose pile of asbestos-containing "Transite" piping under building.



Photo 16: Loose-fill asbestos-containing Vermiculite insulation in soils under building.



Photo 17: Close-up of asbestos-containing loose-fill Vermiculite insulation in soils under building.



Photo 18: Loose lead-acid battery laying on ground next to building.



Photo 19: PCB-containing light ballast.



Photo 20: Loose containers of heating system glycol inside the building.



Photo 21: Loose container of heating system glycol under building.



Photo 22: 55-gallon drum of oil under building.



Photo 23: Loose containers of corrosive chemicals under building.



Photo 24: Loose cathode-ray computer monitors and miscellaneous chemicals.