

**UTICA MINE CAMP
SITE CHARACTERIZATION REPORT**

Prepared for

NANA REGIONAL CORPORATION
1001 East Benson Boulevard
Anchorage, Alaska 99508



Prepared by

TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.
3305 Arctic Blvd, Suite 102
Anchorage, Alaska 99503

329 2nd Street
Fairbanks, Alaska 99701

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EXECUTIVE SUMMARY

This report summarizes a Site Characterization including a Hazardous Materials Survey conducted by Travis/Peterson Environmental Consulting, Inc. (TPECI). The old Utica Mine camp site is located 20 miles southwest of Deering, Alaska in the Northwest Arctic Borough, Latitude 66° 04' 32" N, Longitude 162° 43' 02" W. The former mine encompasses approximately seven miles along the Inmachuk River drainage (Figure 1).

Site History: According to SLR International Corp. (SLR), placer mining was accomplished at the Utica Mine using hydraulic mining, shoveling, drifting, and dredging. Once the Fairhaven Ditch (a viaduct) was completed, Imuruk Lake provided hydraulic head to support placer mining operations. Placer mining operated along a seven mile stretch of the Inmachuk River drainage for over 40 years until World War II. After the war, placer mining was intermittent through the 1960's. GEM mined the area from the 1960s to about 1980 (SLR, 2005).

NANA is the current owner of the property, which it received from the United States pursuant to the Alaska Native Claims Settlement Act. The roads at the site are owned by the State of Alaska.

According to the Phase I Environmental Site Assessment (ESA) performed by SLR, the entire seven mile stretch of the Inmachuk River drainage located within the Utica Mine was heavily placer mined from 1900 until about 1980 (SLR, 2005). Limited surface soil sampling conducted by SLR personnel indicated elevated concentrations of heavy metals including mercury, arsenic, lead, and petroleum, oil, and lubricants (POLs) in some parts of the Utica Mine camp and the four dump sites.

Geologic Setting: The geology of the upper Inmachuk basin has been described by Herreid (1966). According to Herreid, the granitic rocks on the Seward Peninsula are considered to be of Mesozoic age. The granitic rocks intrude an older package of metamorphosed sedimentary rocks (schist) and limestone (marble). Lithologic contacts are folded on both minor and major scales, with the axial planes of folds often having moderate dips.

Mineral deposits containing lead, zinc, copper, and other metallic minerals are known to be present within the Inmachuk River drainage. Herreid (1966) reports anomalous lead values within stream sediments over a seven mile distance of the Inmachuk River below the mineral occurrences in Hannum Creek and the Pinell River.

Within the stream sediment progressively decreasing lead anomalies for seven miles were noted below Hannum Creek and the Pinnell River. Tin anomalies were also noted associated with the Hannum Creek deposit which is partially within the Inmachuk River basin. Cinnabar, arsenic, and mercury may also be present. Brooks (1907).

The placer gold that has been mined from the Inmachuk River drainage represents the erosion product of a former lode gold system that was emplaced within this

geologic/geographic province. Lode gold systems characteristically include highly anomalous levels of mercury, lead and arsenic. The mercury mineral, cinnabar, was recovered from dredge concentrates from the Inmachuk River. Cadmium, although not as commonly associated with gold systems, is rarely absent from mineral deposits of lead. There are numerous documented lead deposits within the Inmachuk drainage (e.g. Hannum Creek, Cunningham Creek, etc.)

Site Reconnaissance: TPECI personnel conducted a site reconnaissance following the procedures outlined by the American Society for Testing and Materials Standard E-1527-00. The site reconnaissance was conducted on June 27 and 28, 2007 and included a thorough inspection and inventory of each structure and piece of equipment at the site. Soil samples were collected within the camp for mercury and other metals, petroleum hydrocarbons, and polychlorinated biphenyls (PCBs).

Conclusions and Recommendations: Soil sample results indicate discrete areas of petroleum-related and mercury contamination within the industrial section of the camp. This section of the camp includes the machinist shop, gold house, electrical/carpenter shop, power generating shed, and an old tin shed used to store fuel oil located at the south end of the camp near the parts dump. Arsenic was detected in all sampling locations, and TPECI personnel surmise that the widespread occurrence of arsenic is indicative of the natural background levels.

The bunkhouse areas, located uphill from the industrial area, appeared free from environmental degradation. TPECI personnel gathered about ninety (90) empty and partially empty 5-gallon fuel cans and placed them in the tin fuel storage shed. There is a parts washer located in the main bay of the machinist shop. Its liquid contents were transferred into a 55-gallon drum and labeled. Based on sampling results, this drum contains mostly diesel range organic (DRO) compounds. This drum and others containing fluids will need to be over packed and hauled off site for disposal during the 2008 mine camp cleanup.

The discrete areas of contamination are limited to (1) mercury-impacted soil beneath and behind the former gold house; and (2) fuel-impacted soils within and surrounding the machinist shop. The lead-contaminated soil must be excavated, packed into drums, and disposed as RCRA hazardous waste. The POL-contaminated soil must be excavated and disposed of in accordance with applicable regulations. All heavy equipment had the fluids drained and captured in September 2007. All additional cleanup work will be completed in the summer of 2008.

The buildings and some of the equipment in the camp date to the early 1900's and may have historic value. As a courtesy, the State of Alaska Historic Preservation office should be contacted prior to demolition or removal of any structures at the site.

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1.0 INTRODUCTION

Travis/Peterson Environmental Consulting, Inc. (TPECI) performed a Site Characterization of the Utica Mine camp located at approximately 66° 04' 32" N latitude, and 162° 43' 02" W longitude in the Northwest Arctic Borough, Alaska (Figure 1). The camp is about 20 miles south of Deering, Alaska.

The scope of work for this survey included:

- Geochemical assessment of soils within the camp area;
- Quantification and containment of fluids (Petroleum, oil, and lubricants (POLs)) on site;
- Identification and quantification of all remaining process reagents;
- Identification and quantification of the extent of any spilled or spent process reagents or POLs;
- Identification and quantification of asbestos containing materials within the 23 remaining structures;
- Identification and quantification of lead based paint in any structures or equipment; and
- Identification and quantification of the structural integrity of the 23 remaining structures for demolition purposes.

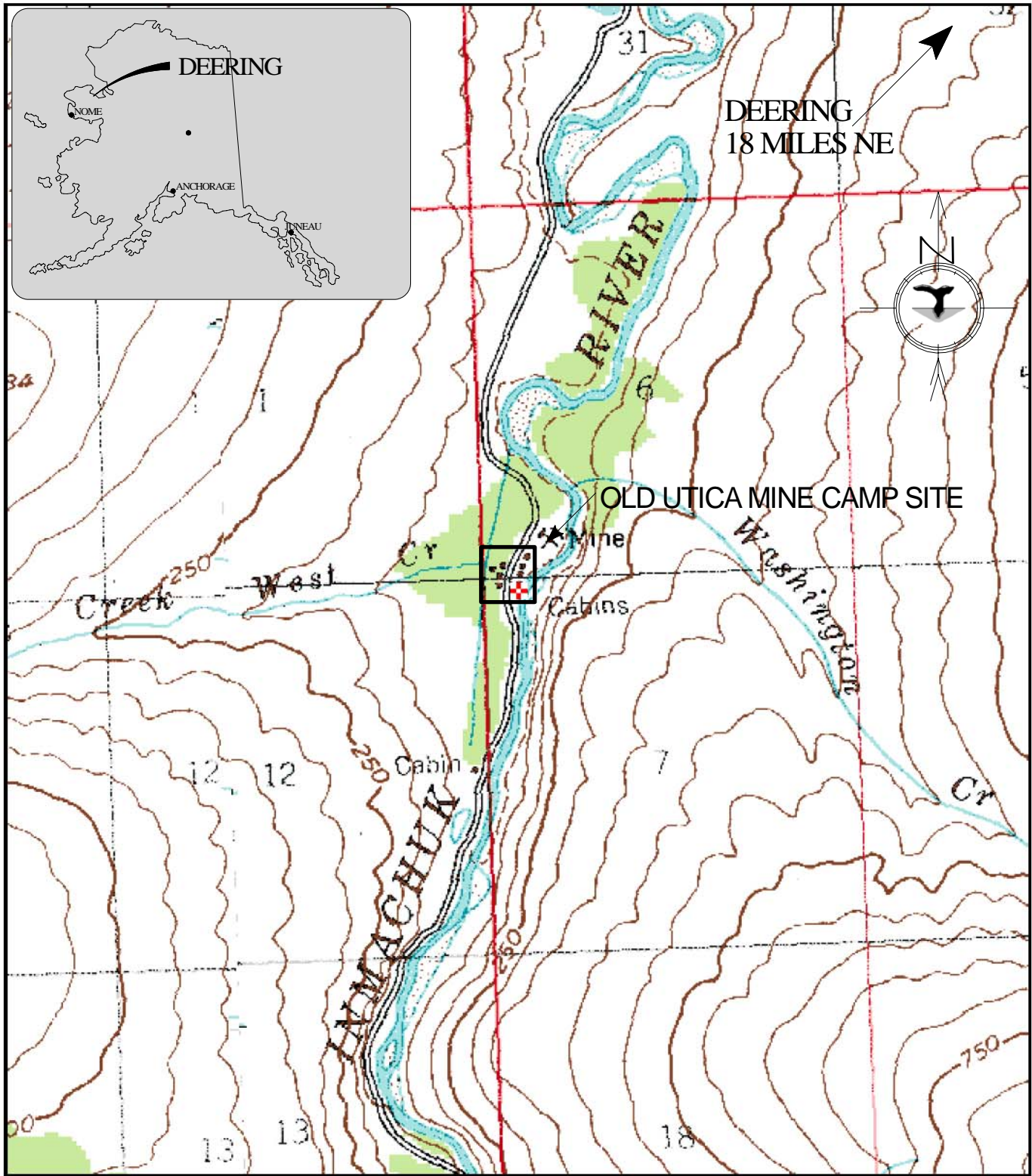
Environmental impairment of a property may result from activities such as illegal or unreported dumping or spilling of hazardous waste materials. The presence of contaminants at a property may not always be apparent, and the completion of a Hazardous Materials Survey cannot guarantee that contamination does not exist. The scope of services executed for this project comprises a detailed survey for asbestos, lead paint, or other conditions or potential hazards.

This report has been prepared for the exclusive use of NANA Regional Corporation, Inc. (NANA) and their agents in accordance with generally accepted professional consulting practices. No warranty, expressed or implied, is made. The findings contained herein are relevant to the date of TPECI's site visit and should not be relied upon to represent conditions at a later date.

In the event that changes in the nature, usage, or layout of the site or nearby properties are made, the conclusions and recommendations contained in this report may not be valid. If additional information becomes available, it should be provided to TPECI so that the original conclusions and recommendations can be modified as necessary.

2.0 SITE DESCRIPTION

The old Utica Mine camp is set up in the typical manner of mine camps of the early 1900's. The camp sits above the west bank of the Inmachuk River. The main industrial and processing area of the camp is situated downhill from the residential portion (Figure 2). Most of the environmental impacts documented within the camp are confined to this industrial zone. All bunkhouses are located uphill of the industrial area.



DEERING
18 MILES NE

OLD UTICA MINE CAMP SITE

65° 56' 34"N, 162° 58' 25"W (NAD27)
USGS Bendeleben D-2 (AK) Quadrangle
 Projection is UTM Zone 3 NAD83 Datum

M=15.865
 G=1.849

TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.
 329 2ND STREET
 FAIRBANKS, ALASKA 99701

NANA REGIONAL CORPORATION
 UTICA MINE CAMP

FIGURE 1
 LOCATION & VICINITY

PROJECT NO: 1080-19

FILE: PROJECTS/1080/19/FIGURES/FIGURE 1.SKF

DATE: 03/16/2007

SCALE: AS SHOWN

3.0 SITE HISTORY

According to SLR, placer mining was accomplished at the old Utica Mine site using hydraulic mining, shoveling, drifting, and dredging. Once the Fairhaven Ditch (a viaduct) was completed, Imuruk Lake provided hydraulic head to support placer mining operations. Placer mining operated along a seven mile stretch of the Inmachuk River drainage for over 40 years until World War II. After the war, placer mining was intermittent through the 1960's. GEM mined the area from the 1960's to about 1980 (SLR, 2005).

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SLR personnel conducted limited surface soil sampling during the summer of 2005. Sample results indicated elevated concentrations of heavy metals including mercury, arsenic, lead, and POLs in some parts of the Utica Mine camp and the four dump sites.

3.1 PERSONAL INTERVIEWS

During the site inspection, Mr. Gilbert Barr, resident of Deering, accompanied TPECI personnel to the mine and provided valuable historic information and assistance during field work.

3.2 GEOLOGIC SETTING

The geology of the upper Inmachuk basin has been described by Herreid (1966). According to Herreid, the granitic rocks on the Seward Peninsula are considered to be of Mesozoic age. The granitic rocks intrude an older package of metamorphosed sedimentary rocks (schist) and limestone (marble). Lithologic contacts are folded on both minor and major scales, with axial planes of folds often having moderate dips.

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commonly associated with gold systems, is rarely absent from mineral deposits of lead. There are numerous documented lead deposits within the Inmachuk drainage, e.g. Hannum Creek, Cunningham Creek etc.)

4.0 SITE RECONNAISSANCE

TPECI personnel conducted a site reconnaissance to inventory potentially hazardous materials within the camp and buildings and to visually inspect the two dump sites near the camp. The site reconnaissance was conducted on June 27 and 28, 2007.

TPECI personnel inspected each structure in the camp for integrity, safety, and environmental hazards. Each piece of equipment in the camp area was also inspected for the presence of hydraulic fluids, oil, and fuel.

4.1 BUILDINGS

4.1.1 Camp Industrial Area

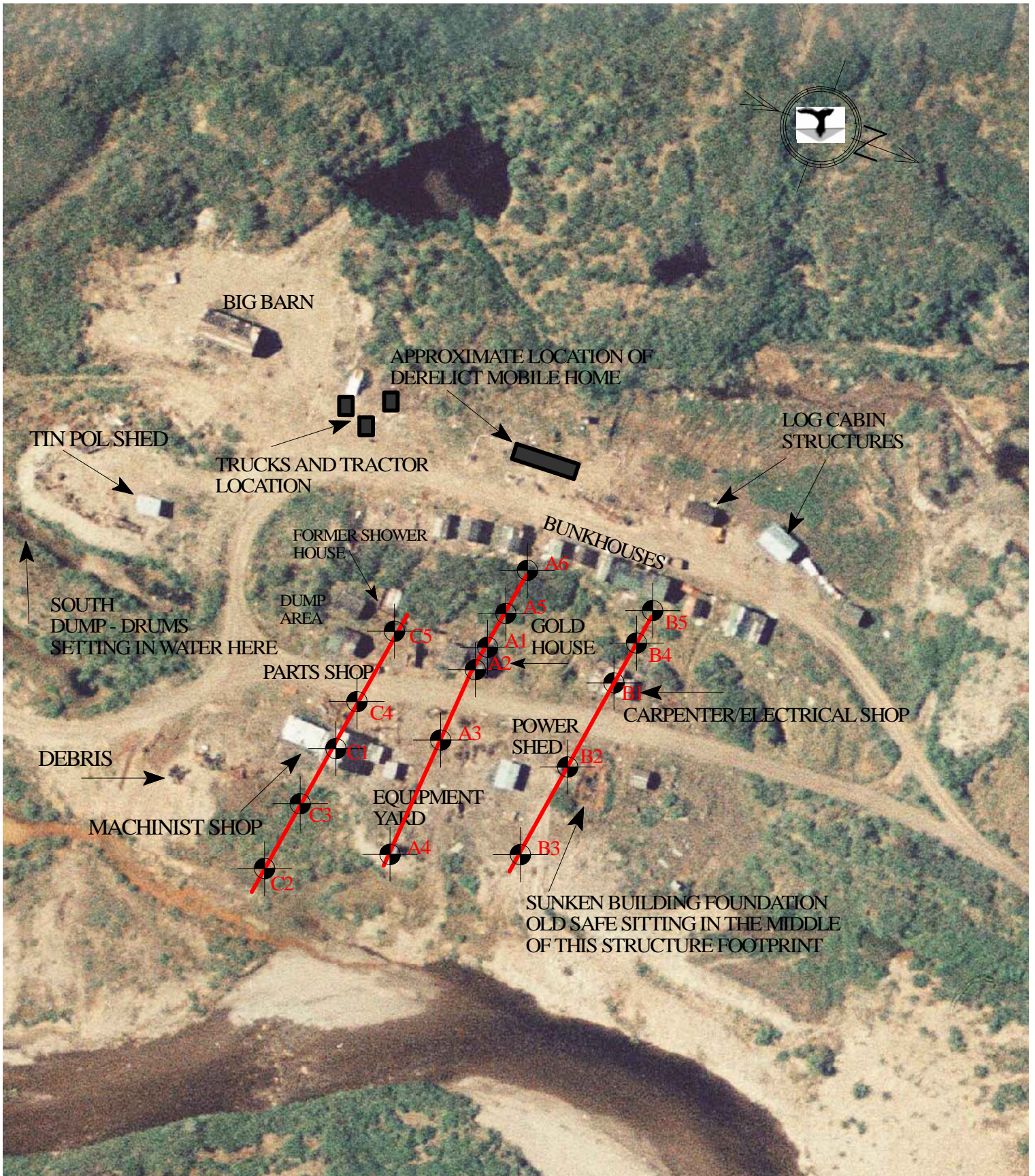
The industrial area includes a machinist shop of wood construction that consists of three shop bays (Figure 2). The main bay of the shop is 30 feet by 30 feet. POL soil staining was prevalent throughout the shop areas and will need to be excavated and treated.

TPECI personnel also observed a parts washer made from a 55-gallon drum on a stand. The parts washer was full of oily liquid. These fluids were sampled and analyzed for petroleum hydrocarbons and volatile organic compounds. Analytical results are presented in Table 4.

TPECI transferred the liquids from the parts washer into a 55-gallon drum found outside the shop. The drum appeared in good condition. TPECI labeled the drum and stored it inside the machinist shop.

TPECI personnel estimated 15 to 20 cubic yards of contaminated soil existed within and surrounding the machinist shop. During collection of a soil sample from underneath the parts washer, TPECI personnel noted that the soil was impacted within the top 12 inches when sampling down to 20-24 inches below the soil surface using a hand auger. The heavier staining appeared confined to the top foot of soil.

The gold house was situated west of the gravel roadway from the machinist shop. This building was in disrepair. TPECI personnel recommend demolishing the structure following removal of all equipment, to enable complete cleanup of contaminated soil beneath and surrounding the building.



AERIAL PHOTOGRAPH DATES TO 1978
 DOES NOT REFLECT CURRENT CONDITIONS AT UTICA MINE CAMP

TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.
 329 2ND STREET
 FAIRBANKS, ALASKA 99701

NANA REGIONAL CORPORATION
 UTICA MINE CAMP
 SITE RECONNAISSANCE

FIGURE 2
 SITE PLAN

PROJECT NO.: 1080-19

FILE: PROJECTS/1080/19/FIGURES/FIGURE 2.SKF

DATE: 08/03/2007

SCALE: AS SHOWN

Soil samples collected underneath the floor boards and behind the structure indicated high concentrations of mercury (1,570 mg/kg), lead (13,600 mg/kg), arsenic (755 mg/kg), and DRO (2,050 mg/kg). These values exceeded ADEC soil cleanup levels (Tables 4 and 5). Using the 20-times rule, mercury and lead may qualify as a RCRA waste. Because of the potential RCRA waste issues, TCLP testing was performed for lead, mercury, and arsenic on sample number A-5. TCLP arsenic was non-detect, mercury was 0.0038 mg/L, and lead was 114 mg/L. None of the metals, except lead, exceeded EPA RCRA levels. The RCRA action level for lead is 5 mg/L therefore the soil must be drummed and shipped off-site as hazardous waste by a certified handler.

Inside the gold house is a Denver Equipment Co. Gardner-Denver ball mill (Appendix A). TPECI personnel observed no evidence of balls or rods within or near the mill. TPECI personnel presumed that these items were taken from the site. Field personnel also presumed that the mill was originally used to crush ore for assay rather than production purposes. This assumption is based on the fact that crushing and grinding equipment was bench scale and not production scale. The presence of mercury in high concentrations in barren spoils outside the back of the building bolsters the theory that lode assay occurred at the site.

TPECI personnel estimated that approximately five to ten yards of heavy-metal contaminated soil must be excavated, drummed, and removed from the gold house. This building will need to be demolished prior to soil excavation. The soil samples collected from this location were reanalyzed at Test America analytical laboratories for toxic characteristic leach procedure (TCLP) arsenic, lead, and mercury to determine if the contaminant concentrations within the soil qualify as RCRA hazardous waste. The results of this analysis indicate the lead (114 mg/L) is the only heavy metal in high enough concentrations to make the contaminated soil RCRA hazardous waste. Arsenic was non-detect and mercury was detected at a concentration of 0.00388 mg/L which is below the cut off for RCRA hazardous waste. Further, the low TCLP results indicate that mercury is bound in the soil matrix and is not readily transported in solution.

An electrical/carpenter shop was located north of the gold house. TPECI personnel inspected this shop and found a broken bag of what looked like friable asbestos. A sample of this material was collected and analyzed. Sampling results are listed in Table 6. Chrysotile material (asbestos) was detected in the sample. It must be properly disposed. All applicable requirements under state and federal law, including 40 C.F.R. Part 61, 29 C.F.R. Part 1910.1001, and 18 AAC Chapter 60 will be followed in handling and disposing of this material. This structure is also in disrepair and should be demolished for safety reasons.

To the south of the electrical/carpenter shop and gold house was the parts storage shop. Upon inspection, TPECI personnel noticed the interior of the shop was full of miscellaneous parts for vehicles and equipment. The parts were stored in wood bins that were built into the structure. The building was 20 feet by 20 feet and made of wood. TPECI personnel estimated that there is approximately one cubic yard of metal debris in the building. Some of the parts may be salvageable.

A small metal shed was at the south end of the mine camp. TPECI personnel refer to it as the tin POL shed. The wood floor boards in the shed were heavily stained from petroleum hydrocarbons. There were a few five-gallon “Chevron” fuel cans located inside and immediately outside the building. A soil sample was collected from beneath the floor boards (Table 4).

Concentrations of DRO were detected in the soil sample; however, they were below ADEC soil cleanup levels. TPECI personnel noted that upon breaking through the floor board to obtain the sample, the soil appeared relatively free of petroleum staining. The ground surface immediately in front of the shed was heavily stained and will need to be treated (Appendix A).

During the site reconnaissance, TPECI personnel noticed the “Chevron” cans spread throughout the entire camp. Some of the cans were full or partially full, many were empty. Upon completion of the site reconnaissance, TPECI personnel and Mr. Gilbert Barr drove through the camp and collected the five-gallon cans and placed them inside the POL shed for temporary storage. TPECI personnel counted 92 five-gallon cans in the shed.

4.1.2 Camp Residential Area

TPECI considers the portion of the mine camp located uphill from the gold house and machinist shops as the residential area (Figure 2). It contains bunkhouses, shower, outhouses and a building with a kitchen/mess hall. Most of the structures dated to the early 1900’s. However, there was a large mobile home present. This trailer is structurally unsafe. TPECI believes it does not have historical significance and needs to be demolished.

Most of the bunkhouses are structurally sound except the kitchen/mess hall building. Two of the bunkhouses, located on the north end of the camp, are of log construction and appear in good shape.

Many of the structures contain personal effects from the last inhabitants of the camp along with miscellaneous items such as a washing machine, furnace, oil heaters, snow machine batteries, and bed frames. Several five-gallon fuel cans were removed from this area of the camp and placed in the POL shed for temporary storage. Several drums were noted outside many of these buildings. Some had liquid contents and will need to be over-packed and hauled off site for disposal.

The following table summarizes the structures inspected by TPECI personnel and their condition. Some structures will need to be demolished to complete cleanup of contaminated soil underneath and behind the buildings. Some structures, such as the mobile home, must be demolished because they present a potential safety hazards.

**TABLE 1
 UTICA MINE CAMP STRUCTURES**

STRUCTURE	LOCATION	CONSTRUCTION	CONDITION	DEMOLISH Y/N
Machinist shop	Lower camp	Wood frame, three bays, main is 30x30 feet	Fair-good	N
Gold house	Lower camp		poor	Y, for soil cleanup and safety purposes
Parts building	Lower camp	Wood frame, 20 x20 feet	good	N
Electrical shop	Lower camp	Wood frame, 30 x12 feet	fair	Y, for cleanup purposes
Generator shed (power house)	Lower camp	Wood-tin,	good	Can be moved rather than demolished
Tin POL shed	South end of camp	2x4 and tin, small building	fair	Can be moved rather than demolished
Big barn	South end of camp, uphill	Wood frame	Good, contains miscellaneous non-hazardous items inside.	N
Camp Residential Structure Inventory- Heading South to North, beginning along east side of road.				
Bldg 1. Bunkhouse	Upper camp	Wood frame	fair	N
Bldg. 2 Bunkhouse	Upper camp	Wood frame, labeled "Hotel Coomuck"	Fair, snow machine battery inside	N
Bldg. 3 Bunkhouse	Upper camp	Wood frame	Fair, heater present inside	N
Bldg. 4 Bunkhouse	Upper camp	Wood frame with plywood	fair	N
Bldg. 5 Bunkhouse	Upper camp	Wood frame	Fair, wash machine, furnace, ironing board, and kerosene heater present	N
Bldg. 6 Bunkhouse	Upper camp	Wood frame, Bunkhouse addition	ACMs sample collected here from wallboard	N
Bldg. 7 Bunkhouse/kitchen	Upper camp	Wood frame	Fair, Freezer, sink, range hood, cabinets, bed frame, table, woodstove. Drums outside bldg.	N
Bldg. 8 Log cabin	Upper camp	Log cabin with wood floor	Good, sink, cabinets.	N
Bldg. 9 Log cabin	Upper camp	Log cabin with wood floor	Good, old mattress inside	N
Bldg. 10 Bunkhouse	Upper camp	Wood frame	Fair, labeled "Villa Ductape"	N
Bldg. 11 Bunkhouse	Upper camp	Wood frame	Fair, with outhouse in back and empty steel tank setting next to it.	N
Bldg. 12 Bunkhouse	Upper camp	Wood frame	Fair, old tank inside bldg, drums setting outside	N
Bldg. 13 Trailer	Upper camp	Mobile home-modern	derelict	Y
Bldg. 14 Bunkhouse	North of camp, along the road	Wood frame	Good, belonged to Elmer Thomas. Anthracite stove lying outside.	N

4.2 HEAVY EQUIPMENT

As part of the site reconnaissance, TPECI personnel inventoried all heavy equipment, drums and miscellaneous metal debris at the site. The following list includes all heavy equipment located in the equipment yard next to the machinist shop and equipment located inside buildings that need to have fluids drained and captured as part of the site cleanup efforts.

**TABLE 2
 EQUIPMENT YARD INVENTORY LIST**

MAKE	MODEL	GENERAL DESCRIPTION	HYDRAULICS/OIL Y/N	BATTERIES LEAD-ACID Y/N	DRAIN FLUIDS Y/N
Caterpillar	D-7	1950's era	Y	N	Y
Military	6 X 6	Next to D-7	N	N	N
Gen-Set		generator	Y	Y	Y
Caterpillar	motor	diesel	Y	N	Y
Caterpillar	motor	Skid mounted	Y	N	Y
Caterpillar	motor	Equipment motor	Y	N	Y
Caterpillar	PU#9J259	pump	Y	N	Y
Caterpillar	D6 or 7	1947 bulldozer	Y	N	Y
John Deere	tractor	#40, track mounted	Y	Y	Y
Trucks	1960-70's era	Pickup trucks	Y	Y	Y
John Deere 440	Serial No. 444425	Backhoe	Y	Y	Y
Caterpillar	D-7	Dozer with winch	Y	Y	Y
1940's	Dump truck		Y	N	Y

**TABLE 3
 MACHINIST SHOP EQUIPMENT INVENTORY LIST**

MAKE	GENERAL DESCRIPTION	HYDRAULICS/OIL Y/N	LOCATION	BATTERIES LEAD-ACID Y/N	DRAIN FLUIDS Y/N
Greaves & Klusman	Bed lathe, in excess of one ton in weight, 12 feet long, stained soil beneath.	This equipment is inert, however metal shavings and machine oil in tray were observed.	Main shop bay.	N	Y
Rodgers Hydraulics, Inc.	Hydraulic press, in excess of one ton in weight, stained soil beneath.	This equipment is inert however hydraulics are present. See photo log.	Main shop bay.	N	Y
Deutz diesel	Air diesel compressor, model no. 6422801, 1092/02	See photo log.	Back shop extension (12' by 30')	N	Y

4.3 FUEL STORAGE TANKS

No underground storage tanks were observed on site during the reconnaissance. One above ground storage tank was observed in the bunkhouse section of the camp (Appendix A). It looked intact and there was no evidence of leaks at the site of the tank. Heavy equipment throughout the camp has had fuel stored in fuel tanks for several years. TPECI personnel observed some ground surface staining beneath several pieces of heavy equipment that will need to be remediated.

4.4 CHEMICAL MATERIALS

Petroleum hydrocarbons were noted in the machinist shop parts washer. Fuel oil staining on the ground in several areas throughout the camp was also observed. There were some old broken lead acid batteries on the ground on the west side of the machinist shop.

4.5 REFUSE AND DEBRIS

Clothing, lead-acid batteries, 5-gallon Chevron fuel cans, drums and metal debris were present throughout the camp and within each structure. There are at least three areas that have been used for disposal. These areas were inspected and appeared to contain metal debris that was largely inert (all accessible drums in the landfills were inspected for contents). TPECI recommends that all refuse and inert metal debris be consolidated and placed into a single permitted monofill on site.

4.6 SITE DRAINAGE

The area within and surrounding the camp is hilly. The mine camp is situated on a hill slope that drains east toward the Inmachuk River.

4.7 SOIL AND WATER ANALYTICAL RESULTS

**TABLE 4
 SOIL/WATER SAMPLING RESULTS FOR PETROLEUM, OIL, AND LUBRICANTS
 AND VOLATILE ORGANIC COMPOUNDS**

SAMPLE ID	DATE	MATRIX	DRO	RRO	GRO	Bz	TOL	ETB	XYL
ADEC Soil Cleanup level*	mg/kg	SOIL	200	2,000	100	200	27,400	13,700	274,000
F-1	06/27/07	Soil	2,080	N/A	ND	ND	ND	ND	ND
C-1	06/27/07	Soil	ND	N/A	ND	ND	ND	ND	ND
POL Shed	06/27/07	Soil	176	N/A	ND	ND	ND	ND	ND
PH	06/27/07	Soil	5,230	2,520	N/A	N/A	N/A	N/A	N/A
Trip Blank	06/27/07	Soil	N/A	N/A	ND	ND	ND	ND	ND
SAMPLE ID	DATE	MATRIX	DRO	GRO	Bz	Acetone	Methylene Chloride	Chloroethane	Chloromethane
ADEC MCL	mg/L	WATER	1.5	1.3	0.005	3.65	0.005	0.29**	0.066**

PW	06/27/07	water	545	ND	ND	.147	0.0038	0.0037	0.0054
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Notes:
BOLD – bold lettering indicates analyte detected above ADEC cleanup levels
 F-1 - sample collected behind gold house
 C-1 – fuels sample collected at transect C, location 1
 POL shed- sample collected from underneath the floorboards in the tin shed located at the south end of camp
 PW – sample collected from fluids found in parts washer
 PH – sample collected from within the former power generator house, no polychlorinated biphenyls detected in this sample.
 DRO – diesel range organic compounds
 GRO – gasoline range organic compounds
 Bz – benzene
 TOL – toluene
 ETB – ethylbenzene
 XYL - total xylenes
 ND – analyte not detected
 N/A- analysis not performed
 MCL – maximum contaminant level for groundwater
 * - indicates the ADEC soil cleanup levels for the Arctic Zone ** - indicates ADEC calculated cleanup level-not published

**TABLE 5
 SOIL SAMPLING RESULTS FOR METALS**

SAMPLE ID	DATE	AS	BA	CD	CR	PB	HG	SE	AG
ADEC Soil Cleanup Levels*	mg/Kg	8.0	9,600	140	410	400	26	680	680
A-1	06/27/07	15.5	80	ND	16.1	18.6	0.712	ND	ND
A-2	06/27/07	36.5	47.9	ND	12.6	25.9	4.06	0.666	ND
A-3	06/27/07	33.1	41.8	0.662	20.1	26.4	0.197	ND	ND
A-4	06/27/07	106	75.3	ND	19.3	20.4	0.145	0.739	ND
A-5**	06/27/07	755	108	1.92	37.8	13,600	1,570	4.12	27.6
A-6	06/27/07	14	254	ND	39.3	15.9	2.63	ND	ND
B-1	06/27/07	27.6	66.2	0.742	24.2	20.4	1.43	0.706	ND
B-2	06/27/07	18.3	83.2	0.614	15.8	60.2	4.26	0.638	ND
B-3	06/27/07	29.1	43.7	0.557	14.6	25.3	ND	ND	ND
B-4	06/27/07	19.7	66.5	ND	15.4	25.3	14.8	0.744	ND
B-5	06/27/07	11.4	101	ND	14.9	7.32	0.132	ND	ND
C-1	06/27/07	38.3	60.4	0.616	11.6	12.5	0.109	0.996	ND
C-2	06/27/07	25.6	40.1	ND	10.1	6.88	ND	ND	ND
C-3	06/27/07	22.1	86.9	ND	14.1	18.9	0.142	0.584	ND
C-4	06/27/07	14.3	279	ND	33.8	31.4	0.375	ND	ND
C-5	06/27/07	22.3	51.8	ND	14.7	7.86	ND	1.07	ND

NOTES:
 AS – Arsenic * - Denotes Cleanup levels used are from Table B1, Arctic Zone, Ingestion.
 BA- Barium ** - Denotes the sample taken behind the camp gold house in spoils pile.
 CD- Cadmium PB- Lead
 CR- Chromium HG – Mercury
 SE- Selenium AG- Silver
 ND – analyte not detected

4.8 ELECTRICAL UTILITIES AND TRANSFORMERS

A few old transformers were found near and next to the former electrical generating shed. TPECI recorded the make and model of each transformer and researched whether PCBs were used in them. The research showed the transformers contained PCBs when manufactured. All transformers appeared dry. Soil sample PH (Table 4) was collected from within the former power shed and analyzed for PCBs. No PCBs were detected in this sample.

4.9 SURFACE VEGETATION

Vegetation within the camp was consistent with the surrounding hillsides and consisted mainly of grasses, willows and dwarf shrubs and forbs. No vegetation was growing within the spoils pile behind the gold house likely due to high concentrations of heavy metals in this material.

4.10 ADJOINING PROPERTIES

All adjoining property was undeveloped and mining impacts are limited to the Utica claim block.

5.0 BUSINESS ENVIRONMENTAL RISK CONSIDERATIONS

5.1 ASBESTOS-CONTAINING MATERIALS

The wiring in the buildings was sampled and analyzed for asbestos-containing materials (ACMs) in the wire coating. All wiring samples were non-detect for ACMs. There was a bag of powdery fibrous material located in the electrical/carpentry shop across the path from the machinist shop. This material and a solid silver-gray pad (possible brake pad) were analyzed for ACMs. Analytical results are presented in the following table.

**TABLE 6
 Building Materials Samples**

SAMPLE ID	SAMPLE LAYERS	DATE	Asbestos (% Detected)
AS-1 Loose asbestos from carpenter shop and solid brake pad item	Black non-fibrous material	06/27/07	ND
AS-1	Brown semi-fibrous material	06/27/07	5% Chrysotile
AS-1	Composite asbestos content	06/27/07	3% Asbestos
AS-1	Composite non-asbestos content	06/27/07	20% Cellulose
AS-2 Wiring insulation-brown	Wire coating	06/27/07	ND
AS-2	Composite-asbestos content	06/27/07	ND
AS-2	Composite-non-asbestos content	06/27/07	40% Cellulose
AS-3 Wiring insulation-black.	Wire coating	06/27/07	ND
AS-3	Composite-asbestos content	06/27/07	ND
AS-3	Composite-non-asbestos content	06/27/07	25% Cellulose
AS-4 Wallboard from bunkhouse.	Paint	06/27/07	ND
AS-4	Brown ceiling tile	06/27/07	ND
AS-4	Composite-asbestos content	06/27/07	ND
AS-4	Composite-non-asbestos content	06/27/07	95% Cellulose

5.2 LEAD-BASED PAINT

No sources of lead based paint were observed during the site reconnaissance. Most of the buildings on site were wood frame construction and were not painted. The only potential source for lead based paint would be the old equipment. Lead acid batteries were observed stored on the ground next to the machinist shop. These will need to be removed and placed into a fish tote and shipped to a recycling facility. The soil beneath the batteries will need to be sampled and may need to be handled as RCRA hazardous waste depending on the concentrations of lead in the soil.

5.3 HISTORIC CONTAMINATION

Known historic contamination at the site includes fuel related contamination, which was evidenced by surface staining and corroborated by the presence of a large number of fuel cans and drums littering the property. In addition, there is a high concentration of mercury in the spoils pile located outside the gold house. TPECI personnel noted during sampling that little to no vegetation was growing in this spoils pile.

6.0 IMPACTED MEDIA

Impacted media is limited to the soil affected by petroleum hydrocarbon and mercury contaminants in the camp area. Groundwater impacts are unknown but considered unlikely due to shallow penetration of mobile contaminants (i.e. petroleum).

7.0 EXPOSURE ROUTES

TPECI identified ingestion, inhalation, and dermal contact as potential exposure routes. The primary onsite exposure routes at this location are contaminated surface and subsurface soils. Potentially, excavation of soils may also result in dermal and inhalation exposure. There are no known or potential offsite migration pathways.

8.0 IMPACT LOCATION

Based on TPECI site investigations, the contaminants of concern are confined on site. Subsurface investigations proved that the contaminants have not spread off site.

9.0 POTENTIAL RECEPTORS

Potential receptors to mercury, lead, arsenic, and petroleum-related contamination include visitors to the site, any future demolition or environmental contractors working at the site during cleanup and any resident animals that could come into contact with contaminated soil beneath and behind the gold house.

10.0 CONCLUSIONS AND RECOMMENDATIONS

Upon completion of the site reconnaissance and associated soil sampling, TPECI personnel concluded that any gross contamination related to the mining and general operation of the camp is confined to discrete areas and has not migrated off-site.

Petroleum-related impacts to soil are evident in the machinist shop located close to the river. TPECI estimates approximately 15 to 20 cubic yards of contaminated soil must be excavated and treated. Other areas of petroleum contamination appear confined to the tin POL shed located at the south end of the camp near the dump site. More than twenty (20) 55-gallon drums were noted within and near the camp and dump areas. All of these drums will need to be removed. Some of them must be over-packed and hauled off site for disposal. Approximately one dozen of the drums had unknown liquid contents in them.

Ninety-two 5-gallon fuel cans were removed from the camp area and consolidated into the tin POL shed. Obvious soil staining was observed at the entrance to this shed. This contaminated soil will need to be excavated, and treated. TPECI personnel estimated up to one 55-gallon drum (approximately 0.3 cubic yards) of contaminated material at this location.

Sampling within and behind the gold house indicated that mercury, arsenic, lead, and DRO compounds are present in the soil above ADEC cleanup standards. The soil beneath and surrounding this structure should be excavated, drummed, and hauled off site for disposal.

Only one sample from the transects exceeded the standard for mercury. TCLP test results indicated that lead is the only analyte above the EPA action levels for RCRA hazardous waste. The contaminated material beneath and behind the gold house will need to be excavated, drummed, and hauled off site by a certified RCRA hazardous materials handler, for proper disposal.

The only metal consistently detected throughout the sampling transects above ADEC soil cleanup levels was arsenic. Background concentrations of heavy metals like arsenic are common throughout mining districts like the Bendeleben quadrangle (USGS ARDF, 2007).

The overall condition of the camp is characterized by the presence of scrap metal, machinery, and parts abandoned since mining ceased in this valley. TPECI personnel recommend obtaining a one-time use landfill permit from the ADEC to dispose of scrap metal, crushed vehicles and structures, and any other non-toxic waste material at the site. All asbestos containing materials, soil contaminated with petroleum or mercury, fuel and hydraulic oils, and lead-acid batteries will need to be properly contained and disposed off site.

11.0 REFERENCES

- Barr, Gilbert, 2007. Personal communications during site reconnaissance between Mr. Barr and TPECI personnel; Eddie Packee, Senior Scientist, and Melissa Shippey, Staff Scientist, TPECI. June 28, 2007.
- Brooks, Alfred H. Mineral Resources of Alaska. Washington: Government Printing Office, 1908.
- Herreid, G. The Geology and Geochemistry of the Inmachuk River Map Area, Seward Peninsula, Alaska. Geologic Report No. 23. State of Alaska, Department of Natural Resources, 1966
- SLR, 2005. SLR International Corp., Phase I Environmental Site Assessment With Limited Site Characterization, Former Utica Mine Site, Inmachuk River, Alaska. Site Characterization Summary Report. June, 2005.
- USGS, 2007. Alaska Resource Data File Bendeleben Quadrangle. Open-File Report Number 99-332. United States Geologic Survey, 2007.

APPENDIX A
PHOTOGRAPHIC LOG



Photo 1:

Utica Mine Camp. Machinist shop in background to the right of equipment yard. CAT bulldozer is sitting in front of the machinist shop.

View is to the north east.



Photo 2:

View of machinist shop with equipment yard in foreground. Picture taken looking to the south.



Photo 3:

Miscellaneous equipment parts in foreground with John Deere #40 tractor in background. View is looking to the southwest with machinist shop to the left.



Photo 4:

The metal building on the right is the power generating shed. Miscellaneous equipment in foreground and the living quarters are located uphill of the industrial part of the mine camp in the background.



Photo 5:

The Elmer Thomas cabin which is located en route to (a few hundred yards from) the main camp.



Photo 6:

Dredge buckets located at south dump along with other miscellaneous debris.



Photo 7:

Miscellaneous debris at south end of mine camp including an old truck body.



Photo 8:

Approximately 20 cubic yards of miscellaneous metal parts and debris located at camp south end dump area. This dump is located in front of a small pond that has drums sitting in the water.



Photo 9:

Soil sampling location inside gold house. Sample number A-2.



Photo 10:

Soil sampling in spoils pile behind gold house. Sample number A-1



Photo 11:

Soil sample location B-5, uphill and behind the electrical/carpenter shop.



Photo 12:

Soil sampling at lead acid battery pile to the north of the machinist shop. Sample number A-3.



Photo 13:

Soil sample location B-5. Located uphill from industrial area.



Photo 14:

Soil sample location C-4.



Photo 15:

Soil sample location C-5.



Photo 16:

Ball mill located approximately 1 mile from the Utica Mine camp.



Photo 17:

Ball mill different view.

APPENDIX B
LABORATORY ANALYTICAL REPORT

August 10, 2007

Melissa Shippey
Travis/Peterson Environmental Consulting
329 2nd Street
Fairbanks, AK 99701

RE: Utica Mine

Enclosed are the results of analyses for samples received by the laboratory on 07/03/07 16:25.
The following list is a summary of the Work Orders contained in this report, generated on 08/10/07
15:57.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BQG0070	Utica Mine	1080-19

TestAmerica - Seattle, WA



Blake T. Meinert, Project Manager

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Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name:	Utica Mine	Report Created:
	Project Number:	1080-19	08/10/07 15:57
	Project Manager:	Melissa Shippey	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AS-1	BQG0070-01	Other dry	06/27/07 17:46	07/03/07 16:25
AS-2	BQG0070-02	Other dry	06/27/07 20:30	07/03/07 16:25
AS-3	BQG0070-03	Other dry	06/27/07 21:00	07/03/07 16:25
AS-4	BQG0070-04	Other dry	06/27/07 21:30	07/03/07 16:25
A-1	BQG0070-05	Soil	06/27/07 16:21	07/03/07 16:25
A-2	BQG0070-06	Soil	06/27/07 16:30	07/03/07 16:25
A-3	BQG0070-07	Soil	06/27/07 16:43	07/03/07 16:25
A-4	BQG0070-08	Soil	06/27/07 16:47	07/03/07 16:25
A-5	BQG0070-09	Soil	06/27/07 16:56	07/03/07 16:25
A-6	BQG0070-10	Soil	06/27/07 17:06	07/03/07 16:25
B-1	BQG0070-11	Soil	06/27/07 17:23	07/03/07 16:25
B-2	BQG0070-12	Soil	06/27/07 18:15	07/03/07 16:25
B-3	BQG0070-13	Soil	06/27/07 18:25	07/03/07 16:25
B-4	BQG0070-14	Soil	06/27/07 18:40	07/03/07 16:25
B-5	BQG0070-15	Soil	06/27/07 18:46	07/03/07 16:25
C-1	BQG0070-16	Soil	06/27/07 19:04	07/03/07 16:25
C-2	BQG0070-17	Soil	06/27/07 19:15	07/03/07 16:25
C-3	BQG0070-18	Soil	06/27/07 19:23	07/03/07 16:25
C-4	BQG0070-19	Soil	06/27/07 19:30	07/03/07 16:25
C-5	BQG0070-20	Soil	06/27/07 19:35	07/03/07 16:25
P.H.	BQG0070-21	Soil	06/27/07 20:15	07/03/07 16:25

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Total Metals by EPA 6000/7000 Series Methods
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-05 (A-1)		Soil			Sampled: 06/27/07 16:21					
Arsenic	EPA 6020	15.5	---	0.551	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 22:56	
Barium	"	80.0	---	5.51	"	"	"	"	"	
Cadmium	"	ND	---	0.551	"	"	"	"	"	
Chromium	"	16.1	---	0.551	"	"	"	"	"	
Lead	"	18.6	---	0.551	"	"	"	"	07/11/07 21:50	
Mercury	EPA 7471A	0.712	---	0.110	"	"	7G12057	07/12/07 17:21	07/13/07 15:21	
Selenium	EPA 6020	ND	---	0.551	"	"	7G06021	07/06/07 13:14	07/09/07 22:56	
Silver	"	ND	---	0.551	"	"	"	"	"	
BQG0070-06 (A-2)		Soil			Sampled: 06/27/07 16:30					
Arsenic	EPA 6020	36.5	---	0.524	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 23:02	
Barium	"	47.9	---	5.24	"	"	"	"	"	
Cadmium	"	ND	---	0.524	"	"	"	"	"	
Chromium	"	12.6	---	0.524	"	"	"	"	"	
Lead	"	25.9	---	0.524	"	"	"	"	07/11/07 21:56	
Mercury	EPA 7471A	4.06	---	0.529	"	5x	7G12057	07/12/07 17:21	07/13/07 16:36	
Selenium	EPA 6020	0.666	---	0.524	"	1x	7G06021	07/06/07 13:14	07/09/07 23:02	
Silver	"	ND	---	0.524	"	"	"	"	"	
BQG0070-07 (A-3)		Soil			Sampled: 06/27/07 16:43					
Arsenic	EPA 6020	33.1	---	0.586	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 23:08	
Barium	"	41.8	---	5.86	"	"	"	"	"	
Cadmium	"	0.662	---	0.586	"	"	"	"	"	
Chromium	"	20.1	---	0.586	"	"	"	"	"	
Lead	"	26.4	---	0.586	"	"	"	"	07/11/07 22:02	
Mercury	EPA 7471A	0.197	---	0.104	"	"	7G12057	07/12/07 17:21	07/13/07 16:02	
Selenium	EPA 6020	ND	---	0.586	"	"	7G06021	07/06/07 13:14	07/09/07 23:08	
Silver	"	ND	---	0.586	"	"	"	"	"	
BQG0070-08 (A-4)		Soil			Sampled: 06/27/07 16:47					
Arsenic	EPA 6020	106	---	0.660	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 23:14	
Barium	"	75.3	---	6.60	"	"	"	"	"	
Cadmium	"	ND	---	0.660	"	"	"	"	"	
Chromium	"	19.3	---	0.660	"	"	"	"	"	
Lead	"	20.4	---	0.660	"	"	"	"	07/11/07 22:19	
Mercury	EPA 7471A	0.145	---	0.128	"	"	7G12057	07/12/07 17:21	07/13/07 15:29	
Selenium	EPA 6020	0.739	---	0.660	"	"	7G06021	07/06/07 13:14	07/09/07 23:14	
Silver	"	ND	---	0.660	"	"	"	"	"	

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Blake T. Meinert, Project Manager

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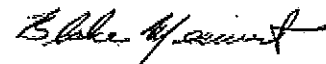


Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
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Total Metals by EPA 6000/7000 Series Methods
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-09 (A-5)		Soil			Sampled: 06/27/07 16:56					
Barium	EPA 6020	108	----	5.47	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 23:20	
Cadmium	"	1.92	----	0.547	"	"	"	"	"	
Chromium	"	37.8	----	0.547	"	"	"	"	"	
Mercury	EPA 7471A	1570	----	174	"	1500x	7G12057	07/12/07 17:21	07/13/07 17:13	
Selenium	EPA 6020	4.12	----	0.547	"	1x	7G06021	07/06/07 13:14	07/09/07 23:20	
Silver	"	27.6	----	0.547	"	"	"	"	"	
BQG0070-09RE1 (A-5)		Soil			Sampled: 06/27/07 16:56					
Arsenic	EPA 6020	755	---	27.3	mg/kg dry	50x	7G06021	07/06/07 13:14	07/11/07 22:25	
Lead	"	13600	---	54.7	"	100x	"	"	07/12/07 06:03	
BQG0070-10 (A-6)		Soil			Sampled: 06/27/07 17:06					
Arsenic	EPA 6020	14.0	---	1.04	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 23:26	
Barium	"	254	---	10.4	"	"	"	"	"	
Cadmium	"	ND	---	1.04	"	"	"	"	"	
Chromium	"	39.3	---	1.04	"	"	"	"	"	
Lead	"	15.9	---	1.04	"	"	"	"	07/11/07 22:31	
Mercury	EPA 7471A	2.63	---	2.17	"	10x	7G12057	07/12/07 17:21	07/13/07 16:44	
Selenium	EPA 6020	ND	---	1.04	"	1x	7G06021	07/06/07 13:14	07/09/07 23:26	
Silver	"	ND	---	1.04	"	"	"	"	"	
BQG0070-11 (B-1)		Soil			Sampled: 06/27/07 17:23					
Arsenic	EPA 6020	27.6	---	0.515	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 23:31	
Barium	"	66.2	---	5.15	"	"	"	"	"	
Cadmium	"	0.742	----	0.515	"	"	"	"	"	
Chromium	"	24.2	----	0.515	"	"	"	"	"	
Lead	"	20.4	----	0.515	"	"	"	"	07/11/07 22:37	
Mercury	EPA 7471A	1.43	----	0.561	"	5x	7G12057	07/12/07 17:21	07/13/07 16:46	
Selenium	EPA 6020	0.706	----	0.515	"	1x	7G06021	07/06/07 13:14	07/09/07 23:31	
Silver	"	ND	----	0.515	"	"	"	"	"	

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Total Metals by EPA 6000/7000 Series Methods
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-12 (B-2)		Soil			Sampled: 06/27/07 18:15					
Arsenic	EPA 6020	18.3	---	0.608	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 23:49	
Barium	"	83.2	---	6.08	"	"	"	"	"	
Cadmium	"	0.614	---	0.608	"	"	"	"	"	
Chromium	"	15.8	---	0.608	"	"	"	"	"	
Lead	"	60.2	---	0.608	"	"	"	"	07/11/07 22:43	
Mercury	EPA 7471A	4.26	---	1.20	"	10x	7G12057	07/12/07 17:21	07/13/07 16:49	
Selenium	EPA 6020	0.638	---	0.608	"	1x	7G06021	07/06/07 13:14	07/09/07 23:49	
Silver	"	ND	---	0.608	"	"	"	"	"	
BQG0070-13 (B-3)		Soil			Sampled: 06/27/07 18:25					
Arsenic	EPA 6020	29.1	---	0.489	mg/kg dry	1x	7G06021	07/06/07 13:14	07/09/07 23:55	
Barium	"	43.7	---	4.89	"	"	"	"	"	
Cadmium	"	0.557	---	0.489	"	"	"	"	"	
Chromium	"	14.6	---	0.489	"	"	"	"	"	
Lead	"	25.3	---	0.489	"	"	"	"	07/11/07 22:49	
Mercury	EPA 7471A	ND	---	0.106	"	"	7G12057	07/12/07 17:21	07/13/07 16:05	
Selenium	EPA 6020	ND	---	0.489	"	"	7G06021	07/06/07 13:14	07/09/07 23:55	
Silver	"	ND	---	0.489	"	"	"	"	"	
BQG0070-14 (B-4)		Soil			Sampled: 06/27/07 18:40					
Arsenic	EPA 6020	19.7	---	0.595	mg/kg dry	1x	7G06021	07/06/07 13:14	07/10/07 00:13	
Barium	"	66.5	---	5.95	"	"	"	"	"	
Cadmium	"	ND	---	0.595	"	"	"	"	"	
Chromium	"	15.4	---	0.595	"	"	"	"	"	
Lead	"	25.3	---	0.595	"	"	"	"	07/11/07 22:55	
Mercury	EPA 7471A	14.8	---	1.27	"	10x	7G12057	07/12/07 17:21	07/13/07 17:02	
Selenium	EPA 6020	0.744	---	0.595	"	1x	7G06021	07/06/07 13:14	07/10/07 00:13	
Silver	"	ND	---	0.595	"	"	"	"	"	
BQG0070-15 (B-5)		Soil			Sampled: 06/27/07 18:46					
Arsenic	EPA 6020	11.4	---	0.617	mg/kg dry	1x	7G06021	07/06/07 13:14	07/10/07 00:19	
Barium	"	101	---	6.17	"	"	"	"	"	
Cadmium	"	ND	---	0.617	"	"	"	"	"	
Chromium	"	14.9	---	0.617	"	"	"	"	"	
Lead	"	7.32	---	0.617	"	"	"	"	07/11/07 23:01	
Mercury	EPA 7471A	0.132	---	0.117	"	"	7G12057	07/12/07 17:21	07/13/07 16:10	
Selenium	EPA 6020	ND	---	0.617	"	"	7G06021	07/06/07 13:14	07/10/07 00:19	
Silver	"	ND	---	0.617	"	"	"	"	"	

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Blake T. Meinert, Project Manager

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Total Metals by EPA 6000/7000 Series Methods
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-16 (C-1)		Soil			Sampled: 06/27/07 19:04					
Arsenic	EPA 6020	38.3	----	0.535	mg/kg dry	1x	7G06021	07/06/07 13:14	07/10/07 00:25	
Barium	"	60.4	----	5.35	"	"	"	"	"	
Cadmium	"	0.616	---	0.535	"	"	"	"	"	
Chromium	"	11.6	---	0.535	"	"	"	"	"	
Lead	"	12.5	----	0.535	"	"	"	"	07/11/07 23:07	
Mercury	EPA 7471A	0.109	----	0.0956	"	"	7G12057	07/12/07 17:21	07/13/07 16:12	
Selenium	EPA 6020	0.996	----	0.535	"	"	7G06021	07/06/07 13:14	07/10/07 00:25	
Silver	"	ND	---	0.535	"	"	"	"	"	
BQG0070-17 (C-2)		Soil			Sampled: 06/27/07 19:15					
Arsenic	EPA 6020	25.6	----	0.550	mg/kg dry	1x	7G06021	07/06/07 13:14	07/10/07 00:31	
Barium	"	40.1	----	5.50	"	"	"	"	"	
Cadmium	"	ND	---	0.550	"	"	"	"	"	
Chromium	"	10.1	---	0.550	"	"	"	"	"	
Lead	"	6.88	----	0.550	"	"	"	"	07/11/07 23:12	
Mercury	EPA 7471A	ND	---	0.0975	"	"	7G12057	07/12/07 17:21	07/13/07 16:15	
Selenium	EPA 6020	ND	----	0.550	"	"	7G06021	07/06/07 13:14	07/10/07 00:31	
Silver	"	ND	----	0.550	"	"	"	"	"	
BQG0070-18 (C-3)		Soil			Sampled: 06/27/07 19:23					
Arsenic	EPA 6020	22.1	----	0.578	mg/kg dry	1x	7G06021	07/06/07 13:14	07/10/07 00:37	
Barium	"	86.9	---	5.78	"	"	"	"	"	
Cadmium	"	ND	---	0.578	"	"	"	"	"	
Chromium	"	14.1	----	0.578	"	"	"	"	"	
Lead	"	18.9	----	0.578	"	"	"	"	07/11/07 23:30	
Mercury	EPA 7471A	0.142	---	0.117	"	"	7G12057	07/12/07 17:21	07/13/07 16:17	
Selenium	EPA 6020	0.584	----	0.578	"	"	7G06021	07/06/07 13:14	07/10/07 00:37	
Silver	"	ND	----	0.578	"	"	"	"	"	
BQG0070-19 (C-4)		Soil			Sampled: 06/27/07 19:30					
Arsenic	EPA 6020	14.3	----	0.735	mg/kg dry	1x	7G06021	07/06/07 13:14	07/10/07 00:43	
Cadmium	"	ND	----	0.735	"	"	"	"	"	
Chromium	"	33.8	---	0.735	"	"	"	"	"	
Lead	"	31.4	----	0.735	"	"	"	"	07/11/07 23:36	
Mercury	EPA 7471A	0.375	---	0.148	"	"	7G12057	07/12/07 17:21	07/13/07 16:20	
Selenium	EPA 6020	ND	---	0.735	"	"	7G06021	07/06/07 13:14	07/10/07 00:43	
Silver	"	ND	----	0.735	"	"	"	"	"	

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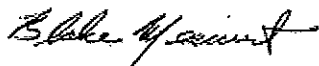


Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
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Total Metals by EPA 6000/7000 Series Methods
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-19RE1 (C-4)		Soil			Sampled: 06/27/07 19:30					
Barium	EPA 6020	279	---	14.7	mg/kg dry	2x	7G06021	07/06/07 13:14	07/11/07 23:42	
BQG0070-20 (C-5)		Soil			Sampled: 06/27/07 19:35					
Arsenic	EPA 6020	22.3	---	0.535	mg/kg dry	1x	7G06021	07/06/07 13:14	07/10/07 01:00	
Barium	"	51.8	---	5.35	"	"	"	"	"	
Cadmium	"	ND	---	0.535	"	"	"	"	"	
Chromium	"	14.7	---	0.535	"	"	"	"	"	
Lead	"	7.86	---	0.535	"	"	"	"	07/11/07 23:48	
Mercury	EPA 7471A	ND	---	0.0983	"	"	7G12057	07/12/07 17:21	07/13/07 16:22	
Selenium	EPA 6020	1.07	---	0.535	"	"	7G06021	07/06/07 13:14	07/10/07 01:00	
Silver	"	ND	---	0.535	"	"	"	"	"	

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TCLP Metals by EPA 1311/6000/7000 Series Methods
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-09 (A-5)		Soil		Sampled: 06/27/07 16:56						
Arsenic	EPA 6010B	ND	—	1.00	mg/l	1x	7H07028	08/07/07 11:15	08/07/07 17:12	
Lead	"	114	—	1.00	"	"	"	"	"	
Mercury	EPA 7470A	0.00388	—	0.00250	"	"	7H07038	08/07/07 12:42	08/08/07 12:47	HI

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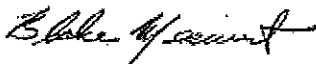


Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
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Polychlorinated Biphenyls by EPA Method 8082
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-21 (P.H.)		Soil				Sampled: 06/27/07 20:15				RL1
Aroclor 1016	EPA 8082	ND	----	556	ug/kg dry	20x	7G10029	07/10/07 12:24	07/17/07 18:04	
Aroclor 1221	"	ND	----	1110	"	"	"	"	"	
Aroclor 1232	"	ND	----	556	"	"	"	"	"	
Aroclor 1242	"	ND	----	556	"	"	"	"	"	
Aroclor 1248	"	ND	----	556	"	"	"	"	"	
Aroclor 1254	"	ND	----	556	"	"	"	"	"	
Aroclor 1260	"	ND	----	556	"	"	"	"	"	
Aroclor 1262	"	ND	----	556	"	"	"	"	"	
Aroclor 1268	"	ND	----	556	"	"	"	"	"	
Surrogate(s): TCX			95.6%		39 - 139 %	"				
Decachlorobiphenyl			82.7%		33 - 163 %	"				Z3

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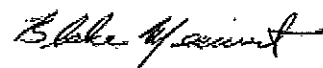


Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
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Physical Parameters by APHA/ASTM/EPA Methods
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-05 (A-1)		Soil					Sampled: 06/27/07 16:21			
Dry Weight	BSOPSPLO03R0 8	91.7	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-06 (A-2)		Soil					Sampled: 06/27/07 16:30			
Dry Weight	BSOPSPLO03R0 8	90.9	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-07 (A-3)		Soil					Sampled: 06/27/07 16:43			
Dry Weight	BSOPSPLO03R0 8	88.9	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-08 (A-4)		Soil					Sampled: 06/27/07 16:47			
Dry Weight	BSOPSPLO03R0 8	81.4	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-09 (A-5)		Soil					Sampled: 06/27/07 16:56			
Dry Weight	BSOPSPLO03R0 8	86.3	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-10 (A-6)		Soil					Sampled: 06/27/07 17:06			
Dry Weight	BSOPSPLO03R0 8	46.8	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-11 (B-1)		Soil					Sampled: 06/27/07 17:23			
Dry Weight	BSOPSPLO03R0 8	91.5	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-12 (B-2)		Soil					Sampled: 06/27/07 18:15			
Dry Weight	BSOPSPLO03R0 8	81.4	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-13 (B-3)		Soil					Sampled: 06/27/07 18:25			
Dry Weight	BSOPSPLO03R0 8	93.0	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-14 (B-4)		Soil					Sampled: 06/27/07 18:40			
Dry Weight	BSOPSPLO03R0 8	78.5	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-15 (B-5)		Soil					Sampled: 06/27/07 18:46			

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Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
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Physical Parameters by APHA/ASTM/EPA Methods
TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQG0070-15 (B-5)		Soil			Sampled: 06/27/07 18:46					
Dry Weight	BSOPSPL003R0 8	77.1	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-16 (C-1)		Soil			Sampled: 06/27/07 19:04					
Dry Weight	BSOPSPL003R0 8	93.4	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-17 (C-2)		Soil			Sampled: 06/27/07 19:15					
Dry Weight	BSOPSPL003R0 8	93.8	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-18 (C-3)		Soil			Sampled: 06/27/07 19:23					
Dry Weight	BSOPSPL003R0 8	90.1	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-19 (C-4)		Soil			Sampled: 06/27/07 19:30					
Dry Weight	BSOPSPL003R0 8	66.7	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-20 (C-5)		Soil			Sampled: 06/27/07 19:35					
Dry Weight	BSOPSPL003R0 8	89.8	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	
BQG0070-21 (P.H.)		Soil			Sampled: 06/27/07 20:15					
Dry Weight	BSOPSPL003R0 8	90.9	---	1.00	%	1x	7G13060	07/13/07 21:02	07/16/07 00:00	

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Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
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Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7G06021	Soil Preparation Method: EPA 3050B
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Analyte	Method	Result	MDL ^A	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------------------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (7G06021-BLK1) Extracted: 07/06/07 13:14

Cadmium	EPA 6020	ND	---	0.500	mg/kg wet	1x	--	--	--	--	--	--	07/09/07 21:51	
Selenium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.500	"	"	--	--	--	--	--	--	07/12/07 05:57	
Chromium	"	ND	---	0.500	"	"	--	--	--	--	--	--	07/09/07 21:51	
Barium	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	

LCS (7G06021-BS1) Extracted: 07/06/07 13:14

Arsenic	EPA 6020	42.6	---	0.500	mg/kg wet	1x	--	40.0	107%	(80-120)	--	--	07/09/07 21:57	
Barium	"	42.9	---	5.00	"	"	--	"	107%	"	--	--	"	
Selenium	"	42.9	---	0.500	"	"	--	"	107%	"	--	--	"	
Chromium	"	41.7	---	0.500	"	"	--	"	104%	"	--	--	"	
Silver	"	41.6	---	0.500	"	"	--	"	104%	"	--	--	"	
Lead	"	40.2	---	0.500	"	"	--	"	101%	"	--	--	07/11/07 20:39	
Cadmium	"	42.7	---	0.500	"	"	--	"	107%	"	--	--	07/09/07 21:57	

Duplicate (7G06021-DUP1) QC Source: BQG0070-05 Extracted: 07/06/07 13:14

Cadmium	EPA 6020	ND	---	0.568	mg/kg dry	1x	ND	--	--	--	50.1% (30)	--	07/09/07 22:15	R4
Lead	"	170	---	0.568	"	"	18.6	--	--	--	161%	"	07/11/07 21:09	R3
Selenium	"	ND	---	0.568	"	"	ND	--	--	--	33.4%	"	07/09/07 22:15	R4
Silver	"	ND	---	0.568	"	"	ND	--	--	--	147% (50)	"	"	R4
Chromium	"	18.6	---	0.568	"	"	16.1	--	--	--	14.4% (30)	"	"	
Arsenic	"	23.7	---	0.568	"	"	15.5	--	--	--	42.0%	"	"	R3
Barium	"	91.3	---	5.68	"	"	80.0	--	--	--	13.2%	"	"	

Matrix Spike (7G06021-MIS1) QC Source: BQG0070-05 Extracted: 07/06/07 13:14

Selenium	EPA 6020	46.4	---	0.574	mg/kg dry	1x	0.369	45.9	100%	(61-120)	--	--	07/09/07 22:09	
Cadmium	"	47.5	---	0.574	"	"	0.187	"	103%	(80-120)	--	--	"	
Lead	"	144	---	0.574	"	"	18.6	"	274%	(29-166)	--	--	07/11/07 20:51	M1
Chromium	"	63.1	---	0.574	"	"	16.1	"	102%	(30-163)	--	--	07/09/07 22:09	
Barium	"	140	---	5.74	"	"	80.0	"	130%	(20-160)	--	--	"	
Silver	"	44.9	---	0.574	"	"	0.0826	"	97.7%	(54-126)	--	--	"	
Arsenic	"	62.5	---	0.574	"	"	15.5	"	102%	(57-125)	--	--	"	

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Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

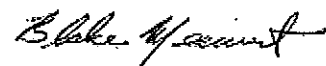
QC Batch: 7G06021	Soil Preparation Method: EPA 3050B
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Post Spike (7G06021-PS1)			QC Source: BQG0070-05				Extracted: 07/06/07 13:14							
Chromium	EPA 6020	0.134	---		ug/ml	1x	0.0293	0.100	104%	(75-125)	--	--	07/09/07 22:03	
Cadmium	"	0.106	---		"	"	0.000340	"	106%	"	--	--	"	
Barium	"	0.254	---		"	"	0.145	"	109%	"	--	--	"	
Lead	"	0.131	---		"	"	0.0338	"	97.1%	"	--	--	07/11/07 20:45	
Arsenic	"	0.136	---		"	"	0.0282	0.0995	109%	"	--	--	07/09/07 22:03	
Silver	"	0.101	---		"	"	0.000150	0.100	101%	"	--	--	"	
Selenium	"	0.105	---		"	"	0.000670	"	104%	"	--	--	"	

QC Batch: 7G12057	Soil Preparation Method: EPA 7471A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7G12057-BLK1)							Extracted: 07/12/07 17:21							
Mercury	EPA 7471A	ND	---	0.100	mg/kg wet	1x	--	--	--	--	--	--	07/13/07 14:56	
LCS (7G12057-BS1)							Extracted: 07/12/07 17:21							
Mercury	EPA 7471A	0.720	--	0.100	mg/kg wet	1x	--	0.667	108%	(80-120)	--	--	07/13/07 14:58	
LCS Dup (7G12057-BSD1)							Extracted: 07/12/07 17:21							
Mercury	EPA 7471A	0.689	---	0.100	mg/kg wet	1x	--	0.667	103%	(80-120)	4.48% (20)	--	07/13/07 15:01	
Duplicate (7G12057-DUP1)			QC Source: BQG0067-23				Extracted: 07/12/07 17:21							
Mercury	EPA 7471A	ND	---	0.122	mg/kg dry	1x	0.165	--	--	--	76.0% (30)	--	07/13/07 15:06	R4
Matrix Spike (7G12057-MS1)			QC Source: BQG0067-23				Extracted: 07/12/07 17:21							
Mercury	EPA 7471A	1.02	---	0.129	mg/kg dry	1x	0.165	0.859	100%	(70-130)	--	--	07/13/07 15:03	

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TCLP Metals by EPA 1311/6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7H07028	TCLP Preparation Method: EPA 3010A TCLP
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7H07028-BLK1)													Extracted: 08/07/07 11:15	
Lead	EPA 6010B	ND	---	1.00	mg/l	1x	--	--	--	--	--	--	08/07/07 16:27	
Arsenic	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
LCS (7H07028-BS1)													Extracted: 08/07/07 11:15	
Lead	EPA 6010B	55.1	---	1.00	mg/l	1x	--	50.0	110%	(80-120)	--	--	08/07/07 16:47	
Arsenic	"	54.2	---	1.00	"	"	--	"	108%	"	--	--	"	
Duplicate (7H07028-DUP1)													QC Source: BQG0070-09 Extracted: 08/07/07 11:15	
Arsenic	EPA 6010B	ND	---	1.00	mg/l	1x	ND	--	--	--	NR (20)	--	08/07/07 17:06	R4
Lead	"	117	---	1.00	"	"	114	--	--	--	2.78%	"	"	
Matrix Spike (7H07028-MS1)													QC Source: BQG0070-09 Extracted: 08/07/07 11:15	
Lead	EPA 6010B	169	---	1.00	mg/l	1x	114	50.0	111%	(80-120)	--	--	08/07/07 16:53	
Arsenic	"	52.0	---	1.00	"	"	ND	"	104%	"	--	--	"	
Post Spike (7H07028-PS1)													QC Source: BQG0070-09 Extracted: 08/07/07 11:15	
Arsenic	EPA 6010B	5.04	---		ug/ml	1x	0.00600	5.00	101%	(0-200)	--	--	08/07/07 17:00	
Lead	"	16.2	---		"	"	11.4	"	96.2%	"	--	--	"	

QC Batch: 7H07038	TCLP Preparation Method: EPA 7470A TCLP
-------------------	---

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7H07038-BLK1)													Extracted: 08/07/07 12:42	
Mercury	EPA 7470A	ND	---	0.00250	mg/l	1x	--	--	--	--	--	--	08/08/07 12:17	
Blank (7H07038-BLK2)													Extracted: 08/07/07 12:42	
Mercury	EPA 7470A	ND	---	0.00250	mg/l	1x	--	--	--	--	--	--	08/08/07 12:19	
Blank (7H07038-BLK3)													Extracted: 08/07/07 12:42	
Mercury	EPA 7470A	ND	---	0.00250	mg/l	1x	--	--	--	--	--	--	08/08/07 12:21	
LCS (7H07038-BS1)													Extracted: 08/07/07 12:42	
Mercury	EPA 7470A	0.0130	---	0.00250	mg/l	1x	--	0.0125	104%	(80-120)	--	--	08/08/07 12:24	
LCS Dup (7H07038-BSD1)													Extracted: 08/07/07 12:42	
Mercury	EPA 7470A	0.0134	---	0.00250	mg/l	1x	--	0.0125	107%	(80-120)	2.75% (20)	--	08/08/07 12:26	
Duplicate (7H07038-DUP1)													QC Source: BQG0574-01 Extracted: 08/07/07 12:42	

TestAmerica - Seattle, WA

Blake T. Meinert

Blake T. Meinert, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
---	--	-----------------------------------

TCLP Metals by EPA 1311/6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7H07038	TCLP Preparation Method: EPA 7470A TCLP
-------------------	---

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (7H07038-DUP1)				QC Source: BQG0574-01				Extracted: 08/07/07 12:42						
Mercury	EPA 7470A	ND	--	0.00250	mg/l	1x	ND	--	--	--		(20)	08/08/07 12:31	R4
Matrix Spike (7H07038-MS1)				QC Source: BQG0574-01				Extracted: 08/07/07 12:42						
Mercury	EPA 7470A	0.0141	--	0.00250	mg/l	1x	ND	0.0125	113%	(75-125)	--	--	08/08/07 12:29	

TestAmerica - Seattle, WA

Blake T. Meinert

Blake T. Meinert, Project Manager

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Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
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Polychlorinated Biphenyls by EPA Method 8082 - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7G10029 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7G10029-BLK2)													Extracted: 07/10/07 12:24	
Aroclor 1016 [2C]	EPA 8082	ND	---	25.0	ug/kg wet	1x	--	--	--	--	--	--	07/14/07 15:34	
Aroclor 1221	"	ND	---	50.0	"	"	--	--	--	--	--	--	"	
Aroclor 1232	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1242	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1248	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1254	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1260	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1262	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1268	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Surrogate(s): TCX		Recovery: 103%		Limits: 39-139%								07/14/07 15:34		
Decachlorobiphenyl		103%		33-163%										

LCS (7G10029-BS2)													Extracted: 07/10/07 12:24	
Aroclor 1016	EPA 8082	84.1	---	25.0	ug/kg wet	1x	--	83.3	101%	(54-125)	--	--	07/16/07 16:12	
Aroclor 1260	"	84.3	---	25.0	"	"	--	"	101%	(58-128)	--	--	"	
Surrogate(s): TCX		Recovery: 95.9%		Limits: 39-139%								07/16/07 16:12		
Decachlorobiphenyl		94.3%		33-163%										

Matrix Spike (7G10029-MS2)													QC Source: BQG0121-01		Extracted: 07/10/07 12:24	
Aroclor 1016	EPA 8082	84.9	---	23.7	ug/kg dry	1x	ND	79.1	107%	(47-134)	--	--	07/16/07 17:05			
Aroclor 1260	"	87.7	---	23.7	"	"	9.97	"	98.3%	(22-171)	--	--	"			
Surrogate(s): TCX		Recovery: 98.2%		Limits: 39-139%								07/16/07 17:05				
Decachlorobiphenyl		93.9%		33-163%												

Matrix Spike Dup (7G10029-MSD2)													QC Source: BQG0121-01		Extracted: 07/10/07 12:24	
Aroclor 1016	EPA 8082	81.6	---	24.0	ug/kg dry	1x	ND	80.1	102%	(47-134)	4.07% (35)		07/16/07 17:23			
Aroclor 1260	"	88.5	---	24.0	"	"	9.97	"	98.0%	(22-171)	0.831%		"			
Surrogate(s): TCX		Recovery: 94.3%		Limits: 39-139%								07/16/07 17:23				
Decachlorobiphenyl		90.6%		33-163%												

TestAmerica - Seattle, WA

Blake T. Meinert

Blake T. Meinert, Project Manager

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Travis/Peterson Environmental Consulting 329 2nd Street Fairbanks, AK 99701	Project Name: Utica Mine Project Number: 1080-19 Project Manager: Melissa Shippey	Report Created: 08/10/07 15:57
--	--	-----------------------------------

Physical Parameters by APHA/ASTM/EPA Methods - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 7G13060 Soil Preparation Method: Dry Weight

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7G13060-BLK1)										Extracted: 07/13/07 21:02				
Dry Weight	BSOPSPLO0 3R08	100	---	1.00	%	1x	--	--	--	--	--	--	07/16/07 00:00	

TestAmerica - Seattle, WA



Blake T. Meinert, Project Manager

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Travis/Peterson Environmental Consulting

329 2nd Street
Fairbanks, AK 99701

Project Name: **Utica Mine**

Project Number: 1080-19

Project Manager: Melissa Shippey

Report Created:

08/10/07 15:57

Notes and Definitions

Report Specific Notes:

- A-01 - This peak was not included in the average of the Aroclor.
- C8 - Calibration Verification recovery was above the method control limit for this analyte. A high bias may be indicated.
- H1 - Sample analysis performed past the method-specified holding time per client's approval.
- M1 - The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- R3 - The RPD exceeded the acceptance limit due to sample matrix effects.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- RL1 - Reporting limit raised due to sample matrix effects.
- Z3 - The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Seattle, WA



Blake T. Meinert, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



①

CHAIN OF CUSTODY REPORT

Work Order #: **BQ60070**

CLIENT: **T. RAUS / PETERSON ENVIRONMENTAL**

REPORT TO: **MELISSA SHIPPEY**

ADDRESS: **329 2nd STREET FAIRBANKS, AK 99701**

PHONE: **455-7225** FAX: **455-7228**

PROJECT NAME: **UTICA NINE CAMP**

PROJECT NUMBER: **1080-19**

SAMPLED BY: **MELISSA SHIPPEY**

INVOICE TO: **329 2nd STREET FAIRBANKS AK 99701**

(907) 455-7225

P.O. NUMBER: **1080-19**

PRESERVATIVE

REQUESTED ANALYSES

TURNAROUND REQUEST
 In Business Days *

Organic & Inorganic Analyses
 1 2 3 4 5 6 7 8 9 10 11 12

Trace Metals Analysis
 1 2 3 4 5 6 7 8 9 10 11 12

OTHER Specify:

* Turnaround Request: List show standard, may incur Mark Charge.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PCMS	METS	MERCURY	REQUESTED ANALYSES	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WORD
AS-1	6/27/07 5:40p	X				MISS O	1		-01
AS-2	6/27/07 8:30p	X				O	1		-02
AS-3	6/27/07 9:00p	X				O	1		-03
AS-4	6/27/07 9:30p	X				O	1		-04
A-1	6/27/07 4:21pm		X	X		S	2		-05
A-2	6/27/07 4:30pm		X	X			2		-06
A-3	6/27/07 4:43pm		X	X			2		-07
A-4	6/27/07 4:47p		X	X			2		-08
A-5	6/27/07 4:56p		X	X			2		-09
A-6	6/27/07 5:06p		X	X			2		-10

RECEIVED BY: **David Peterson**
 PRINT NAME: **DAVID PETERSON**
 DATE: **7-1-07**
 TIME: **4:50**

RECEIVED BY: **Francisco Luna, Jr.**
 PRINT NAME: **Francisco Luna, Jr.**
 DATE: **7/1/07**
 TIME: **1625**

ADDITIONAL REMARKS: **W/CS 5.6**

DATE: **7-1-07** TIME: **4:50**

DATE: **7/1/07** TIME: **1625**

DATE: **7-1-07** TIME: **4:50**

DATE: **7/1/07** TIME: **1625**



11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 11922 E 1st Ave, Spokane, WA 99206-5302
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145
 20332 Empire Ave, Ste F1, Bend, OR 97701-5712
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-430-9000 FAX 420-9210
 509-924-9200 FAX 924-9280
 503-906-9200 FAX 906-9210
 541-383-9310 FAX 382-7588
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

NCA CLIENT: TRAVIS/PETERSON ENVIRONMENTAL
 REPORT TO: MELISSA SHIPPEY
 ADDRESS: 329 2nd STREET
FAIRBANKS AK 99701
 PHONE: 455-7225 FAX: 455-7228

Work Order #: B890010
 TURNAROUND REQUEST
 In Business Days*
 Organic & Inorganic Analysis
 Petroleum Hydrocarbon Analysis
 METALS
 HHT
 GMA
 WMM
 F.O. NUMBER: 1080-19
 PRESERVATIVE

PROJECT NUMBER: 1080-19
 SAMPLED BY: M. Shippey

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES
1 B-1	6/27/07 5:23p	
2 B-2	6/27/07 6:15p	
3 B-3	6/27/07 6:25p	
4 B-4	6/27/07 6:40p	
5 B-5	6/27/07 6:46p	
6 C-1	6/27/07 7:0p	
7 C-2	6/27/07 7:15p	
8 C-3	6/27/07 7:23p	
9 C-4	6/27/07 7:30p	
10 C-5	6/27/07 7:35p	

MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	NCA W/O ID
S	2		-11
			-12
			-13
			-14
			-15
			-16
			-17
			-18
			-19
			-20

RELEASED BY: MELISSA S. SHIPPEY DATE: June 29, 2007 RECEIVED BY: David Houston DATE: 7-1-07
 PRINT NAME: Melissa Shippey FROM: ENVIRONMENTAL TIME: 6:30am PRINT NAME: David Houston FROM: TANK TIME: 14:50
 RELEASED BY: Johnnie Decker DATE: 07/02/07 RECEIVED BY: Francisco Lung Jr. DATE: 7/3/07
 PRINT NAME: Johnnie Decker FROM: TA - AL TIME: 18:00 PRINT NAME: Francisco Lung Jr. FROM: TA-S TIME: 16:25

ADDITIONAL REMARKS:
 COC REV 09/04
 TICKET: 2.6 PAGE OF

Laboratory Data Review Checklist

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
 Yes No 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 Comments:

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?
 Yes No Comments:

- b. Correct analyses requested?
 Yes No Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?
 Yes No Comments:

- b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
 Yes No Comments:

- c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?
 Yes No Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

Yes No

Comments: *N/A*

e. Data quality or usability affected? Explain.

Comments: *N/A*

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No

Comments:

c. Were all corrective actions documented?

Yes No

Comments: *N/A*

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

Comments: *None*

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No

Comments:

b. All applicable holding times met?

Yes No

Comments: *TCLP Metals analysis requested after*

initial lab report generated. See notes for sample BQG0070-09 (A-5).

c. All soils reported on a dry weight basis?

Yes No

Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes No

Comments:

e. Data quality or usability affected? Explain. *N/A*

Comments:

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments: *N/A*

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments: *N/A*

v. Data quality or usability affected? Explain.

Comments: *N/A*

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

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes No

Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No

Comments:

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits or project specified DQOs? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No

Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits or project specified DQOs? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No

Comments:

All percent recoveries and RPD's were good except some on sample # (76 06021 - This was an LCS duplicate.)

v. If %R or RPD is outside of acceptable limits, what samples are affected? *NONE*

Comments:

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined? *N/A*

Yes No

Comments:

vii. Data quality or usability affected? Explain.

Comments: *NONE*

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes No

Comments: *N/A*

No organic analyses run on this C.O.C.

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits or project specified DQOs? (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No

Comments: *N/A*

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No

Comments: *N/A*

iv. Data quality or usability affected? Explain.

Comments: *N/A*

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

Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments: *N/A*

ii. All results less than PQL?

Yes No

Comments: *N/A*

iii. If above PQL, what samples are affected?

Comments: *N/A*

iv. Data quality or usability affected? Explain.

Comments: *N/A*

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No

Comments:

ii. Submitted blind to lab?

Yes No

Comments: *N/A*

iii. Precision - All relative percent differences (RPD) less than specified DQOs? (Recommened:
30% water, 50% soil)

Yes No

Comments: *N/A*

iv. Data quality or usability affected?

Yes No

Comments: *N/A*

f. Decontamination or Equipment Blank (if applicable)

Yes No Not Applicable

i. All results less than PQL?

Yes No

Comments:

[Empty text box]

ii. If above PQL, what samples are affected?

Comments: *N/A*

[Empty text box]

iii. Data quality or usability affected? Explain.

Comments: *N/A*

[Empty text box]

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

a. Defined and appropriate?

Yes No

Comments: *N/A*

[Empty text box]

Completed by: *MELISSA S. SHIPPEY*

Title: *STAFF SCIENTIST*

Date: *9/17/07*

Report Name: *BQG 0070 Utica Mine 1080-19*

Report Date: *8/10/07*

Firm: *TRAVIS/PETERSON ENVIRONMENTAL CONSULTING.*

File Number:

Submit by E-Mail

Print Form

Reset Form



EMLab P&K

Report for:

Mr Blake Meinert
Test America - Seattle
11720 North Creek Pkwy N.
Suite 400
Bothell, WA 98011

Regarding: Project: BQG0070
 EML ID: 313844

Date of Analysis: 07-20-2007

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Project SOPs: Asbestos-EPA Method 600/R-93/116 (100204)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

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

Document Number: 200091 - Revision Number: 5

Client: Test America - Seattle
C/O: Mr Blake Meinert
Re: BQG0070

Date of Sampling: 06-27-2007
Date of Receipt: 07-20-2007
Date of Report: 07-20-2007

ASBESTOS PLM REPORT: EPA METHOD 600/R-93-116

Total Samples Submitted:	4
Total Samples Analysed:	4
Total Samples with Composite Asbestos Value > 1%:	1

Location: BQG0070-01

Lab ID-Version†: 1368929-1

Sample Layers	Asbestos Content
Black Non-Fibrous Material	ND
Brown Semi-Fibrous Material	5% Chrysotile
Composite Asbestos Fibrous Content:	3% Asbestos
Composite Non-Asbestos Fibrous Content:	20% Cellulose
Sample Composite Homogeneity:	Good

Location: BQG0070-02

Lab ID-Version†: 1368930-1

Sample Layers	Asbestos Content
Brown Wiring Insulation	ND
Composite Asbestos Fibrous Content:	ND
Composite Non-Asbestos Fibrous Content:	40% Cellulose
Sample Composite Homogeneity:	Good

Location: BQG0070-03

Lab ID-Version†: 1368931-1

Sample Layers	Asbestos Content
Black Wiring Insulation	ND
Composite Asbestos Fibrous Content:	ND
Composite Non-Asbestos Fibrous Content:	25% Cellulose
Sample Composite Homogeneity:	Good

Location: BQG0070-04

Lab ID-Version†: 1368932-1

Sample Layers	Asbestos Content
Paint	ND
Brown Ceiling Tile	ND
Composite Asbestos Fibrous Content:	ND
Composite Non-Asbestos Fibrous Content:	95% Cellulose
Sample Composite Homogeneity:	Good

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

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogenous samples are separated into homogenous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.

† A "Version" greater than 1 indicates amended data.

Submit by E-Mail

Print Form

Reset Form

Laboratory Data Review Checklist

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
 Yes No 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 Comments:

2. Chain of Custody (COC) *Part of Work Order No. : BQ6-0070 - C.O.C. in final report.*

a. COC information completed, signed, and dated (including released/received by)?
 Yes No Comments:

b. Correct analyses requested?
 Yes No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ} \text{C}$)?
 Yes No Comments:

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
 Yes No Comments:

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?
 Yes No Comments: *N/A all were good.*

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

Yes No

Comments: *N/A*

All were good.

e. Data quality or usability affected? Explain. *N/A*

Comments:

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No

Comments: *N/A*

none reported.

c. Were all corrective actions documented?

Yes No

Comments:

N/A

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

Comments: *N/A*

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No

Comments:

b. All applicable holding times met?

Yes No

Comments:

c. All soils reported on a dry weight basis?

Yes No

Comments:

N/A

Dry building materials samples.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes No

Comments: *N/A*

e. Data quality or usability affected? Explain.

Comments: *N/A*

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments: *N/A*

iii. If above PQL, what samples are affected?

Comments: *N/A*

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments: *N/A*

v. Data quality or usability affected? Explain.

Comments: *N/A*

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

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes No

Comments:

N/A

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No

Comments:

N/A

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits or project specified DQOs? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No

Comments: *N/A*

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits or project specified DQOs? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No

Comments: *N/A*

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

Comments: *N/A*

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments: *N/A*

vii. Data quality or usability affected? Explain.

Comments: *N/A*

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes No

Comments: *N/A*

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits or project specified DQOs? (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No

Comments: *N/A*

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No

Comments: *N/A*

iv. Data quality or usability affected? Explain.

Comments: N/A

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

Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

No volatiles on this work order.

ii. All results less than PQL?

Yes No

Comments: N/A

iii. If above PQL, what samples are affected?

Comments: N/A

iv. Data quality or usability affected? Explain.

Comments: N/A

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No

Comments:

ii. Submitted blind to lab?

Yes No

Comments: N/A

iii. Precision - All relative percent differences (RPD) less than specified DQOs? (Recommened: 30% water, 50% soil)

Yes No

Comments: N/A

iv. Data quality or usability affected?

Yes No

Comments: N/A

f. Decontamination or Equipment Blank (if applicable)

Yes No Not Applicable

i. All results less than PQL?

Yes No

Comments:

ii. If above PQL, what samples are affected?

Comments: N/A

iii. Data quality or usability affected? Explain.

Comments: N/A

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

a. Defined and appropriate?

Yes No

Comments: N/A

Completed by: MELISSA S. SHIPPEY

Title: STAFF SCIENTIST

Date: 9/17/07

Report Name: EMLab P&K BQG-0070 EMLID: 313844

Report Date: 7.20.07

Firm: TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.

File Number:

Submit by E-Mail

Print Form

Reset Form

July 17, 2007

Melissa Shippey
Travis/Peterson Environmental Consulting, Inc. FBK
329 2nd Street
Fairbanks, ALASKA/USA 99701

RE: UTICA Mine Camp

Enclosed are the results of analyses for samples received by the laboratory on 07/02/07 14:17.
The following list is a summary of the Work Orders contained in this report, generated on 07/17/07
17:23.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
AQG0004	UTICA Mine Camp	1086-19

TestAmerica - Anchorage, AK



Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
---	---	-----------------------------------

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P.W.	AQG0004-01	Water	06/28/07 16:00	07/02/07 14:17
F-1	AQG0004-02	Soil	06/27/07 17:37	07/02/07 14:17
C-1	AQG0004-03	Soil	06/27/07 19:04	07/02/07 14:17
P.H.	AQG0004-04	Soil	06/27/07 20:16	07/02/07 14:17
TRIP BLANK	AQG0004-05	Soil	06/28/07 22:00	07/02/07 14:17
POL Shed	AQG0004-06	Soil	06/27/07 21:23	07/02/07 14:17

TestAmerica - Anchorage, AK



Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
---	---	-----------------------------------

Gasoline Range Organics (C6-C10) and BTEX per AK101
 TestAmerica - Anchorage, AK

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
AQG0004-02 (F-1)		Soil		Sampled: 06/27/07 17:37						
Gasoline Range Organics	AK101 GRO/BTEX	ND	---	2.48	mg/kg dry	1x	7070032	07/06/07 16:16	07/08/07 19:11	
Benzene	"	ND	---	0.0124	"	"	"	"	"	
Toluene	"	ND	---	0.0248	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.0248	"	"	"	"	"	
Xylenes (total)	"	ND	---	0.0372	"	"	"	"	"	
<i>Surrogate(s): 4-BFB (FID)</i>			45.9%		50 - 150 %	"				Z6
<i>4-BFB (PID)</i>			48.9%		50 - 150 %	"				Z6
AQG0004-03 (C-1)		Soil		Sampled: 06/27/07 19:04						
Gasoline Range Organics	AK101 GRO/BTEX	ND	---	2.80	mg/kg dry	3x	7070032	07/06/07 16:16	07/08/07 00:09	
Benzene	"	ND	---	0.0140	"	"	"	"	"	
Toluene	"	ND	---	0.0280	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.0280	"	"	"	"	"	
Xylenes (total)	"	ND	---	0.0420	"	"	"	"	"	
<i>Surrogate(s): 4-BFB (FID)</i>			85.9%		50 - 150 %	"				
<i>4-BFB (PID)</i>			82.4%		50 - 150 %	"				
AQG0004-05 (TRIP BLANK)		Soil		Sampled: 06/28/07 22:00						
Gasoline Range Organics	AK101 GRO/BTEX	ND	---	3.33	mg/kg wet	1x	7070032	07/06/07 16:16	07/09/07 04:38	
Benzene	"	ND	---	0.0166	"	"	"	"	"	
Toluene	"	ND	---	0.0333	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.0333	"	"	"	"	"	
Xylenes (total)	"	ND	---	0.0500	"	"	"	"	"	
<i>Surrogate(s): a,a,a-TFT (FID)</i>			107%		50 - 150 %	"				
<i>a,a,a-TFT (PID)</i>			98.4%		50 - 150 %	"				
AQG0004-06 (POL Shed)		Soil		Sampled: 06/27/07 21:23						
Gasoline Range Organics	AK101 GRO/BTEX	ND	---	3.39	mg/kg dry	2.7x	7070032	07/06/07 16:16	07/08/07 00:42	
Benzene	"	ND	---	0.0169	"	"	"	"	"	
Toluene	"	ND	---	0.0339	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.0339	"	"	"	"	"	
Xylenes (total)	"	ND	---	0.0508	"	"	"	"	"	
<i>Surrogate(s): 4-BFB (FID)</i>			87.3%		50 - 150 %	"				
<i>4-BFB (PID)</i>			84.2%		50 - 150 %	"				

TestAmerica - Anchorage, AK

Troy J Engstrom

Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
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Diesel Range Organics (C10-C25) per AK102
 TestAmerica - Anchorage, AK

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
AQG0004-01 (P.W.)		Water			Sampled: 06/28/07 16:00					
Diesel Range Organics	AK 102	545	---	39.1	mg/l	100x	7070041	07/09/07 14:51	07/10/07 12:02	RL7
Surrogate(s): 1-Chlorooctadecane		309%		50 - 150 %		"				Z3
AQG0004-02 (F-1)		Soil			Sampled: 06/27/07 17:37					
Diesel Range Organics	AK 102	2080	---	200	mg/kg dry	10x	7070028	07/06/07 13:05	07/11/07 10:47	RL7
Surrogate(s): 1-Chlorooctadecane		93.3%		50 - 150 %		"				
AQG0004-03 (C-1)		Soil			Sampled: 06/27/07 19:04					
Diesel Range Organics	AK 102	ND	---	20.0	mg/kg dry	1x	7070028	07/06/07 13:05	07/09/07 18:45	
Surrogate(s): 1-Chlorooctadecane		83.4%		50 - 150 %		"				
AQG0004-04 (P.H.)		Soil			Sampled: 06/27/07 20:16					
Diesel Range Organics	AK 102	5230	---	180	mg/kg dry	10x	7070028	07/06/07 13:05	07/11/07 10:47	RL7
Surrogate(s): 1-Chlorooctadecane		94.5%		50 - 150 %		"				
AQG0004-06 (POL Shed)		Soil			Sampled: 06/27/07 21:23					
Diesel Range Organics	AK 102	176	---	20.0	mg/kg dry	1x	7070028	07/06/07 13:05	07/09/07 19:18	
Surrogate(s): 1-Chlorooctadecane		91.5%		50 - 150 %		"				

TestAmerica - Anchorage, AK

Troy J Engstrom

Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
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Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO
 TestAmerica - Anchorage, AK

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
AQG0004-04 (P.H.)		Soil					Sampled: 06/27/07 20:16			
Diesel Range Organics	AK102/103	5230	---	180	mg/kg dry	10x	7070028	07/06/07 13:05	07/11/07 10:47	RL7
Residual Range Organics	"	2520	---	450	"	"	"	"	"	RL7
Surrogate(s):	1-Chlorooctadecane		94.5%		50 - 150 %	"			"	
	Triacontane		114%		50 - 150 %	"			"	

TestAmerica - Anchorage, AK

Troy J Engstrom

Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
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Physical Parameters by APHA/ASTM/EPA Methods
TestAmerica - Anchorage, AK

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
AQG0004-02 (F-1)		Soil				Sampled: 06/27/07 17:37				
Dry Weight	TA-SOP	76.7	---	1.00	%	1x	7070030	07/06/07 15:42	07/09/07 15:47	
AQG0004-03 (C-1)		Soil				Sampled: 06/27/07 19:04				
Dry Weight	TA-SOP	95.1	---	1.00	%	1x	7070030	07/06/07 15:42	07/09/07 15:47	
AQG0004-04 (P.H.)		Soil				Sampled: 06/27/07 20:16				
Dry Weight	TA-SOP	93.3	---	1.00	%	1x	7070030	07/06/07 15:42	07/09/07 15:47	
AQG0004-06 (POL Shed)		Soil				Sampled: 06/27/07 21:23				
Dry Weight	TA-SOP	94.6	---	1.00	%	1x	7070030	07/06/07 15:42	07/09/07 15:47	

TestAmerica - Anchorage, AK

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name:	UTICA Mine Camp	Report Created:
	Project Number:	1086-19	07/17/07 17:23
	Project Manager:	Melissa Shippey	

Gasoline Range Organics (C6-C10) per AK101
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
AQG0004-01 (P.W.)		Water					Sampled: 06/28/07 16:00			
Gasoline Range Organics	AK101 GRO	ND	15.6	80.0	ug/l	1x	7070145	07/05/07 10:20	07/05/07 16:56	RL1
Surrogate(s): 4-BFB (FID)			86.4%		50 - 150 %	"				"

TestAmerica - Anchorage, AK



Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
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Volatile Organic Compounds per EPA Method 8260B
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
AQG0004-01RE1 (P.W.)		Water					Sampled: 06/28/07 16:00			RL1
Acetone	EPA 8260B	147	77.6	250	ug/l	10x	7070301	07/10/07 07:28	07/10/07 18:36	J
Benzene	"	ND	0.900	10.0	"	"	"	"	"	
Bromobenzene	"	ND	1.00	10.0	"	"	"	"	"	
Bromochloromethane	"	ND	1.80	10.0	"	"	"	"	"	
Bromodichloromethane	"	ND	1.10	10.0	"	"	"	"	"	
Bromoform	"	ND	1.00	10.0	"	"	"	"	"	
Bromomethane	"	ND	1.70	50.0	"	"	"	"	"	
2-Butanone (MEK)	"	ND	35.0	100	"	"	"	"	"	
n-Butylbenzene	"	ND	0.600	50.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	0.800	10.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	0.600	10.0	"	"	"	"	"	
Carbon disulfide	"	ND	1.40	100	"	"	"	"	"	
Carbon tetrachloride	"	ND	0.600	10.0	"	"	"	"	"	
Chlorobenzene	"	ND	0.500	10.0	"	"	"	"	"	
Chloroethane	"	3.70	1.10	10.0	"	"	"	"	"	J
Chloroform	"	ND	0.900	10.0	"	"	"	"	"	
Chloromethane	"	5.40	0.800	50.0	"	"	"	"	"	J
2-Chlorotoluene	"	ND	0.700	10.0	"	"	"	"	"	
4-Chlorotoluene	"	ND	1.10	10.0	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	23.5	50.0	"	"	"	"	"	
Dibromochloromethane	"	ND	0.700	10.0	"	"	"	"	"	
1,2-Dibromoethane	"	ND	1.10	10.0	"	"	"	"	"	
Dibromomethane	"	ND	1.00	10.0	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	0.700	10.0	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	0.600	10.0	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	1.20	10.0	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	1.10	50.0	"	"	"	"	"	
1,1-Dichloroethane	"	ND	0.800	10.0	"	"	"	"	"	
1,2-Dichloroethane	"	ND	1.00	10.0	"	"	"	"	"	
1,1-Dichloroethene	"	ND	1.20	10.0	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	0.900	10.0	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	1.00	10.0	"	"	"	"	"	
1,2-Dichloropropane	"	ND	1.10	10.0	"	"	"	"	"	
1,3-Dichloropropane	"	ND	1.40	10.0	"	"	"	"	"	
2,2-Dichloropropane	"	ND	0.900	10.0	"	"	"	"	"	
1,1-Dichloropropene	"	ND	0.800	10.0	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	0.900	10.0	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	1.00	10.0	"	"	"	"	"	
Ethylbenzene	"	ND	0.600	10.0	"	"	"	"	"	
Hexachlorobutadiene	"	ND	2.10	40.0	"	"	"	"	"	
2-Hexanone	"	ND	36.2	100	"	"	"	"	"	
Isopropylbenzene	"	ND	0.700	20.0	"	"	"	"	"	
p-Isopropyltoluene	"	ND	0.600	20.0	"	"	"	"	"	

TestAmerica - Anchorage, AK



Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
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Volatile Organic Compounds per EPA Method 8260B
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
AQG0004-01RE1 (P.W.)		Water				Sampled: 06/28/07 16:00				RLI
4-Methyl-2-pentanone	EPA 8260B	ND	2.90	50.0	ug/l	10x	7070301	07/10/07 07:28	07/10/07 18:36	
Methyl tert-butyl ether	"	ND	0.900	10.0	"	"	"	"	"	
Methylene chloride	"	3.80	1.60	50.0	"	"	"	"	"	J
Naphthalene	"	ND	0.900	20.0	"	"	"	"	"	
n-Propylbenzene	"	ND	1.00	10.0	"	"	"	"	"	
Styrene	"	ND	0.400	10.0	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	0.900	10.0	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	0.800	10.0	"	"	"	"	"	
Tetrachloroethene	"	ND	1.10	10.0	"	"	"	"	"	
Toluene	"	ND	1.10	10.0	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	1.00	10.0	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	1.10	10.0	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	1.20	10.0	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	1.30	10.0	"	"	"	"	"	
Trichloroethene	"	ND	0.800	10.0	"	"	"	"	"	
Trichlorofluoromethane	"	ND	0.600	10.0	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	1.30	10.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	0.800	10.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	0.700	10.0	"	"	"	"	"	
Vinyl chloride	"	ND	1.00	10.0	"	"	"	"	"	
o-Xylene	"	ND	0.700	10.0	"	"	"	"	"	
m,p-Xylene	"	ND	2.10	20.0	"	"	"	"	"	
Surrogate(s): 4-BFB			90.6%		80 - 120 %	1x				
1,2-DCA-d4			92.0%		80 - 120 %	"				
Dibromofluoromethane			88.8%		80 - 120 %	"				
Toluene-d8			90.0%		80 - 120 %	"				




Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
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Gasoline Range Organics (C6-C10) and BTEX per AK101 - Laboratory Quality Control Results
 TestAmerica - Anchorage, AK

QC Batch: 7070032 Soil Preparation Method: AK101 Field Prep

Analyte	Method	Result	MDL ⁺	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Blank (7070032-BLK1) Extracted: 07/06/07 16:16

Gasoline Range Organics	AK101 GRO/BTEX	ND	---	3.33	mg/kg wet	1x	--	--	--	--	--	--	07/07/07 18:02	
Benzene	"	ND	---	0.0166	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Surrogate(s): a,a,a-TFT (FID)		Recovery: 105%		Limits: 50-150%	"								07/07/07 18:02	
a,a,a-TFT (PID)		96.3%		50-150%	"								"	

LCS (7070032-BS1) Extracted: 07/06/07 16:16

Gasoline Range Organics	AK101 GRO/BTEX	19.9	---	3.33	mg/kg wet	1x	--	22.0	90.3%	(60-120)	--	--	07/07/07 16:56	
Benzene	"	0.239	---	0.0166	"	"	--	0.212	113%	(73.5-120)	--	--	"	
Toluene	"	1.84	---	0.0333	"	"	--	1.84	100%	(76.3-120)	--	--	"	
Ethylbenzene	"	0.384	---	0.0333	"	"	--	0.368	104%	(80-122)	--	--	"	
Xylenes (total)	"	2.09	---	0.0500	"	"	--	2.12	98.7%	(80-120)	--	--	"	
Surrogate(s): a,a,a-TFT (FID)		Recovery: 111%		Limits: 60-120%	"								07/07/07 16:56	
a,a,a-TFT (PID)		106%		60-120%	"								"	

LCS Dup (7070032-BSD1) Extracted: 07/06/07 16:16

Gasoline Range Organics	AK101 GRO/BTEX	19.8	---	3.33	mg/kg wet	1x	--	22.0	90.0%	(60-120)	0.406% (20)	--	07/07/07 17:29	
Benzene	"	0.249	---	0.0166	"	"	--	0.212	117%	(73.5-120)	4.21% (13)	--	"	
Toluene	"	1.81	---	0.0333	"	"	--	1.84	98.4%	(76.3-120)	1.86% (12.3)	--	"	
Ethylbenzene	"	0.380	---	0.0333	"	"	--	0.368	103%	(80-122)	1.13% (10.1)	--	"	
Xylenes (total)	"	2.08	---	0.0500	"	"	--	2.12	98.1%	(80-120)	0.526% (11.6)	--	"	
Surrogate(s): a,a,a-TFT (FID)		Recovery: 110%		Limits: 60-120%	"								07/07/07 17:29	
a,a,a-TFT (PID)		105%		60-120%	"								"	

Duplicate (7070032-DUP1) QC Source: AQG0014-01 Extracted: 07/06/07 16:16

Gasoline Range Organics	AK101 GRO/BTEX	ND	---	3.09	mg/kg dry	2.25x	ND	--	--	--	19.9% (35.8)	--	07/08/07 13:37	
Surrogate(s): a,a,a-TFT (FID)		Recovery: 82.8%		Limits: 50-150%	"								07/08/07 13:37	

Matrix Spike (7070032-MS1) QC Source: AQG0014-01 Extracted: 07/06/07 16:16

Benzene	AK101 GRO/BTEX	0.770	---	0.0155	mg/kg dry	2.25x	ND	0.701	110%	(80-125)	--	--	07/08/07 14:10	
Toluene	"	0.767	---	0.0309	"	"	0.00333	0.671	114%	(80-130)	--	--	"	
Ethylbenzene	"	0.803	---	0.0309	"	"	ND	0.674	119%	(80-138)	--	--	"	
Xylenes (total)	"	2.32	---	0.0464	"	"	ND	2.03	114%	(80-141)	--	--	"	
Surrogate(s): a,a,a-TFT (PID)		Recovery: 84.8%		Limits: 50-150%	"								07/08/07 14:10	

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Troy J Engstrom

Troy J. Engstrom, Manager

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Gasoline Range Organics (C6-C10) and BTEX per AK101 - Laboratory Quality Control Results
TestAmerica - Anchorage, AK

QC Batch: 7070032 Soil Preparation Method: AK101 Field Prep

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (7070032-MSD1)			QC Source: AQG0014-01			Extracted: 07/06/07 16:16								
Benzene	AK101 GRO/BTEX	0.759	---	0.0155	mg/kg dry	2.25x	ND	0.701	108%	(80-125)	1.40% (18.4)		07/08/07 14:43	
Toluene	"	0.755	---	0.0309	"	"	0.00333	0.671	112%	(80-130)	1.50% (18)		"	
Ethylbenzene	"	0.787	---	0.0309	"	"	ND	0.674	117%	(80-138)	1.96% (15.3)		"	
Xylenes (total)	"	2.29	---	0.0464	"	"	ND	2.03	113%	(80-141)	1.48% (14.2)		"	
Surrogate(s): o,a,a-TFT (PID)		Recovery: 80.6%		Limits: 50-150%		"		07/08/07 14:43						

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Diesel Range Organics (C10-C25) per AK102 - Laboratory Quality Control Results
 TestAmerica - Anchorage, AK

QC Batch: 7070028 Soil Preparation Method: EPA 3545

Analyte	Method	Result	MDL ^A	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7070028-BLK1)													Extracted: 07/06/07 13:05	
Diesel Range Organics	AK 102	ND	---	20.0	mg/kg wet	1x	--	--	--	--	--	--	07/09/07 06:58	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 89.1%</i>		<i>Limits: 50-150%</i>										07/09/07 06:58
LCS (7070028-BS1)													Extracted: 07/06/07 13:05	
Diesel Range Organics	AK 102	123	---	20.0	mg/kg wet	1x	--	126	97.7%	(75-125)	--	--	07/09/07 07:31	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 90.1%</i>		<i>Limits: 60-120%</i>										07/09/07 07:31
LCS (7070028-BS2)													Extracted: 07/06/07 13:05	
Diesel Range Organics	AK 102	129	---	20.0	mg/kg wet	1x	--	126	103%	(75-125)	--	--	07/10/07 17:58	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 88.7%</i>		<i>Limits: 60-120%</i>										07/10/07 17:58
LCS (7070028-BS3)													Extracted: 07/06/07 13:05	
Diesel Range Organics	AK 102	138	---	20.0	mg/kg wet	1x	--	126	110%	(75-125)	--	--	07/10/07 18:31	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 97.5%</i>		<i>Limits: 60-120%</i>										07/10/07 18:31
LCS Dup (7070028-BSD1)													Extracted: 07/06/07 13:05	
Diesel Range Organics	AK 102	123	---	20.0	mg/kg wet	1x	--	126	97.4%	(75-125)	0.381% (20)	--	07/09/07 08:04	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 84.2%</i>		<i>Limits: 60-120%</i>										07/09/07 08:04
Duplicate (7070028-DUP1)													QC Source: AQG0002-09 Extracted: 07/06/07 13:05	
Diesel Range Organics	AK 102	ND	---	17.6	mg/kg dry	1x	ND	--	--	--	12.2% (20)	--	07/09/07 06:58	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 82.1%</i>		<i>Limits: 50-150%</i>										07/09/07 06:58
Matrix Spike (7070028-MS1)													QC Source: AQG0002-09 Extracted: 07/06/07 13:05	
Diesel Range Organics	AK 102	116	---	20.0	mg/kg dry	1x	3.93	127	88.1%	(75-125)	--	--	07/09/07 08:04	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 85.5%</i>		<i>Limits: 50-150%</i>										07/09/07 08:04
Matrix Spike Dup (7070028-MSD1)													QC Source: AQG0002-09 Extracted: 07/06/07 13:05	
Diesel Range Organics	AK 102	115	---	17.6	mg/kg dry	1x	3.93	121	91.6%	(75-125)	0.746% (25)	--	07/09/07 08:37	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 85.9%</i>		<i>Limits: 50-150%</i>										07/09/07 08:37

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Diesel Range Organics (C10-C25) per AK102 - Laboratory Quality Control Results
 TestAmerica - Anchorage, AK

QC Batch: 7070041 Water Preparation Method: EPA 3510

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7070041-BLK1)										Extracted: 07/09/07 14:51				
Diesel Range Organics	AK 102	ND	---	0.500	mg/l	1x	--	--	--	--	--	--	07/10/07 08:47	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 96.2%</i>		<i>Limits: 50-150%</i>		"						07/10/07 08:47		
LCS (7070041-BS1)										Extracted: 07/09/07 14:51				
Diesel Range Organics	AK 102	10.3	---	0.500	mg/l	1x	--	10.1	102%	(75-125)	--	--	07/10/07 09:20	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 109%</i>		<i>Limits: 60-120%</i>		"						07/10/07 09:20		
LCS Dup (7070041-BSD1)										Extracted: 07/09/07 14:51				
Diesel Range Organics	AK 102	10.4	---	0.500	mg/l	1x	--	10.1	103%	(75-125)	0.452% (20)		07/10/07 09:52	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 108%</i>		<i>Limits: 60-120%</i>		"						07/10/07 09:52		
Duplicate (7070041-DUP1)										QC Source: AQG0013-01		Extracted: 07/09/07 14:51		
Diesel Range Organics	AK 102	0.441	---	0.391	mg/l	1x	0.537	--	--	--	19.6% (20)		07/10/07 08:47	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 81.7%</i>		<i>Limits: 50-150%</i>		"						07/10/07 08:47		

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Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results
 TestAmerica - Anchorage, AK

QC Batch: 7070028 Soil Preparation Method: EPA 3545

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7070028-BLK1)														
Extracted: 07/06/07 13:05														
Diesel Range Organics	AK102/103	ND	---	20.0	mg/kg wet	1x	--	--	--	--	--	--	07/09/07 06:58	
Residual Range Organics	"	ND	---	50.0	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 89.1%		Limits: 50-150%								07/09/07 06:58		
Triacontane		88.2%		50-150%								"		
LCS (7070028-BS1)														
Extracted: 07/06/07 13:05														
Diesel Range Organics	AK102/103	123	---	20.0	mg/kg wet	1x	--	126	97.7%	(75-125)	--	--	07/09/07 07:31	
Residual Range Organics	"	127	---	50.0	"	"	--	130	97.5%	(60-120)	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 90.1%		Limits: 60-120%								07/09/07 07:31		
Triacontane		87.9%		60-120%								"		
LCS (7070028-BS2)														
Extracted: 07/06/07 13:05														
Diesel Range Organics	AK102/103	129	---	20.0	mg/kg wet	1x	--	126	103%	(75-125)	--	--	07/10/07 17:58	
Residual Range Organics	"	127	---	50.0	"	"	--	130	97.7%	(60-120)	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 88.7%		Limits: 60-120%								07/10/07 17:58		
Triacontane		85.0%		60-120%								"		
LCS (7070028-BS3)														
Extracted: 07/06/07 13:05														
Diesel Range Organics	AK102/103	138	---	20.0	mg/kg wet	1x	--	126	110%	(75-125)	--	--	07/10/07 18:31	
Residual Range Organics	"	140	---	50.0	"	"	--	130	107%	(60-120)	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 97.5%		Limits: 60-120%								07/10/07 18:31		
Triacontane		94.3%		60-120%								"		
LCS Dup (7070028-BSD1)														
Extracted: 07/06/07 13:05														
Diesel Range Organics	AK102/103	123	---	20.0	mg/kg wet	1x	--	126	97.4%	(75-125)	0.381% (20)	--	07/09/07 08:04	
Residual Range Organics	"	120	---	50.0	"	"	--	130	92.5%	(60-120)	5.29%	"	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 84.2%		Limits: 60-120%								07/09/07 08:04		
Triacontane		81.4%		60-120%								"		
Duplicate (7070028-DUP1)														
QC Source: AQG0002-09 Extracted: 07/06/07 13:05														
Diesel Range Organics	AK102/103	ND	---	17.6	mg/kg dry	1x	ND	--	--	--	12.2% (20)	--	07/09/07 06:58	
Residual Range Organics	"	ND	---	44.0	"	"	ND	--	--	--	42.0%	"	"	R4
Surrogate(s): 1-Chlorooctadecane		Recovery: 82.1%		Limits: 50-150%								07/09/07 06:58		
Triacontane		80.2%		50-150%								"		

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Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results
 TestAmerica - Anchorage, AK

QC Batch: 7070028 Soil Preparation Method: EPA 3545

Analyte	Method	Result	MDL ^A	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (7070028-MS1)			QC Source: AQG0002-09			Extracted: 07/06/07 13:05								
Diesel Range Organics	AK102/103	116	---	20.0	mg/kg dry	1x	3.93	127	88.1%	(75-125)	--	--	07/09/07 08:04	
Residual Range Organics	"	117	---	50.0	"	"	5.13	131	85.4%	(60-150)	--	--	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery:</i>	<i>85.5%</i>	<i>Limits: 50-150%</i>		"								<i>07/09/07 08:04</i>
<i> Triacontane</i>			<i>79.9%</i>	<i>50-150%</i>		"								<i>"</i>
Matrix Spike Dup (7070028-MSD1)			QC Source: AQG0002-09			Extracted: 07/06/07 13:05								
Diesel Range Organics	AK102/103	115	---	17.6	mg/kg dry	1x	3.93	121	91.6%	(75-125)	0.746%	(25)	07/09/07 08:37	
Residual Range Organics	"	115	---	44.1	"	"	5.13	125	87.6%	(60-150)	1.96%	"	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery:</i>	<i>83.9%</i>	<i>Limits: 50-150%</i>		"								<i>07/09/07 08:37</i>
<i> Triacontane</i>			<i>80.4%</i>	<i>50-150%</i>		"								<i>"</i>

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Physical Parameters by APHA/ASTM/EPA Methods - Laboratory Quality Control Results
 TestAmerica - Anchorage, AK

QC Batch: 7070030 Soil Preparation Method: *** DEFAULT PREP

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (7070030-DUP1)			QC Source: AQG0002-09			Extracted: 07/06/07 15:42								
Dry Weight	TA-SOP	92.0	---	1.00	%	1x	91.8	--	--	--	0.316% (25)		07/09/07 15:47	

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Gasoline Range Organics (C6-C10) per AK101 - Laboratory Quality Control Results
 TestAmerica - Portland, OR

QC Batch: 7070145 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (7070145-BLK1)													Extracted: 07/05/07 10:20			
Gasoline Range Organics	AK101 GRO	ND	15.6	80.0	ug/l	1x	--	--	--	--	--	--	07/05/07 12:47			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 86.7%</i>	<i>Limits: 50-150%</i>											<i>07/05/07 12:47</i>		
LCS (7070145-BS1)													Extracted: 07/05/07 10:20			
Gasoline Range Organics	AK101 GRO	486	15.6	80.0	ug/l	1x	--	500	97.2%	(60-120)	--	--	07/05/07 12:20			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.9%</i>	<i>Limits: 60-120%</i>											<i>07/05/07 12:20</i>		
LCS Dup (7070145-BSD1)													Extracted: 07/05/07 10:20			
Gasoline Range Organics	AK101 GRO	481	15.6	80.0	ug/l	1x	--	500	96.2%	(60-120)	1.03%	(20)	07/05/07 11:52			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 97.5%</i>	<i>Limits: 60-120%</i>											<i>07/05/07 11:52</i>		
Duplicate (7070145-DUP1)													QC Source: PQG0024-03RE1		Extracted: 07/05/07 10:20	
Gasoline Range Organics	AK101 GRO	45.2	15.6	80.0	ug/l	1x	47.8	--	--	--	5.64%	(50)	07/05/07 14:09	J		
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 89.9%</i>	<i>Limits: 50-150%</i>											<i>07/05/07 14:09</i>		

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Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica - Portland, OR

QC Batch: 7070301	Water Preparation Method: EPA 5030B
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Analyte	Method	Result	MDL ^A	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RFD	(Limits)	Analyzed	Notes
Blank (7070301-BLK1)													Extracted: 07/10/07 07:28	
Acetone	EPA 8260B	ND	7.76	25.0	ug/l	1x	--	--	--	--	--	--	07/10/07 10:20	
Benzene	"	ND	0.0900	1.00	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	0.180	1.00	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	0.110	1.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	0.170	5.00	"	"	--	--	--	--	--	--	"	
2-Butanone (MEK)	"	ND	3.50	10.0	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	0.0600	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	0.0800	1.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	0.0600	1.00	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	0.140	10.0	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	0.0600	1.00	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	0.0500	1.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	0.110	1.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	0.0900	1.00	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	0.0800	5.00	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	0.0700	1.00	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	0.110	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	2.35	5.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	0.0700	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	0.110	1.00	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	0.0700	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	0.0600	1.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	0.120	1.00	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	0.110	5.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	0.0800	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	0.120	1.00	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	0.0900	1.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	0.110	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	0.140	1.00	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	0.0900	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	0.0800	1.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	0.0900	1.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	0.0600	1.00	"	"	--	--	--	--	--	--	"	

TestAmerica - Anchorage, AK



Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
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Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica - Portland, OR

QC Batch: 7070301	Water Preparation Method: EPA 5030B
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7070301-BLK1)													Extracted: 07/10/07 07:28	
Hexachlorobutadiene	EPA 8260B	ND	0.210	4.00	ug/l	1x	--	--	--	--	--	--	07/10/07 10:20	
2-Hexanone	"	ND	3.62	10.0	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	0.0700	2.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	0.0600	2.00	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	0.290	5.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	0.0900	1.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	0.160	5.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	0.0900	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	0.0400	1.00	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	0.0900	1.00	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	0.0800	1.00	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	0.110	1.00	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	0.110	1.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	0.110	1.00	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	0.120	1.00	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	0.130	1.00	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	0.0800	1.00	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	0.0600	1.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	0.130	1.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	0.0800	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	0.0700	1.00	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	0.100	1.00	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	0.0700	1.00	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	0.210	2.00	"	"	--	--	--	--	--	--	"	
Surrogate(s):	4-BFB	Recovery:	92.8%	Limits:	80-120%	"							07/10/07 10:20	
	1,2-DCA-d4		85.6%		80-120%	"							"	
	Dibromofluoromethane		89.0%		80-120%	"							"	
	Toluene-d8		89.6%		80-120%	"							"	

TestAmerica - Anchorage, AK

Troy J Engstrom

Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name: UTICA Mine Camp Project Number: 1086-19 Project Manager: Melissa Shippey	Report Created: 07/17/07 17:23
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Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

TestAmerica - Portland, OR

QC Batch: 7070301	Water Preparation Method: EPA 5030B
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (7070301-BS1)														
										Extracted: 07/10/07 07:28				
Benzene	EPA 8260B	19.3	0.0900	1.00	ug/l	1x	--	20.0	96.7%	(80-120)	--	--	07/10/07 08:28	
Chlorobenzene	"	18.9	0.0500	1.00	"	"	--	"	94.3%	(80-124)	--	--	"	
1,1-Dichloroethene	"	17.0	0.120	1.00	"	"	--	"	85.0%	(78-120)	--	--	"	
Toluene	"	19.3	0.110	1.00	"	"	--	"	96.4%	(80-124)	--	--	"	
Trichloroethene	"	19.1	0.0800	1.00	"	"	--	"	95.6%	(80-132)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 80-120%</i>								<i>07/10/07 08:28</i>		
<i>1,2-DCA-d4</i>		<i>91.3%</i>		<i>80-120%</i>								<i>"</i>		
<i>Dibromofluoromethane</i>		<i>96.2%</i>		<i>80-120%</i>								<i>"</i>		
<i>Toluene-d8</i>		<i>99.0%</i>		<i>80-120%</i>								<i>"</i>		

Matrix Spike (7070301-MS1)														
										QC Source: PQG0090-02				
										Extracted: 07/10/07 07:28				
Benzene	EPA 8260B	20.2	0.0900	1.00	ug/l	1x	ND	20.0	101%	(80-124)	--	--	07/10/07 08:55	
Chlorobenzene	"	19.1	0.0500	1.00	"	"	ND	"	95.7%	(72.9-134)	--	--	"	
1,1-Dichloroethene	"	20.2	0.120	1.00	"	"	ND	"	101%	(79.3-127)	--	--	"	
Toluene	"	19.7	0.110	1.00	"	"	0.280	"	97.3%	(79.7-131)	--	--	"	
Trichloroethene	"	22.9	0.0800	1.00	"	"	2.99	"	99.6%	(68.4-130)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 104%</i>		<i>Limits: 80-120%</i>								<i>07/10/07 08:55</i>		
<i>1,2-DCA-d4</i>		<i>93.2%</i>		<i>80-120%</i>								<i>"</i>		
<i>Dibromofluoromethane</i>		<i>99.8%</i>		<i>80-120%</i>								<i>"</i>		
<i>Toluene-d8</i>		<i>102%</i>		<i>80-120%</i>								<i>"</i>		

Matrix Spike Dup (7070301-MSD1)														
										QC Source: PQG0090-02				
										Extracted: 07/10/07 07:28				
Benzene	EPA 8260B	18.7	0.0900	1.00	ug/l	1x	ND	20.0	93.6%	(80-124)	7.86%	(25)	07/10/07 09:26	
Chlorobenzene	"	18.1	0.0500	1.00	"	"	ND	"	90.5%	(72.9-134)	5.59%	"	"	
1,1-Dichloroethene	"	17.8	0.120	1.00	"	"	ND	"	89.0%	(79.3-127)	12.7%	"	"	
Toluene	"	18.7	0.110	1.00	"	"	0.280	"	92.0%	(79.7-131)	5.57%	"	"	
Trichloroethene	"	20.7	0.0800	1.00	"	"	2.99	"	88.6%	(68.4-130)	10.0%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 106%</i>		<i>Limits: 80-120%</i>								<i>07/10/07 09:26</i>		
<i>1,2-DCA-d4</i>		<i>94.0%</i>		<i>80-120%</i>								<i>"</i>		
<i>Dibromofluoromethane</i>		<i>98.2%</i>		<i>80-120%</i>								<i>"</i>		
<i>Toluene-d8</i>		<i>100%</i>		<i>80-120%</i>								<i>"</i>		

TestAmerica - Anchorage, AK



Troy J. Engstrom, Manager

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Travis/Peterson Environmental Consulting, Inc. FBK 329 2nd Street Fairbanks, ALASKA/USA 99701	Project Name:	UTICA Mine Camp	Report Created: 07/17/07 17:23
	Project Number:	1086-19	
	Project Manager:	Melissa Shippey	

Notes and Definitions

Report Specific Notes:

- J - Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- RL1 - Reporting limit raised due to sample matrix effects.
- RL7 - Sample required dilution due to high concentrations of target analyte.
- Z3 - The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.
- Z6 - Surrogate recovery was below acceptance limits.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Anchorage, AK



Troy J. Engstrom, Manager

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CHAIN OF CUSTODY REPORT

Work Order #: **AG0004**

CLIENT: **TRAVIS/PETERSON ENVIRONMENTAL**
 REPORT TO: **329 2nd STREET FAIRBANKS, AK 99701**
 ADDRESS: **Attac. Melissa**
 PHONE: **455-7225** FAX:
 PROJECT NAME: **UTICA MINE CAMP**
 PROJECT NUMBER: **1080-19**
 SAMPLED BY: **ML-Shipprey**

INVOICE TO: **Larry Peterson**
 329 2nd STREET
 FAIRBANKS, AK 99701
 P.O. NUMBER: **1080-19**
 PRESERVATIVE

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES				MATRIX (W.S.O)	# OF CONT.	LOCATION/ COMMENTS	TA WORD
		HCl	HCl	HCl	HCl				
P.W.	6/28/07 4:00 pm	X	X	X	X	W			
F-1	6/27/07 5:37p	X	X	X	X	S			
C-1	6/27/07 7:04	X	X	X	X	S			
P.H.	6/27/07 8:16 pm	X	X	X	X	S			
TRIP BLANK	6/28/07 10:00pm	X	X	X	X	S			DRO/REG ONLY

TURNAROUND REQUEST
 In Business Days *
 Organic & Inorganic Analyses: 1 2 3 4 5 6 7
 Petroleum Hydrocarbon Analyses: 1 2 3 4 5
 STD: 1 2 3 4 5 6 7
 OTHER: Specify:
 * Turnaround Requests less than standard may incur Rush Charges.

RECEIVED BY: **Melissa S. Shipprey** DATE: **July 2, 2007**
 PRINT NAME: **Melissa S. Shipprey** TIME: **09:00**
 RECEIVED BY: **David Houston** DATE: **7/2/07**
 PRINT NAME: **David Houston** TIME: **14:17**

ADDITIONAL REMARKS:
 COUNTRY CODE: **USA**

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and for any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice unless otherwise contracted. Sample(s) will be disposed of after 30 days unless otherwise contracted.

Test America Cooler Receipt Form

(Army Corps. Compliant)

WORK ORDER # ADG0004

CLIENT: Travis Peterson

PROJECT: Environmental mine Camp

Date/Time Cooler Arrived 7/2/07 14:17

Cooler signed for by: David Houston
(Print name)

Preliminary Examination Phase:

Date cooler opened: same as date received or _____/_____/____

Cooler opened by (print) David Houston (sign) David Houston

1. Delivered by ALASKA AIRLINES Fed-Ex UPS NAC LYNDEN CLIENT Other: _____

Shipment Tracking # if applicable _____ (include copy of shipping papers in file)

2. Number of Custody Seals 1 Signed by see back Date 7/2/07

Were custody seals unbroken and intact on arrival? Yes No

3. Were custody papers sealed in a plastic bag? Yes No

4. Were custody papers filled out properly (ink, signed, etc.)? Yes No

5. Did you sign the custody papers in the appropriate place? Yes No

6. Was ice used? Yes No Type of ice: blue ice gel ice real ice dry ice Condition of Ice: Good

Temperature by Digi-Thermo Probe 3.2 °C Thermometer # Rec#3

7. Packing in Cooler: bubble wrap styrofoam cardboard Other: _____

8. Did samples arrive in plastic bags? Yes No

9. Did all bottles arrive unbroken, and with labels in good condition? Yes No

10. Are all bottle labels complete (ID, date, time, etc.) Yes No

11. Do bottle labels and Chain of Custody agree? Yes No

12. Are the containers and preservatives correct for the tests indicated? Yes No

13. Is there adequate volume for the tests requested? Yes No

14. Were VOA vials free of bubbles? N/A Yes No

If "NO" which containers contained "head space" or bubbles? _____

07/02/07 jd
POL 8:20
6/27/07 @ 9:23 pm
not on COC
Contact client
07/03/07
client asked to
add the sample
to work order
see email

Log-in Phase:

Date of sample log-in 07/02/07

Samples logged in by (print) Johanna Dieker (sign) Johanna Dieker

1. Was project identifiable from custody papers? Yes No

2. Do Turn Around Times and Due Dates agree? Yes No

3. Was the Project Manager notified of status? Yes No

4. Was the Lab notified of status? Yes No

5. Was the COC scanned and copied? Yes No

AQ6004

CUSTODY SEAL

Signature

Date *July 2, 2007*
W. L. Brown - Stegors

TestAmerica
ANALYTICAL TESTING CORPORATION

Laboratory Data Review Checklist

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
 Yes No Comments:

[Empty text box for 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 Comments:

[Empty text box for comments]

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?
 Yes No Comments:

[Empty text box for comments]

b. Correct analyses requested?
 Yes No Comments:

[Empty text box for comments]

But one correction was made. M. Shippey accidentally checked the wrong box. Corrections made on C.O.C.

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
 Yes No Comments:

[Empty text box for comments]

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
 Yes No Comments:

[Empty text box for comments]

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?
 Yes No Comments:

[Empty text box for comments]

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

Yes No

Comments: *See C.O.C. and sample receipt form*

e. Data quality or usability affected? Explain. *ND*

Comments:

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No

Comments: *No failures or discrepancies*

c. Were all corrective actions documented?

Yes No

Comments: *N/A*

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

Comments: *None.*

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No

Comments:

b. All applicable holding times met?

Yes No

Comments:

c. All soils reported on a dry weight basis?

Yes No

Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes No

Comments:

e. Data quality or usability affected? Explain.

Comments: *NO.*

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments: *N/A*

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

N/A

v. Data quality or usability affected? Explain.

Comments: *N/A*

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

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes No

Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No

Comments:

No metals in this batch.

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits or project specified DQOs? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No

Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits or project specified DQOs? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No

Comments:

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

Comments: *N/A*

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

N/A

vii. Data quality or usability affected? Explain.

Comments: *N/A*

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes No

Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits or project specified DQOs? (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

*60004-02 All are reported. One recovery was outside limits. AQG-0004-01(P.W.) 309%
F-1 recoveries were slightly low. range is 50-100%*

iv. Data quality or usability affected? Explain.

Comments: *N/A LUS*

Recovery calculation does not provide useful information - Sample AQC-0004-01

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

Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

GRO/BTEX analysis. AQC-0004-03

ii. All results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments: *N/A*

iv. Data quality or usability affected? Explain.

Comments: *N/A*

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No

Comments:

No duplicates submitted for

this sampling event.

ii. Submitted blind to lab?

Yes No

Comments:

N/A

iii. Precision - All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

Yes No

Comments:

N/A

iv. Data quality or usability affected?

Yes No

Comments:

N/A

f. Decontamination or Equipment Blank (if applicable)

Yes No Not Applicable

i. All results less than PQL?

Yes No

Comments:

[Empty text box]

ii. If above PQL, what samples are affected?

Comments: N/A

[Empty text box]

iii. Data quality or usability affected? Explain.

Comments: N/A

[Empty text box]

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

a. Defined and appropriate?

Yes No

Comments:

N/A

[Empty text box]

Completed by: MELISSA S. SHIPPEY

Title: STAFF SCIENTIST

Date: 9-17-07

Report Name: AQS 0004 - Ulica Mine Camp 1080-19

Report Date: 7-17-07

Firm: TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.

File Number:

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