YUKON GOVERNMENT – YUKON ENERGY, MINES & RESOURCES
ASSESSMENT & ABANDONED MINES, ROOM 2C, 2ND FLOOR, ROYAL CENTER
P.O. BOX 2703, WHITEHORSE, YUKON Y1A 2C6

HAZARDOUS MATERIALS CLASSIFICATION
MT. NANSEN MINESITE
YUKON

REPORT

DECEMBER 2011
ISSUED FOR USE
EBA FILE: W23101481

creating & delivering | BETTER SOLUTIONS

eba
A TETRA TECH COMPANY

LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Yukon Government - Yukon Energy Mines and Resources Assessment and Abandoned Mines and their agents. EBA Engineering Consultants Ltd. operating as EBA, A Tetra Tech Company (EBA), does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Yukon Government - Yukon Energy Mines and Resources Assessment and Abandoned Mines, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in EBA's Services Agreement. EBA's General Conditions are provided in Appendix A of this report.

EBA Engineering Consultants Ltd. operating as EBA, A Tetra Tech Company
Calcite Business Centre, Unit 6, 151 Industrial Road
Whitehorse, YT Y1A 2V3 CANADA
p. 867.668.3068 f. 867.668.4349

EXECUTIVE SUMMARY

EBA Engineering Consultants Ltd. operating as EBA, A Tetra Tech Company (EBA) was retained by Government of Yukon, Assessment of Abandoned Mines (AAM) division to provide environmental services at the Mt. Nansen Mine Site (the Property) for classification of regulated materials deemed as hazardous and requiring regulated disposal.

EBA representatives Mr. Shane Dooley and Mr. Chris Harwood completed the site assessment and sampling August 24 - 27, 2011.

The assessment included an intrusive (destructive) assessment to identify the potential presence of asbestos containing materials (ACMs) and lead based paints (LBPs) and a visual assessment for the presence of PCBs, ODS and mercury containing equipment. The assessment also included the sampling of fluids that were not easily identifiable or labeled and some soil sampling within an area of potential hydrocarbon contamination.

The results of the assessment are provided as follows.

- Asbestos containing furnace gasket totaling approximately 0.3 lin m and asbestos containing transite cement board associated with the furnace within the reclaim heating house totaling approximately 6 m^2. The ACM was in good condition at the time of assessment;
- White lead based paint applied to a mixing tank on the upper level of the mill requiring non-regulated disposal. This paint was visually identified on multiple tanks within the mill and was in fair to poor condition at the time of assessment;
- Based on the construction date of the buildings and associated plumbing components, EBA suspects that solder associated with the cold and hot water supply piping within the buildings may also be lead based where copper piping was used. Lead solder was historically used on hot and cold water piping and is suspect in the mess building and bunk house;
- Fluorescent lamp ballast “TOEC Tech Company 2T8321120” suspect of containing PCB’s was identified within the ketza mine shop;
- Two walk in coolers within the kitchen of the mess building and associated exterior chillers containing either R12, 22, 502 or 404A refrigerant as identified by the manufacture placard;
- Potassium alkaline fire suppression system located in the kitchen of the mess building containing an unknown amount of suppression compound;
- Three refrigerators within the mess building containing an unknown amount of refrigerant;
- One refrigerator within the bunk house containing an unknown amount of refrigerant;
- One refrigerator and one freezer located in the landfill area to the south of the mill;
- One wall mounted mercury switch on the first floor of the bunk house;
- One wall mounted mercury switch in the mess building; and,

- Estimated 100 fluorescent lamp tubes containing a small amount of mercury vapor in the mess building, Ketza Mine shop, mill and associated buildings.

EBA identified 8 barrels of unknown contents and the analytical determination of contents was as follows;

- EBA sample No EBA-2011-MN001; EBA identified similar barrels in proximity that were labeled muratic acid; therefore, EBA suspects the contents of the 9 unlabeled barrels are similar based on litmus testing;
- EBA sample No EBA-2011-MN002; Analysis of the contents through field screening techniques (litmus paper) showed that the contents were pH of 6, indicating the contents are water based. EBA identified one barrel in this area with the above contents;
- EBA sample No EBA-2011-MN003; Analysis of the contents through field screening techniques (olfactory and visual confirmation) showed that the contents were transmission fluid. EBA identified one barrel in this area with the above contents;
- EBA sample No EBA-2011-MN004 and EBA-2011-MN005; Analysis of the contents through review of the hydrocarbon analysis report for Extractable Hydrocarbons 10-19 and 19-32 show a spike trend comparable to hydraulic fluid. EBA identified three barrels in this area with the hydraulic fluid;
- EBA sample No EBA-2011-MN006 was collected from the green exterior mixing tank located to the north of the mill building at a depth of approximately 0.3 m. EBA sample No EBA-2011-MN007; Sample was collected from the green exterior mixing tank located to the north of the Mill building at a depth of approximately 1m. Analytical results were compared to the "Metal Mining Effluent Regulations" SOR/2002-222 Schedule 4, Column 4 as well as the Yukon Contaminated Sites Regulation (YCSR), September 30, 2002 for Aquatic Life (AW) Standards. These regulations were used for comparison purposes and to identify potential constraints on disposal. Analytical results exhibited exceedence of criteria for one or more parameters; and,
- EBA sample No EBA-2011-MN008; Sample was collected from mixing tank number 6 within the mill building. EBA assessed all tanks within the Mill for content and at the time of assessment tank number 6 only contained contents for sampling which was accumulated liquid at the base of the tank[1]. Analytical results were compared to the "Metal Mining Effluent Regulations" SOR/2002-222 Schedule 4, Column 4 as well as the YCSR, September 30, 2002 for AW Standards. These regulations were used for comparison purposes and to identify potential constraints on disposal. Analytical results exhibited exceedence of criteria for one or more parameters.

EBA identified the following hydrocarbon fluids in various locations that were labelled onsite: 25 L Mobil synthetic oil, 515 L waste oil, 10 L heavy duty mechanical oil, 200 L engine oil, 200 L transmission fluid, 20 L heating fuel, 1,425 L hydraulic fluid, 205 L kerosene, 2,505 L gear oil, 6 propane ASTs, 1 gasoline AST, 5 smaller ASTs and 2 large ASTs containing Diesel.

EBA identified the following chemicals in various locations that were labelled onsite: 1205 L hydrochloric/muriatic acid, 600 L acidic liquid, 10 L varsol/solvent, 2250 L hydrogen peroxide, 615 L GW

[1] EBA concluded that the liquid at the base of the tank may originate from a penetration in the roof directly above the tank allowing rain to accumulate at the base of the tank.

Prevent 855, 1025 L sulphuric acid, 205 L coolant/antifreeze, 6 pallets of ferric sulfate, 6 bags of nitrogen phosphate, 24 bags bentonite pellets and one H_2SO_4 rail car tank that was not assessed.

EBA identified areas which historically appear to have been used as an onsite land fill or where debris was disposed of down a slope. The main area of concern is located to the south of the mill building above the polishing pond. EBA delineated the area to be approximately 40 m x 15 m x 10.5 m for a total of approximately 6,300 m^3.

At the time of assessment EBA identified numerous areas within the Property that exhibited stained soil or stressed vegetation due to potential contamination. These areas of concern were located in the Ketza Mine shop and associated yard and the mill area and associated buildings.

EBA completed soil sampling in the area of the geographic coordinates N62.04701; W137.14704 as supplied by AAM, which was south of the fueling station adjacent to the bunk house. At the time of assessment hydrocarbon contamination was not analytically identified. However, based on the test pit having been back filled, EBA recommends borehole sampling to be conducted to determine the presence or absence of hydrocarbon contamination in soil.

Additional recommendations for all regulated materials identified on the Property are provided in Section 6 of this report.

TABLE OF CONTENTS

TABLES

FIGURES

PHOTOGRAPHS

APPENDICES

1.0 INTRODUCTION

EBA Engineering Consultants Ltd. operating as EBA, A Tetra Tech Company (EBA), was retained by Government of Yukon, Assessment of Abandoned Mines (AAM) division to provide environmental services at the Mt. Nansen Mine Site (the Property) for classification of regulated materials deemed as hazardous and requiring regulated disposal.

EBA representatives Mr. Shane Dooley and Mr. Chris Harwood completed the site assessment and sampling August 24 - 27, 2011.

This document provides an outline of:

- Applicable regulations;
- Background information regarding the purpose of the assessment;
- EBA scope of services;
- Methodology;
- Findings of our assessment; and,
- Based on our findings, provides appropriate recommendations.

2.0 BACKGROUND INFORMATION AND SCOPE OF SERVICES

2.1 Background Information

Mt. Nansen mine site is located approximately 60 km west of Carmacks, YT. The mine was explored predominately for gold and silver with operations from circa 1943 up to 1999. Through that time the ownership of the mine changed hands several times.

EBA representatives Mr. Shane Dooley and Mr. Donald Wilson completed a walkthrough of the Property on August 3, 2011 to determine a detailed work plan for inclusion within the proposal for the completion of the services outlined below.

2.2 Scope of Services

EBA's scope of services included the following;

- Review of historical report regarding assessments completed on the Property as supplied by AAM;
- Preliminary site visit;
  - Assessment of structural integrity of buildings for obvious signs of degradation;
  - Completion of a site specific health and safety plan; and,
  - Sampling plan and required resources for sampling materials identified onsite.

- Assessment of all accessible areas of the buildings on the Property for the collection of the following suspect building materials:
  - Asbestos containing materials (ACM's); and,
  - Lead based paints (LBP's).
- Visual assessment for items listed as "hazardous waste" within the Yukon Hazardous Waste Regulation or the Federal Hazardous Waste Regulations as follows:
  - Ozone depleting substances (ODS);
  - Polychlorinated biphenyl's (PCB's); and,
  - Mercury containing equipment.
- Sample collection of suspected ACMs and LBPs for laboratory analysis;
- Sample collection of chemicals and process reagents within containers or drums not labeled or where the contents were not easily identifiable;
- Sample collection of PCB-contaminated oil within transformers that were locked-out and where labels did not identify PCB content. No samples were collected for PCB content;
- Sample collection of potential hydrocarbon contaminated soil within geographic coordinates (N62.04701; W137.14704) as supplied by AAM, which was located to the south of the refuel station adjacent to the bunkhouse;
- Submission of collected samples for laboratory analysis;
- Interpretation of analytical data;
- Visual confirmation for mould or moisture impacted building materials;
- Assessment of stressed vegetation and visibly stained areas;
- Inventory of labeled chemicals and reagents located on the Property with location outlined on figures;
- Figures outlining sample point locations; and,
- Preparation of a final report, detailing the findings of our assessment outlining hazardous materials identified within the Property.

3.0 REGULATIONS AND GUIDELINES

The following sub-sections outline relevant provincial/territorial and federal regulations and guidelines as they pertain to hazardous building materials.

3.1 Federal Occupational Health and Safety Regulations

Within federal jurisdictions Occupational Health and Safety is regulated by Human Resources Skills Development Canada (HRSDC), under the Canada Labor Code, Part II – Occupational Health and Safety

(Canada Labor Code). The Canada Labor Code defines the general duties and obligations of the employer, employees and others at federally regulated workplaces.

3.2 Territorial Occupational Health and Safety Regulations

Territorial workplace health and safety is regulated in Yukon Territory by Yukon Workers Compensation Health and Safety Board under the Occupational Health and Safety Act (the Act), as amended up to 2002. The Act defines the general duties and obligations of the employer, employees and others at the workplace.

The Yukon Territory Occupational Health and Safety Regulation 2006 (OH&S Reg) (including amendments up to the date of this report) contains legal requirements that must be met by all workplaces under the inspection jurisdiction of Yukon Workers Compensation Health and Safety Board. Many parts of the OH&S Regulation have associated guidelines, which are used to help interpret and apply the OH&S Regulation.

Section 10.56 of the OH&S Regs identifies that a competent person must review the structure for the presence of hazardous materials that require special handling prior to demolition.

3.3 Asbestos Containing Material Regulations

The handling and management of asbestos containing materials are regulated by the Act under Section 33 of the OH&S Reg.

Within Section 33, basic information is outlined on asbestos and asbestos products, health hazard requirements for worker protection, safe work procedures and principles that should be followed in selecting the most suitable technique for the safe abatement of ACMs.

Under the Transportation of Dangerous Goods Act, Asbestos is classified under Class 9; Miscellaneous Products, Substances or Organisms.

3.4 Lead Regulations

In 1976, the lead content in certain interior and exterior paint was limited to 0.5% by weight (5,000 parts per million (ppm) under the federal Hazardous Products Act. In April 2005, the Governor General in Council, on the recommendation of the Minister of Health, and pursuant to Section 5 of the Hazardous Products Act, annexed the Surface Coating Materials Regulation 2005-109 and the previous acceptable level of lead in paint was amended from 0.5% by weight to 600 mg/kg (600 ppm).

In October 2010, further corrective action was taken on consumer paints that contain more lead than is allowed by law and the Government amended the Surface Coating Materials Regulations to include "Consumer Products Containing Lead (Contact with Mouth) and Surface Coating Materials Regulation." The amended Surface Coating Materials Regulation identifies that previously considered "safe" lead levels pose a significant risk to the public, especially to children and pregnant women, and significantly lowered the level of total lead allowed in paints and other surface coating materials from 600 mg/kg to 90 mg/kg - which is equivalent to a total lead concentration of 0.009%. This new lead limit is among the most stringent in the world.

Under the Hazardous Products Act, identified LBP must undergo Toxicity Characteristic Leachate Properties (TCLP) to determine disposal procedures. The acceptable TCLP limit for disposal of LBP is less

than 5 mg/L (5 ppm). If an identified LBP exhibits a TCLP result of less than 5 ppm, the paint is not considered a hazardous material and may be disposed of as construction waste.

Under the Transportation of Dangerous Goods Act, lead in sheeting products is under Class 9; Miscellaneous Products, Substances or Organisms.

3.4.1 Lead Soldering

The National Plumbing Code (NPC) allowed lead as an acceptable material for pipes until 1975. In 1986, the American Society of Engineers (ASME)/Canadian Standards Association (CSA) standard ASME 112.18.1/CSA B125.1 for plumbing supply fittings also limited the standard of lead content of solder to 0.2%. The NPC officially prohibited the use of lead solder in new plumbing or in repairs to plumbing for drinking water supplies in 1990.

3.5 Ozone Depleting Substances Regulations

The Yukon passed ODS Regulations in 1996; to control and minimize the release of damaging ODS into the atmosphere. The regulations govern the recovery, recycling and disposal of ODS in the Yukon. They regulate ODS use in:

- Refrigeration and air conditioning equipment;
- Motor vehicle air conditioners;
- Fire extinguishing equipment; and,
- Solvents and sterilizing processes.

Yukon ODS Regulations were amended in 2000 to implement changes in the National Action Plan for Environmental Control of ODS and Their Halocarbon Alternatives (NAP). The NAP outlines how the control, reduction and elimination of ODS and halocarbon alternative emissions can be met. It addresses the ultimate management, control, phase-out and disposal of all ODS in Canada and sets agreed objectives and tasks for harmonized provincial actions.

In 1994, the federal government filed the Ozone-Depleting Substances Regulations to amend controls on the production and consumption of chlorofluorocarbons (CFCs), halons, tetrachloride and methyl chloroform. The Federal Halocarbon Regulations, effective July 1, 1999, was filed to ensure uniformity with respect to the release, recovery and recycling of ODSs and their halocarbon alternatives in refrigeration and air conditioning equipment throughout the provinces of Canada. The Code of Practice for the Reduction of CFC Emissions from Refrigeration and Air Conditioning Systems (EPS/1/RA/1 March 1991, original date) provides Best Practice recommendations for the handling, storage, and disposal of such materials.

Under the Transportation of Dangerous Goods Act, Ozone Depleting Substances are under Class 2; Non-flammable Gas.

3.6 Polychlorinated Biphenyl Regulations

The manufacture and import of PCBs was banned in North America in 1977. The handling, storage and disposal of PCBs that were in use at the time of the ban, is strictly regulated by the federal government under the Canadian Environmental Protection Act (CEPA).

In 2008, Environment Canada introduced new PCB Regulations which seek to phase out the use and storage of PCBs, and to eliminate remaining PCB-containing electrical equipment by the end of 2025.

Under the Transportation of Dangerous Goods Act, polychlorinated biphenyl's are under Class 9; Miscellaneous Products, Substances or Organisms.

3.7 Environmental Regulations

In Yukon Territory, environmental matters pertaining to special or hazardous waste generally fall under the jurisdiction of Yukon Environment, pursuant to the Yukon Environment Act (YEA). The Special Waste Regulation (O.I.C. 1995/047) under the YEA refers to the handling, storage, transportation, treatment, recycling and disposal of special (hazardous) wastes in the territory. The regulation outlines regulated materials and criteria to be used to characterize waste as special waste.

The federal HWR refers to the handling, storage, transportation, treatment, recycling and disposal of hazardous wastes in the territory. The regulation outlines the materials and criteria to be used to characterize waste as hazardous.

The federal HWR defines waste asbestos as a waste containing friable asbestos fibres or asbestos dust in a concentration greater than 1% by weight either at the time of manufacture, or as determined using a method specified in section 40 (1).[2]

3.8 Transportation Regulations

The transportation of special or hazardous wastes is governed (inter-territorial/provincial) under the Federal *Transportation of Dangerous Goods Act* (1992) and *Transport of Dangerous Goods Regulations* that outline the requirements for storage, handling, and transportation of such waste. In Yukon, the Federal TDG regulations are adopted by the Dangerous Goods Transportation Act.

4.0 METHODOLOGY

The assessment included an intrusive (destructive) assessment to identify the potential presence of ACMs and LBPs and a visual assessment for the presence of PCBs, ODS and mercury containing equipment. Fluids sampled that were not easily identifiable or labeled and soil sampling within an area of potential hydrocarbon contamination.

[2] **40** (1) For the purposes of the definition of "waste asbestos" in section 1 (1) of this regulation, if the concentration of asbestos in the waste is not determined by weight at the time of manufacture, it must be determined using one of the following:
(a) Method 600-R-93-116, as amended from time to time, published by the United States Environmental Protection Agency;
(b) NIOSH Method 9002, as amended from time to time, from the *NIOSH Manual of Analytical Methods*, 4th Edition, published by the National Institute for Occupational Safety and Health, United States.

4.1 Asbestos-Containing Materials

EBA assessed suspect ACMs systematically. Suspected asbestos-containing building materials were assessed through intrusive (destructive) sample collection procedures. EBA collected and analyzed suspect ACM samples for asbestos type and percentage content under Polarized Light Microscopy using dispersion staining in accordance with NIOSH 9002 methodologies. Samples collected were submitted to Wes-Har Asbestos Analysis and Consulting of Richmond, British Columbia, for analysis.

Through our assessment, EBA determined the type and extent of visually accessible suspected ACMs within the Property. Building systems that are reviewed as part of the assessment are provided as follows:

- Structural – including fireproofing on beams, open and solid webbed joist systems, Q-deck;
- Mechanical – including hot water and steam system, condensate system, chilled water system, glycol system, domestic hot and cold water, emergency generator exhaust, boiler units, heat exchangers, re-boiler units, asbestos cement piping, wall joint compound, asbestos sheet products, heating ventilation and air conditioning (HVAC); and,
- Architectural – including: texture coats, sheet flooring, vinyl floor tile, acoustical spray-applied materials, condensation control applications, ceiling tile, wall board, drywall joint compound, asbestos sheet products.

4.2 Lead-Based Paint

An assessment of painted surfaces suspect of containing lead was conducted at the Property. Suspect LBP samples were analyzed for lead content in accordance with the requirements of the Environmental Protection Agency (EPA) analytical method 200.8 – Elements by ICP. Suspect LBP samples were submitted to ALS Environmental Laboratory in Whitehorse, YT for analysis. Suspected LBPs were assessed for potential health and safety risks based on their observed physical condition.

As outlined under the *Hazardous Products Act*, identified LBP underwent Toxicity Characteristic Leachate Properties (TCLP) to determine disposal procedures. The acceptable TCLP limit for disposal of LBP is less than 5 ppm. If an identified LBP exhibits a TCLP result of less than 5 ppm, the paint is not considered a hazardous material and may be disposed of as construction waste.

4.3 Ozone Depleting Substances, Mercury and PolyChlorinated Biphenyls

During the assessment, the Property was visually reviewed for the potential presence of ODS, elemental mercury and PCBs. These materials were assessed for potential health and safety risks based on their observed physical condition.

4.4 Drum Sampling

EBA sampled drum contents for classification of materials based on identification for disposal. Prior to sampling, the drum was inspected for, but not limited to;

- Was the drum pressurized (bulging/ visual dimples);
- Crystals forming on the exterior around any openings;

- Visual identification of leaks, holes or stains;
- Identifiers that provide information on potential contents;
- Composition and type of drum (steel/poly and open/bung);
- Condition, estimated age if labeled, exterior rust; and,
- Sampling accessibility (is the drum vertical, horizontal, buried, etc).

Drums that exhibited evidence of pressurization and crystal formation were not sampled by EBA. EBA field technicians determine onsite any barrels exhibiting the above features and determined if they were safe for sampling. Compromised drums that were not sampled were recorded for drum location and estimation of contents if labeled.

Drums were identified by EBA in a sampling plan and also have sample identifiers recorded on the lid and barrel. This will allow for identification incase lids are moved at a later date.

For metal drums not sitting directly on earth, the drum was grounded using grounding wires, alligator clips and a grounding rod or metal structure if practical.

Prior to opening of the lid, the opening equipment was applied to the bung or drum ring and an electrical conductive current path was allowed time to form. EBA used spark resistant tools for the opening of equipment.

When the drum was opened the contents original state was recorded on a Drum Data form. This allowed the field technician to record state, quantity, phases if possible and color of the contents.

Liquid content was sampled using Waterra tubing as a drum thief. Waterra tubing was slowly lowered to the bottom of the container and suction was achieved by the sampler placing their thumb on the end of the thief and slowly removing from the drum. Upon removal from the drum, the sample was transferred into the amber sampling jar. This process was repeated until sufficient sample volume was obtained. The Waterra tubing was then left inside the drum for disposal at a later date.

Samples collected were submitted for all or an individual parameter based on a visual determination of potential contents. Parameters included Extractable Petroleum Hydrocarbons (EPH), pH, Cyanide, total Metals, Glycols and/or Polychlorinated Biphenyls. Analysis of samples was completed by ALS Environmental Laboratory in Edmonton, Alberta.

4.5 Soil Sampling

EBA was requested to complete soil sampling within the area south of the AST where domestic vehicles refuelled south of the bunkhouse. Geographic coordinates as provided by AAM was N62.04701 W137.14704. EBA completed the following;

- Review of available background information as provided by AAM;
- Conducted a site investigation limited to the above noted geographic coordinates for surficial signs of hydrocarbon contamination;
- On-site development of site specific sampling plans;

- Sampling suspected contaminated/hazardous material;
- Interpretation and evaluation of the data gathered during investigation; and,
- Preparation of this report discussing the work completed and results obtained.

4.6 Personal Protective Equipment

During sampling, EBA personnel wore personal protective equipment (PPE) that is to industry standards for such work being performed. PPE included;

- Half mask respirator with P100 HEPA cartridge filters for sampling of building materials;
- Half mask respirator with P100 HEPA organic cartridge filters for sampling of fluids;
- Acid resistant rubber apron and rubber gloves extending to the elbows for sampling of drums;
- CSA approved full-face shield for sampling of drums;
- CSA approved hard hat;
- Leather gloves;
- Nitrile gloves;
- CSA approved safety glasses;
- Steel toed boots (leather and acid resistant rubber); and,
- Hi-Viz safety vests.

Additional safety equipment onsite included a first aid kit, fire extinguisher and portable eye wash station.

5.0 ASSESSMENT RESULTS

The results of the assessment are provided in the following sub-sections.

5.1 Building Assessment

Prior to entering the buildings located on the Property, EBA reviewed structural integrity for obvious signs of compromise. EBA field assessor's made a determination of entering the buildings after visually reviewing the structural integrity of the exterior components for obvious signs of disrepair. Figure 1 is an overview of the buildings located on the Property as supplied by AAM. EBA observed the following characteristics of the buildings located on the Property;

- Seepage pond pump house shown in photograph No. 1[3]:
  - Raised on wood stilts above collection pond;
  - 2' x 4' frame construction with plywood walls, floor and roofing system;

[3] Seepage pond building was rebuilt since the field assessment and photograph within report was supplied by AAM.

  - No suspect hazardous materials identified;
  - Approximately 24 m²[4]; and,
  - Components of the structure were intact but visibly impacted by weathering[5].
- Tailings reclaim heating house shown in photograph No. 2:
  - Concrete slab on grade foundation measuring approximately 18 m²;
  - 2' x 4' frame construction with plywood walls, floor and ceiling;
  - Suspect hazardous materials identified;
  - Roofing system consisted of torch on roofing system; and,
  - Components of the structure were intact but visibly impacted by weathering.
- Reclaim heating electrical house shown in photograph No. 2:
  - 2' x 4' frame construction with plywood walls, floor and roofing system;
  - Approximately 9 m²;
  - No suspect hazardous materials identified; and,
  - Components of the structure were intact but visibly impacted by weathering.
- Reclaim heating pump house #1 shown in photograph No. 3:
  - Floating pump house within the reclaim pond via barrels under the structure;
  - 2' x 4' frame construction with OSB walls, floor and ceiling;
  - Metal q-decking on the exterior roof;
  - Approximately 12 m²;
  - No suspect hazardous materials identified; and,
  - Components of the structure were intact but visibly impacted by weathering.
- Reclaim heating pump house #2 shown in photograph No. 4:
  - Located on the eastern side of the reclaim pond;
  - 2' x 4' frame construction with OSB walls, floor and ceiling;
  - Approximately 7.5 m²;
  - No suspect hazardous materials identified; and,

[4] Square meter foot print of buildings were not surveyed at the time of assessment but estimated by pacing off the exterior linear meters.
[5] Since assessment completion and at the time of AAM review, the building had been rebuilt as per associated photograph as supplied by AAM.

  - Components of the structure were intact but visibly impacted by weathering.
- Junction box house shown in photograph No. 5:
  - Located in-line with the transmission towers;
  - 2' x 4' frame construction with OSB walls, floor and ceiling;
  - Approximately 12 m^2;
  - No suspect hazardous materials identified; and,
  - Components of the structure were intact.
- Ketza mine shop shown in photograph No. 6:
  - Exterior metal q-decking with interior batted insulation covered by plastic sheeting;
  - Foot print of approximately 1,159 m^2;
  - Suspect hazardous materials identified;
  - Building exhibited water ingress through the roofing system and exterior signs of corrosion and weathering;
  - A camping trailer was located behind the shop which was used for storage of old tools and miscellaneous materials; and,
  - Building appeared to be in fair condition.
- Mill area shown in photograph No. 7:
  - Consisted of several buildings;
    - Mill;
    - SAG building;
    - Crushing/sorting building;
    - Generator house; and,
    - Maintenance building and workshop.
  - Numerous drums and pails containing fluids were identified;
  - Buildings consisted of unpainted metal q-decking exterior and roofing system with interior batted insulation covered by plastic sheeting;
  - Mill and generator house were concrete slab on grade;
  - Maintenance building consisted of a dirt floor with perimeter concrete foundation;
  - Suspect hazardous materials identified;
  - SAG and Crushing structures were in visible states of disrepair and structurally compromised; and,

  - Mill building exhibited points of water ingress through the roofing system, as well as a volume of water ingress from north to north west of the building through the mixing tank areas and out the front causing potential compromise of the concrete pad and support columns.

- Water tank building shown in photograph No. 8:
  - 2' x 4' frame construction with OSB walls, floor and ceiling;
  - Approximately 81 m^2;
  - No suspect hazardous materials identified; and,
  - Visibly impacted by weathering with water ingress at the abutment where the walls meet the roof in select locations.
- Mess house, bunkhouse and storage shed (not included in photographs) shown in photograph No. 9 and 10:
  - 2'x4' frame construction with OSB board under wood lathe on exterior;
  - Heating through propane furnaces;
  - Metal q-decking roofing system on mess building and bunkhouse;
  - Torch on roofing system of shed;
  - Crawl space under the mess building and bunkhouse; and,
  - Suspect hazardous materials identified in mess building and bunk house.
- Booster station in-line with the transmission towers as shown in photograph No. 11:
  - 2'x4' frame construction with OSB board on exterior;
  - Approximately 12 m^2; and,
  - No suspect hazardous materials identified.
- Core shack as shown in photograph No. 12:
  - 2'x4' frame construction with OSB board under wood lathe on exterior;
  - No suspect hazardous materials identified;
  - Approximately 63 m^2; and,
  - Visibly impacted by weathering with water ingress at the abutment where the walls meet the roof in select locations and interior due to absence of windows.
- Reclaim heating pump house adjacent to mill as shown in photograph No. 13:
  - 2'x4' frame construction with OSB board under wood lathe on exterior;
  - No suspect hazardous materials identified;
  - Approximately 12 m^2; and,

  - Visibly impacted by weathering with water ingress in select locations.
- Victoria creek well house as shown in photograph No. 14:
  - 2'x4' frame construction with OSB board under wood lathe on exterior;
  - No suspect hazardous materials identified; and,
  - Visibly impacted by weathering.

5.2 Asbestos-Containing Materials

EBA collected and submitted 46 samples of suspected ACMs to the laboratory for analysis. Based on the findings of our assessment, ACMs were identified within some of the samples submitted. Analytical results, sample point locations and descriptions of all materials assessed for asbestos content are summarized in Table 4. Materials confirmed to be asbestos containing are outlined in **RED** bold within Table 4.

Based on the findings of our assessment, the following ACMs were identified onsite at the time of EBA's assessment:

- Asbestos containing furnace gasket (EBA sample No 1981-002), located on the piping system within the reclaim heating house totaling approximately 0.3 lin m. The ACM was in good condition at the time of assessment as shown in photograph No. 15; and,
- Visually identified asbestos containing transite cement board located in the furnace within the reclaim heating house totaling approximately 6 m^2. The ACM was in good condition at the time of assessment as shown in photograph No. 16.

Selected sample point locations for materials collected in the buildings are included in the Figures section. Analytical results for all materials assessed for asbestos content are attached within Appendix B.

5.3 Lead Based Paints

EBA collected and submitted four LBP samples for laboratory analysis. Based on the findings of our assessment, LBPs were identified within some of the samples submitted. Table 5 summarizes sample point locations and paint descriptions. Materials confirmed to be lead based are outlined in **RED** bold within Table 5.

EBA identified the following lead based paints;

- White lead based paint applied to a mixing tank on the upper level of the mill (EBA sample No 1481-L002) requiring non-regulated disposal. This paint was visually identified on multiple tanks within the Mill and was in fair to poor condition at the time of assessment as shown in photograph No. 17.

Selected sample point locations for materials collected are included in the Figures section. Analytical results for all materials assessed for LBP content are attached within Appendix C.

5.4 Lead Solder

Based on the construction date of the buildings and associated plumbing components, EBA suspects that solder associated with the piping within the buildings may also be lead based where copper piping was used.

Based on the visual assessment of piping components connecting the reclaim heating houses, EBA has determined that the components are comprised of steel and that lead solder is likely not present. Historically, lead solder is mainly used for the connection of copper piping in domestic water supply, hot and cold systems.

5.5 Polychlorinated Biphenyls

Based on the findings and limitations of our visual assessment, electrical equipment suspect of containing PCBs was identified within the ketza mine shop building. EBA identified the following lamp ballasts suspect of PCB content;

- Fluorescent lamp ballast TOEC Tech Company 2T8321120.

EBA reviewed additional ballasts in each building and identifiers stating non-PCB-content was identified.

EBA identified one pole mounted transformer still connected into the transmission grid adjacent to the ketza mine shop, as outlined on Figure 6 that is suspect of PCB content based on construction type and visible age as exhibited in Photograph No. 18.

5.6 Ozone Depleting Substances

Based on the findings and limitations of our visual assessment, the following ODS-containing equipment was identified within the Property;

- Two walk in coolers within the kitchen of the mess building and associated exterior chillers containing either R12, R22, R502 or R404A refrigerant as identified by the manufacture placard. The quantity of refrigerant was unknown at the time of assessment;
- Potassium alkaline fire suppression system located in the kitchen of the mess building containing an unknown amount of suppression compound;
- Three refrigerators within the mess building containing an unknown type and amount of refrigerant;
- One refrigerator within the bunk house on the second floor containing an unknown type and amount of refrigerant; and,
- One refrigerator and one freezer located in the landfill area to the south of the mill containing an unknown type and amount of refrigerant.

5.7 Elemental Mercury

Based on the findings and limitations of our visual assessment, the following mercury-containing equipment was identified within the Property;

- One wall mounted mercury switch on the first floor of the bunk house;

- One wall mounted mercury switch in the mess building; and,
- Estimated 100 fluorescent lamp tubes containing a small amount of mercury vapor in the mess building, ketza mine shop, mill and associated buildings.

5.8 Drum Sampling

EBA identified eight (8) barrels of unlabelled/ unknown contents and analytical determination of contents is outlined below;

- EBA sample No EBA-2011-MN001
  - Sample was collected from an unlabeled barrel located in the area up-gradient and north of the tailings pond. Analysis of the contents through field screening techniques (litmus paper) showed that the contents were pH of < 2 therefore indicating the contents are acidic. EBA identified approximately 8 similar barrels in proximity that were labeled muratic acid therefore EBA suspects the contents of the unlabeled barrels are similar. Location of the barrels is depicted within photograph No. 19.
- EBA sample No EBA-2011-MN002
  - Sample was collected from an unlabeled barrel located behind the ketza mine shop. Analysis of the contents through field screening techniques (litmus paper) showed that the contents were pH of 6 indicating the contents to be water based. EBA identified one barrel within the location as depicted within photograph No. 20.
- EBA sample No EBA-2011-MN003
  - Sample was collected from an unlabeled barrel located behind the ketza mine shop. Analysis of the contents through field screening techniques (olfactory and visual confirmation) showed that the contents were transmission fluid. EBA identified one barrel within the location as depicted within photograph No. 20.
- EBA sample No EBA-2011-MN004
  - Sample was collected from an unlabeled barrel located in front of the generator building. Analysis of the contents through review of the hydrocarbon analysis report for Extractable Hydrocarbons 10-19 and 19-32 show a spike trend comparable to hydraulic fluid. Based on the analytical results, EBA recommends that the three unlabeled barrels are treated as a hydraulic fluid. Location of the barrels is depicted within photograph No. 21.
- EBA sample No EBA-2011-MN005
  - Sample was collected from an unlabeled barrel located on the Sag mill road. Analysis of the contents through review of the hydrocarbon analysis report for Extractable Hydrocarbons 10-19 and 19-32 show a spike trend comparable to hydraulic fluid. Based on the analytical results, EBA recommends that the five unlabeled barrels containing visually similar contents are treated as a hydraulic fluid. Location of the barrels is depicted within photograph No. 22.

- EBA sample No EBA-2011-MN006
  - Sample was collected from the green exterior mixing tank (shown within Photograph No. 23) located to the north of the mill building at a depth of approximately 0.3 m. Analytical results were compared to the "Metal Mining Effluent Regulations" SOR/2002-222 Schedule 4, Column 4 as well as the Yukon Contaminated Sites Regulation (YCSR), September 30, 2002 for Aquatic Life (AW) Standards[6]. These regulations were used for comparison purposes. Analytical results exhibited the following exceedence;
    - Cobalt detection limit exceeded the standard for YCSR AW;
    - Selenium detection limit exceeded the standard for YCSR AW;
    - Silver detection limit exceeded the standard for YCSR AW; and,
    - Thallium detection limit exceeded the standard for YCSR AW.
- EBA sample No EBA-2011-MN007
  - Sample was collected from the green exterior mixing tank (shown within Photograph No. 23) located to the north of the mill building at a depth of approximately 1m. Analytical results were compared to the "Metal Mining Effluent Regulations" SOR/2002-222 Schedule 4, Column 4 as well as the YCSR, September 30, 2002 for AW Standards. These regulations were used for comparison purposes. Analytical results exhibited the following exceedence;
    - Cobalt detection limit exceeded the standard for YCSR AW;
    - Selenium detection limit exceeded the standard for YCSR AW;
    - Silver detection limit exceeded the standard for YCSR AW;
    - Thallium detection limit exceeded the standard for YCSR AW;
    - Zinc concentration exceeded the standard for YCSR AW; and,
    - Lead concentration exceeded the MMER and the YCSR AW.
- EBA sample No EBA-2011-MN008
  - Sample was collected from mixing tank[7] number 6 located on the ground floor in the immediate right corner (shown within Photograph No. 17) within the mill building. The sample was accumulated liquid at the base of the tank. EBA anticipates that the accumulation of liquid is rain water leaking in from holes in the roofing system directly above the tank. Analytical results were compared to the "Metal Mining Effluent Regulations" SOR/2002-222 Schedule 4, Column 4 as well as the YCSR, September 30, 2002 for AW Standards. These regulations were used for comparison purposes. Analytical results exhibited the following exceedence;
    - Antimony concentration exceeded the standard for YCSR AW;

[6] EBA compared analytical data for samples EBA-2011-MN006/007/008 to the list standards based on the assumption that if exceedence of parameters was not identified the liquid would be released onsite and potentially enter into a water course.
[7] EBA assessed all tanks within the Mill for content. Each tank was empty except for tank number 6 as sampled.

- Cobalt concentration exceeded the standard for YCSR AW;
- Lead detection limit exceeded the standard for YCSR AW;
- Selenium detection limit exceeded the standard for YCSR AW;
- Silver detection limit exceeded the standard for YCSR AW;
- Thallium detection limit exceeded the standard for YCSR AW; and,
- Lead concentration exceeded the MMER and the YCSR AW.

Analytical results for fluids sampled are outlined in Table 7, 7a and 7b within the Table section. Analytical certificates of analysis are included within Appendix D.

5.9 Hydrocarbons in Drums

EBA identified the following labeled containers of hydrocarbon fluids in various locations onsite:

- 25L Mobil synthetic oil;
- 515 L waste oil;
- 10 L heavy duty mechanical oil;
- 200 L engine oil;
- 200 L transmission fluid;
- 20 L heating fuel;
- 1,425 L hydraulic fluid;
- 205 L kerosene;
- 2,505 L gear oil;
- AST's containing Propane;
  - Three adjacent to the mess building; and,
  - Three adjacent to the bunk house.
- AST containing gasoline adjacent to the bunk house;
- ASTs containing Diesel as follows;
  - Two southeast of the mill between the generator and workshop;
  - One in ketza mine shop and one at exterior;
  - One in the workshop; and
  - Two large diesel tanks within a concrete containment south of the mill.

A detailed breakdown of location and quantities is included within Table 1.

5.10 Chemical Inventory

EBA identified the following chemicals on the property;

- 1205 L hydrochloric/muriatic acid;
- 600 L acidic liquid;
- 10 L varsol/solvent;
- 2250 L hydrogen peroxide;
- 615 L GW Prevent 855;
- 1025 L sulphuric Acid;
- 205 L coolant/antifreeze;
- 6 pallets of ferric sulfate;
- 6 bags of nitrogen phosphate;
- 24 bags bentonite pellets; and,
- One H_2SO_4 rail car tank that is assumed to be empty.

A detailed breakdown of location and quantities is included within Table 2.

5.11 Land Filled Areas and Buried Debris

EBA identified areas which historically appear to have been used as an onsite land fill or where debris was pushed down a slope. The main area of concern is located to the south of the mill building above the polishing pond. EBA delineated the area to be approximately 40 m x 15 m x 10.5 m for a total of approximately 6,300 m^3. Location of the historic land fill site is depicted on figure 7 and photographic documentation is shown in Photographs 24, 25, 26. At the time of assessment debris was located on the top extent of the area and protruding through the southern and eastern side slopes. At the time of assessment there was no seepage or drainage identified at the lower slopes of the area.

In areas throughout the Property EBA identified slopes where debris was protruding. These areas did not reflect a land fill, but more so debris that was not removed prior to the levelling of the top side substrate, therefore EBA did not attempt to quantify potential cubic feet. These areas are located as follows;

- Slope to the north of the reclaim heating house as shown in Photograph No 28;
- Outside storage area to the northeast of the mill, barrels and debris was protruding from the eastern slope. Please refer to figure 7b and photograph No. 29;
- Storage area south of the ketza mine shop exhibited metal debris protruding from the ground. Please refer to figure 6a and photograph No. 30; and,
- Area identified as the ANFO storage south of the ketza mine shop exhibited barrels and debris protruding from the western slope. Please refer to figure 6a and photograph No. 32.

5.12 Stained Soil and Stressed Vegetation

At the time of assessment EBA identified numerous areas within the Property that exhibited stained soil or stressed vegetation due to potential contamination. These areas of concern were located in the following areas of the Property;

- Ketza mine shop and yard;
  - Floor of the shop was earth and staining was apparent throughout the buildings floor totaling approximately 1,159 m^2. Refer to photo No. 33 for site conditions at the time of assessment;
  - Staining to the north of the building under a raised AST totaling approximately 15 m^2. Refer to photo No. 34 for site conditions at the time of assessment;
  - Staining to the west of the building where an overflowing waste oil container was located totaling approximately 3 m^2. Refer to photo No. 35 for site conditions at the time of assessment; and,
  - Staining to the south of the building in the storage yard totaling approximately 60.5 m^2. Refer to photo No. 31 for site conditions at the time of assessment.
- Mill Area
  - Staining identified in the generator building and immediately in front where waste oil barrels were located totaling approximately 454.5 m^2. The generator building consisted of a concrete slab on grade floor and exhibited heavy hydrocarbon staining. There appeared to be three drains in the floor that were visually identified to contain grease and oil. Refer to figure 7b and Photographs No. 36 and 37 for site conditions at the time of assessment;
  - Staining within the warehouse on the concrete floor in the center of the building and under the raised AST totaling approximately 91 m^2. At the time of assessment it did not appear that the system was leaking but rather that diesel had been historically spilled during filling of the tank. Refer to Figure 7b and Photographs No. 38 and 39 for site conditions at the time of assessment;
  - Stained soil in the sump basin of the upper building associated with the mill totaling an unknown quantity. Due to the location of the sump, there is a low potential for water ingress to enter. Refer to Figure 7b and Photographs No. 40 for site conditions at the time of assessment;
  - Stained soil where a waste oil barrel was located next to the diesel tank containment to the south east of the mill totaling approximately 10 ft^2. Refer to Figure 7b and Photographs No. 41 for site conditions at the time of assessment;
  - Stained soil and barrels with oil soaked rags located on the upper road to the SAG building totaling approximately 303 m^2. Refer to Figure 7c and Photographs No. 42 for site conditions at the time of assessment; and,
  - Oil sludge located in the mill. Refer to photo No. 43 for site conditions at the time of assessment.

5.13 Batteries

EBA identified the following areas where discarded batteries were stored;

- Thirteen batteries of various types and sizes stored at the north eastern extent of the mill building where the historic land fill is located; and,
- Eleven batteries of various types stored on a pallet located in the workshop building which is adjacent to the former generator building.

5.14 Transformers

EBA identified five pole mounted transformers throughout the Property. Identifiers suggesting PCB content was not present and EBA did not sample transformer oil due to them being energized.

The pole mounted transformer located near the ketza mine shop is visually suspect of PCB contaminated oil based on suspect age.

5.15 Miscellaneous Debris

EBA identified areas were miscellaneous debris was discarded around the Property. This debris consisted of;

- Approximately twelve unlabeled 1 ton bags, suspected to be ferric sulfate, were located in the mill. Refer to Photograph No 44 for site conditions at the time of assessment;
- Three vehicles that appear to be discarded and not in operation located to the east of the mill building as shown in Figure 7b and Photograph No 45;
- One vehicle located to the south of the ketza mine shop appearing to be discarded and not in operation as shown in Figure 6a and Photograph No 30;
- Discarded metal debris and machine parts located to the east of the mill building as shown in Figure 7b and Photograph's No 45, 46 and 47. This area appeared to be the main storage area for discarded debris and machine parts as shown in Photograph No 45, 46 and 47;
- Discarded metal debris and machine parts located to the south of the ketza mine shop as shown in Figure 6a and Photographs No 30 and 31;
- Discarded metal debris located along the Sag Mill road and next to the former crusher as shown in Figure 7c and Photograph 48; and,
- Wood debris was located in numerous locations on the Property.

5.16 Soil Sampling

EBA was requested to collect soil samples suspected of hydrocarbon contamination as reported in the Altura Environmental Consultants report dated July 4, 2010. Report and associated geographic coordinates (N62.04701; W137.14704) as supplied by AAM, which was located to the south of the refuel station adjacent to the bunkhouse, for suspect hydrocarbon contamination. The basis of the soil sampling was based on test pitting completed by Altura in 2010 where hydrocarbon odour was identified within the top meter of the test pit at the above geographic coordinates.

5.16.1 Field Screening Techniques

During assessment of the area of potential hydrocarbon contamination at the Property, tactile, olfactory, and visual assessments were made at each sample location to determine soil type, and any indications of contamination. Further hydrocarbon screening was done by collecting soil vapour readings using a MiniRAE 2000™ photo ionization detector (PID), which measures the ionizable components of organic vapours.

The PID reading provides a semi-qualitative indication of the hydrocarbons (if any) present in the soil. Clear plastic bags were half filled with soil from sample locations. The PID was used to evaluate the vapours collected within the headspace of the bag (approximately 50% of the bag volume). Soil vapours were tested for each sample location.

5.16.2 Field Sampling

Field sampling at the Property was conducted on August 26, 2011. Sample locations are indicated on corresponding site Figure 7a.

Soil samples were collected with clean nitrile gloves and packed in 120 ml laboratory supplied glass jars with Teflon lined lids, with the minimum possible headspace. The samples were noted on a "chain of custody" form and submitted in a cooler to ALS Environmental Laboratory, Whitehorse; a CALA certified laboratory.

The Yukon Contaminated Sites Regulation (YCSR) provides standards for the assessment and remediation of contaminated sites in Yukon. Schedule 1 and 2 of the YCSR provide generic and matrix numerical standards for the clean-up of soils that are based on site-specific land uses. Based on the proposed decommissioning of the Property and releasing title back to the Yukon Territory, Park land use standards (YCSR-PL) were applied.

The Metal Mining Effluent Regulation (MMER) provides standards for the assessment and guidelines for the release of waste water produced from mining operations into the surrounding environment. Based on the soils sampled potentially originating from mining operations, the MMER was used for comparison purposes.

5.16.3 Sample Location

EBA collected samples from within the area associated with the geographic coordinates as supplied by AAM where potential hydrocarbon contamination was present. EBA hand augured and collected four soil samples to a depth of 0.3 m within the area of the supplied geographic coordinates and directly in front of the current AST to determine if potential hydrocarbon contamination was present. At the time of sampling the ground appeared to have been back filled since the test pitting which occurred in July 2010.

5.16.4 Results

EBA collected four samples and submitted for analytical analysis. Based on potential hydrocarbon contamination, samples were analyzed for volatile organic compounds (VOC), Extractable Petroleum Hydrocarbons (EPH), Light Extractable Petroleum Hydrocarbons (LEPH), Heavy Extractable Petroleum Hydrocarbons (HEPH), Volatile Hydrocarbons (VH), Volatile Petroleum Hydrocarbons (VPH) and Polycyclic

Aromatic Hydrocarbons (PAH). Analytical results indicated that select parameters analyzed were either above the detection limit for YCSR-PL standards, MMER or both. Select parameter detection limits were above the standards set forth by the YCSR-PL standards or MMER.

EBA attempted to hand auger to a greater depth within the bore hole locations but due to the back filling, EBA encountered rocky substrate that would not allow penetration and therefore may not be representative of the substrate where hydrocarbon odour was detected during the 2010 test pitting.

Analytical results are outlined in Table 7 included at the end of this report. Certificate of Analysis is included within Appendix E.

5.17 Water Ingress

At the time of assessment EBA identified water ingress into the north end of the mill building on the ground floor. Water was seeping from the bank immediately to the west of the building, pooling under the exterior green mixing tank then transporting into the north end of the mill and discharging through the building into the east area where it then drains into a creek. Although no visible chemicals were stock piled in the immediate area, the water was pooling where metal debris and vertical mixing tanks were located behind a 12" high concrete berm. At the time of assessment the water was exiting the mill and dissipating through the gravel substrate of the road. Due to the water ingress, the potential exists at times of heavy rain or high run off, for metal leaching to be transferred into the water then directed into Dome creek. Additionally, the potential exists for structural compromise to the support legs of the mixing tanks where the water is pooling prior to draining. Refer to Photograph No. 50 for documentation.

EBA identified water ingress originating from the roof of the water tank building which is located uphill from the cookhouse. Water ingress was apparent due to water collected at roof level behind plastic sheeting utilized as a vapour barrier.

6.0 RECOMMENDATIONS

EBA offers the following recommendations.

6.1 Asbestos Containing Materials

ACMs were identified within the furnace within the reclaim heating house. During demolition activities ensure the ACMs are removed and disposed of in accordance with the requirements of the Yukon Workers Compensation Health and Safety Board, the Transportation of Dangerous Goods Act and the Yukon Ministry of Environment. EBA recommends the following abatement procedures based on risk of fiber release;

- Abatement of asbestos containing transite cement board and furnace gasket following moderate risk work procedures.

6.2 Lead Based Paint

LBPs were identified within white surface coating located on the mixing tank within the mill. During demolition of the building or associated structure, if LBP are to be demolished in place, the contractor must implement an exposure control plan. At that time, ensure this LBP is removed and disposed of in

accordance with the requirements of the Yukon Workers Compensation Health and Safety Board, the Transportation of Dangerous Goods Act and the Yukon Ministry of Environment. Prior to removal of these LBPs, adequate safe work procedures must be developed to ensure workers are protected from exposure to finely divided airborne lead particles if demolition work is to occur.

6.3 Lead Solder

If the copper piping and associated lead solder within the mess building and bunk house is not removed for recycling, EBA recommends that solder associated with the piping be removed and disposed of as hazardous waste in accordance with the requirements of the Yukon Workers Compensation Health and Safety Board, the Transportation of Dangerous Goods Act and the Yukon Ministry of Environment.

6.4 PolyChlorinated Biphenyls

Based on the findings and limitations of our visual assessment, PCB-containing electrical equipment (fluorescent lamp ballasts) was identified within the ketza mine shop on the Property. During EBA's assessment, lamp ballasts were systematically assessed and referenced against Environment Canada's document "Environmental Protection Series – Identification of Lamp Ballasts Containing PCBs, August 1991." The lamp ballasts identified within the Property exhibited identifiers for PCB content. However, for ballasts not easily identifiable, identifiers may be present on the portion of the lamp ballast that is adhered to the light shield. Due to the lamp ballasts being energized, EBA did not remove the ballast to assess for additional identifiers therefore the potential exists for PCB containing lamp ballasts to be present where PCB identifiers were not present. EBA recommends that PCB containing lamp ballasts are sent to an approved hazardous material transfer station for removal of the PCB content and recycling of the ballasts.

6.5 Ozone Depleting Substances

ODS containing equipment was identified within the Property. During demolition activities, ensure these ODS containing equipment are removed and disposed of in accordance with the requirements of the Yukon Workers Compensation Health and Safety Board, the Transportation of Dangerous Goods Act and the Yukon Ministry of Environment.

6.6 Mercury Containing Equipment

Mercury containing equipment was identified within the Property. During demolition activities, ensure these mercury containing equipment are removed and disposed of in accordance with the requirements of the Yukon Workers Compensation Health and Safety Board, the Transportation of Dangerous Goods Act and the Yukon Ministry of Environment.

6.7 Contaminated Fluids

EBA identified liquid within the green exterior mixing tank adjacent to the mill and the mill mixing tank number 6 which exceed standards when compared to the MMER and YCSR-AW. EBA recommends that the liquid is pumped from the tanks and transported to a licensed facility for disposal as per applicable regulations.

EBA recommends that the sediment at the base of the exterior green mixing tank is sampled and analyzed to determine disposal procedures as outlined in the YCSR upon removal of the contaminated liquid.

6.8 Soil Sampling

EBA recommends that a sampling plan is conducted for the potential hydrocarbon contamination as identified within Section 5.16. As the area was back filled, EBA was unable to thoroughly sample the area; therefore a sampling plan should be conducted with the use of a drill rig to complete borehole sampling to penetrate the rocky substrate.

6.9 Chemicals

EBA recommends that chemicals located on the property are transported and disposed of within an approved waste transfer facility and removed in accordance with the requirements of the Yukon Workers Compensation Health and Safety Board, the Transportation of Dangerous Goods Act and the Yukon Ministry of Environment.

6.9.1 H_2SO_4 Rail Tank

At the time of assessment EBA did not open or assess the rail tank labelled as containing H_2SO_4 adjacent to the mill. At the time of assessment the bottom portion at the ends of the tank were visually confirmed to have been extensively rusted. However, it is unconfirmed whether the rail tank is double walled. At the time the tank is assessed, EBA recommends that the interior is reviewed for contents or residue and sampled accordingly with applicable analytical for identification of contents.

EBA recommends that the paint on the exterior of the rail car is analyzed for lead content to determine disposal procedures. Upon confirmation for the presence of absence of interior contents and lead in paint; a recycling/ disposal plan can be determined following the requirements of the Yukon Workers Compensation Health and Safety Board, the Transportation of Dangerous Goods Act and the Yukon Ministry of Environment.

6.10 Tendering Process

EBA recommends that this report not be used solely for the tendering process in the removal and disposal of hazardous/regulated materials identified within this report. EBA recommends that a hazardous materials technical abatement specification and scope of services is included within tender documents for such work.

7.0 CLOSURE

We trust this report meets your present requirements. Should you have any questions or comments, please contact the undersigned at your convenience.

Sincerely,
EBA Engineering Consultants Ltd.

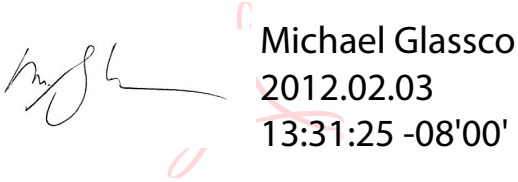
Written by:

Shane Dooley, Dip Tech
AHERA Building Inspector #792
EBA, A Tetra Tech Company
Direct line: 867.668.2071 x258

Written by:

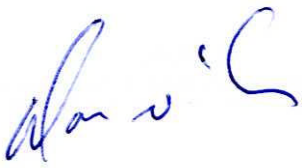
Chris Harwood, B.Sc.
Environment Scientist
EBA, A Tetra Tech Company Direct Line: 867.668.2071 x235

Technical Review by:



Michael Glassco, ROHT
President
Sterling IAQ Consultants Ltd.
Direct Line: 604.681.2701 x102

Senior Review by:



Donald Wilson, B.Sc.
Team Lead, Contaminants Group
EBA, A Tetra Tech Company
Direct line: 867.668.2071 x223

TABLES

Table 1: Hydrocarbons Located Onsite

Type	Container(s)	Volume/Quantitiy	Location
Mobil Synthetic Lubricant	25 L pail	25 L	Reclaim heating house
Unlabelled (suspect tansmission fluid)	2 L bottle	1 L	Reclaim heating house
Waste oil	20 L pail	10 L	Ketza shop
Heavy duty oil	20 L pail	15 L	Ketza shop
Transmission fluid	200 L drum	200 L	Ketza shop
Heating fuel	20 L pail	20 L	Ketza shop
Engine Oil (15w40)	3 x 20 L pails	60 L	Ketza shop
Hydraulic fluid	5 x 205 L drums	820 L	Mill area
Gear oil	8 x 205 L drums	1640 L	Mill area
Heating fuel	2 x Aboveground storage tanks	unknown	Mill area
Waste oil	3 x 205 L drums	unknown	Mill area
Hydraulic fluid	3 x 205 L drums	unknown	Mill area
Waste oil	205 L drum, split vertically.	unknown	Landfill east of mill
Kerosene	205 L drum	205 L	Mechanical shop
Gear oil	3 x 20 L pails	60 L	Mechanical shop
Waste oil	205 L drum	unknown	Generator building
Gear oil	10 x 20 L pails	< 200 L	Generator building
Diesel	2 x Aboveground storage tanks	<2000 L	Generator building
Gear oil	20 L pail	20 L	Work shop
Waste oil	4 x 20 L pails	80 L	Work shop
Unknown	Aboveground storage tank	unknown	Work shop
Engine Oil (15w40)	7 x 20 L pails	140 L	Work shop
Waste oil	2 x 205 L drums	unknown	Work shop
Gear oil	18 x 20 L pails	360 L	Work shop
Diesel	2 x Aboveground storage tanks	unknown	Diesel tank yard
Gear oil	20 L pail	20 L	Belt building, upper portion of Mill
Gear oil	205 L drum	205 L	Belt building, upper portion of Mill
Diesel AST	Various sizes	Unknown	Workshop/ 2 in front of Mill/ 2 at Ketza Yard
Gasoline AST	Quantity unknown	Unknown	Adjacent to Bunkhouse
Diesel Tanks	Quantity unknown	Unknown	2 South of Mill

Table 2: Chemicals Located Onsite

Type	Container(s)	Volume/ Quantitiy	Location
Hydrochloric/Muriatic acid	205 L drum	150 L	Drum storage area*
Unknown (pH indicates acid)	3 x 205 L drum (each approx. 3/4 full)	Approx 600 L	Drum storage area
Unkown	3 x 205 L drum	empty	Drum storage area
Varsol/solvent	205 L drum, split	10 L	Ketza shop
Muriatic acid	9 x 205 L drums	unknown	Mill area
Hyrdogen peroxide (50%)	9 x 205 L drums	1845 L	Mill area
"GW Prevent 855"	3 x 205 L drums	615 L	Mill area
Sulphuric acid	5 x 205 L drums	1025 L	Mill area
Coolant/Antifreeze	205 L drum	205 L	Mill area
Hydrogen peroxide	205 L drum	205 L	Polishing pond
Muriatic acid	205 L drum	205 L	Polishing pond
Hdrogen Peroxide	205 L drum	205 L	Sag mill area
Coolant/Antifreeze	205 L drum	205 L	Work shop
Ferric Sulfate	6 x pallets	unknown	Work shop
Varsol/solvent	Bath container	unknown	Work shop
Nitrogen Phosphate	6 x bags	unknown	Work shop
Bentonite pellets	24 bags	unknown	Adjacent to cookhouse
H2SO4 tank	Rail car	unknown	North of Mill

Note:
* Drum storage area is located east of the Mill where numerous drums are stored on pallets

Table 3: Miscellaneous Materials Onsite

Type	Container(s)	Volume/Quantitiy	Location
Fire Extinguisher	1 x 20 lb fire extinguisher	20 lb ODS	Reclaim heating house
Asbestos Containing Transite cement board	**Inside furnance**	**6 m^2**	**Reclaim heating house**
White bottle	2 L bottle	1 L	Electrical house
Blue 205 L Drum (labelled Ferric Sulphate, suspected to contain water)	205 L drum	10 L	Edge of tailings pond
Propane tank	100 lb	unknown	Ketza shop
Propane	6 x 20 lb cannisters	unknown	Ketza shop trailer
Acetylene tank	100 lb	Unknown	Ketza shop
Propane tank	100 lb	Unknown	Ketza shop
Mercury switch	Building thermostat	1	Ketza shop
Fluorescent light ballasts	Fluorescent lighting fixtures	10	Ketza shop
Fluorescent light tubes	Fluorescent lighting fixtures	20	Ketza shop
Fluorescent light ballasts	Fluorescent lighting fixtures	1	Ketza shop trailer
Fluorescent light tubes	Fluorescent lighting fixtures	2	Ketza shop trailer
Unknown	6 x 205 L drums	Empty	Mill area
Suspect Ferric Sulfate	12 x 1 ton bags	Full	Mill area, interior
Unknown black "sludge"	205 L drum (open)	< 10 L	Drum storage area
Unknown	4 x 205 L drum	Unknown	Floating in polishing pond
Unknown	205 L drum	Empty	Sag mill area
Equipment batteries	13 x batteries	N/A	Landfill east of mill
Argon	100 lb cannister	Unknown	Mechanical shop
Acetylene tank	2 x 100 lb	unknown	Mechanical shop
Nitrogen	100 lb	Unknown	Mechanical shop
Propane	2 x 20 lb cannisters	unknown	Work shop
Equipment batteries	11 x batteries	N/A	Work shop

XXXXXX - Asbestos Containing Material

Table 4: Suspect Asbestos Containing Material Summary

Sample Identification	Type	Volume/ Quantitiy	Location	% Asbestos
1981-001	Front furnace gasket	N/A	Reclaim heating house	Non-detect
1981-002	**Furnace exhaust gasket**	**0.3 m^2**	**Reclaim heating house**	**85-90% Ch**
1981-003	Flow meter gasket	N/A	Reclaim heating house	Non-detect
1981-004	Insulated exterior pipe wrap, black	N/A	Outside reclaim heating house	Non-detect
1981-005	Roofing system	N/A	Reclaim heating house	Non-detect
1981-006	Insulation paper backing	N/A	Conveyor housing	Non-detect
1981-007	Insulation paper backing	N/A	Conveyor housing	Non-detect
1981-008	Flange gasket, generator	N/A	Generator Room	Non-detect
1981-009	White pipe wrap on straight run	N/A	Lower mill	Non-detect
1981-010	White pipe wrap on straight run	N/A	Lower mill	Non-detect
1981-011	Drywall joint compound	N/A	Kitchen furnace room	Non-detect
1981-012	12 x 12 blue flecked VFT	N/A	Throughout kitchen	Non-detect
1981-013	Drywall joint compound	N/A	Wall adjacent to walk-in coolers	Non-detect
1981-014	Drywall joint compound	N/A	Kitchen doorway	Non-detect
1981-015	Drywall joint compound	N/A	Above window in kitchen	Non-detect
1981-016	Drywall joint compound	N/A	Wall adjacennt to entrance	Non-detect
1981-017	Drywall joint compound	N/A	Kitchen trim	Non-detect
1981-018	Drywall joint compound	N/A	Dining area	Non-detect
1981-019	Drywall joint compound	N/A	Above window in dining area	Non-detect
1981-020	Drywall joint compound	N/A	Above window in dining area	Non-detect
1981-021	Drywall joint compound	N/A	Corner of dining area	Non-detect
1981-022	Drywall joint compound	N/A	Dining area wall	Non-detect
1981-023	12 x 12 blue flecked VFT	N/A	Throughout building	Non-detect
1981-024	Tar paper on ceiling insulation	N/A	Dining area attic	Non-detect
1981-025	Roofing system	N/A	Mess water tank side building	Non-detect
1981-026	Roofing system	N/A	Storage shed	Non-detect
1981-027	Insulation paper	N/A	Exterior of bunkhouse	Non-detect
1981-028	12 x 12 blue flecked VFT	N/A	Bunkhouse, 1st floor	Non-detect
1981-029	Drywall joint compound	N/A	Wall of first floor bedroom	Non-detect
1981-030	Drywall joint compound	N/A	Door frame	Non-detect
1981-031	Drywall joint compound	N/A	Above window of perimeter wall	Non-detect
1981-032	Drywall joint compound	N/A	Wall behind door	Non-detect
1981-033	Drywall joint compound	N/A	Above window	Non-detect
1981-034	Drywall joint compound	N/A	Corner of doorframe to first aid room	Non-detect
1981-035	Drywall joint compound	N/A	Wall of washroom/laundry	Non-detect
1981-036	Drywall joint compound	N/A	Underside of stairwell	Non-detect
1981-037	Texture coat/DWJC	N/A	Hallway to stairs	Non-detect
1981-038	Texture coat/DWJC	N/A	Stairwell landing	Non-detect
1981-039	Drywall joint compound	N/A	Second floor entrance wall	Non-detect
1981-040	Drywall joint compound	N/A	Men's washroom wall	Non-detect
1981-041	Drywall joint compound	N/A	Corner of wall leading to exit	Non-detect
1981-042	Drywall joint compound	N/A	Rear bedroom wall	Non-detect
1981-043	Drywall joint compound	N/A	Wall corner	Non-detect
1981-044	Drywall joint compound	N/A	Perimeter wall	Non-detect
1981-045	Drywall joint compound	N/A	Wall of bedroom #8	Non-detect
1981-046	Texture coat/DWJC	N/A	Ceiling of second floor	Non-detect
1981-047	12 x 12 blue flecked VFT	N/A	Bunkhouse, first floor bathroom	Non-detect

Table 5: Suspect Lead Based Paint Summary

Sample Identification	Type	Volume/ Quantitiy	Location	ICP mg/kg	TCLP mg/L
1481-L001	Blue paint on tank 13	Unknown	Mill building	69	N/A
1481-L002	**White paint on tank**	**Unknown**	**Mill building**	**3570**	1.14
1481-L003	Interior white paint	Throughout	Dining room Mess Hall	81	N/A
1481-L004	White interior paint	Throughout	Bunkhouse second floor	<10	N/A

XXXXX - Analytically confirmed lead based paint
TCLP < 5ppm does not require regulated disposal under the HWR

Table 6: Fluid Sampling Summary

Sample Identification	Samping Method	Type	Volume/Quantitiy	Location	Results
EBA-2011-MN001	Litmus paper	Acidic	4 drums (~ 50L per drum)	Open area up from Tailings Pond	~ 2 pH
EBA-2011-MN002	Litmus paper	Suspect water	~ 200L	Ketza shop	~ 6 pH
EBA-2011-MN003	Litmus paper	Tranmission Fluid	~ 200 L	Ketza shop	Visually Confirmed
EBA-2011-MN004	grab	Hydraulic fluid	3 drums (820 L)	Mill area	Refer to Table 6A
EBA-2011-MN005	grab	Liquid	unknown	Drum on Sag Mill Road	Refer to Table 6A and 6B
EBA-2011-MN006	grab	Liquid	unknown	Mill exterior mixing tank	Refer to Table 6A and 6B
EBA-2011-MN007	grab	Liquid	unknown	Mill exterior mixing tank	Refer to Table 6A and 6B
EBA-2011-MN008	grab	Liquid	unknown	Mixing tank # 6, in mill	Refer to Table 6A and 6B

Table 6A: Fluid Sampling Summary

Sample Identification	Units	CSR AW Std	MMER Std	EBA-2011-MN004	EBA-2011-MN005	EBA-2011-MN006	EBA-2011-MN007	EBA-2011-MN008
Physical Tests								
pH	pH	-	-	5.50	5.50	-	7.10	8.00
Cyanides								
Cyanide, Total	ug/L	50	2,000	-	-	<5.0	<5.0	-
Total Metals								
Aluminum (Al)-Total	ug/L	-	-	-	-	<200	5000	1160
Antimony (Sb)-Total	ug/L	200	-	-	-	<200	<200	480
Arsenic (As)-Total	ug/L	50	1,000	-	-	<200	630	440
Barium (Ba)-Total	ug/L	10,000	-	-	-	<10	96	26
Beryllium (Be)-Total	ug/L	53	-	-	-	<5.0	<5.0	<10
Bismuth (Bi)-Total	ug/L	-	-	-	-	<200	<200	<400
Boron (B)-Total	ug/L	-	-	-	-	<100	<100	<200
Cadmium (Cd)-Total	ug/L	0.6	-	-	-	<10	<10	<20
Calcium (Ca)-Total	ug/L	-	-	-	-	84900	94400	305000
Chromium (Cr)-Total	ug/L	10	-	-	-	<10	<10	<20
Cobalt (Co)-Total	ug/L	9	-	-	-	<10	<10	50
Copper (Cu)-Total	ug/L	20	600	-	-	<10	97	<20
Iron (Fe)-Total	ug/L	-	-	-	-	623	13300	1340
Lead (Pb)-Total	ug/L	50	400	-	-	<50	539	<100
Lithium (Li)-Total	ug/L	-	-	-	-	<10	<10	<20
Magnesium (Mg)-Total	ug/L	-	-	-	-	7740	9180	32300
Manganese (Mn)-Total	ug/L	-	-	-	-	26.8	712	600
Molybdenum (Mo)-Total	ug/L	10,000	-	-	-	<30	<30	<60
Nickel (Ni)-Total	ug/L	250	1,000	-	-	<50	<50	<100
Phosphorus (P)-Total	ug/L	-	1,000	-	-	<300	<300	<600
Potassium (K)-Total	ug/L	-	-	-	-	3200	5900	42700
Selenium (Se)-Total	ug/L	10	-	-	-	<200	<200	<400
Silicon (Si)-Total	ug/L	-	-	-	-	543	8890	20500
Silver (Ag)-Total	ug/L	0.5	-	-	-	<10	<10	<20
Sodium (Na)-Total	ug/L	-	-	-	-	6100	6500	1260000
Strontium (Sr)-Total	ug/L	-	-	-	-	162	194	840
Thallium (Tl)-Total	ug/L	3	-	-	-	<200	<200	<400
Tin (Sn)-Total	ug/L	-	-	-	-	<30	<30	<60
Titanium (Ti)-Total	ug/L	1,000	-	-	-	<10	47	39
Vanadium (V)-Total	ug/L	-	-	-	-	<30	<30	<60
Zinc (Zn)-Total	ug/L	75	1000	-	-	24.1	662	1700
Hydrocarbons								
EPH10-19	mg/Kg	5,000	-	14200	9610	-	-	-
EPH19-32	mg/Kg	5,000	-	720000	95000	-	-	-
Glycols								
Diethylene Glycol	ug/L	-	-	-	-	<5000	<5000	<5000
Ethylene Glycol	ug/L	1,920 mg/l	-	-	-	<5000	<5000	<5000
1,2-Propylene Glycol	ug/L	5,000 mg/l	-	-	-	<5000	<5000	<5000

Exceedence as per Metal Mining Effluent Regulations Schedule 4, Column 4
Exceedence as per Yukon Contaminated Sites Regulation Aquatic Life Standards
Exceeds both CSR and MMER standards

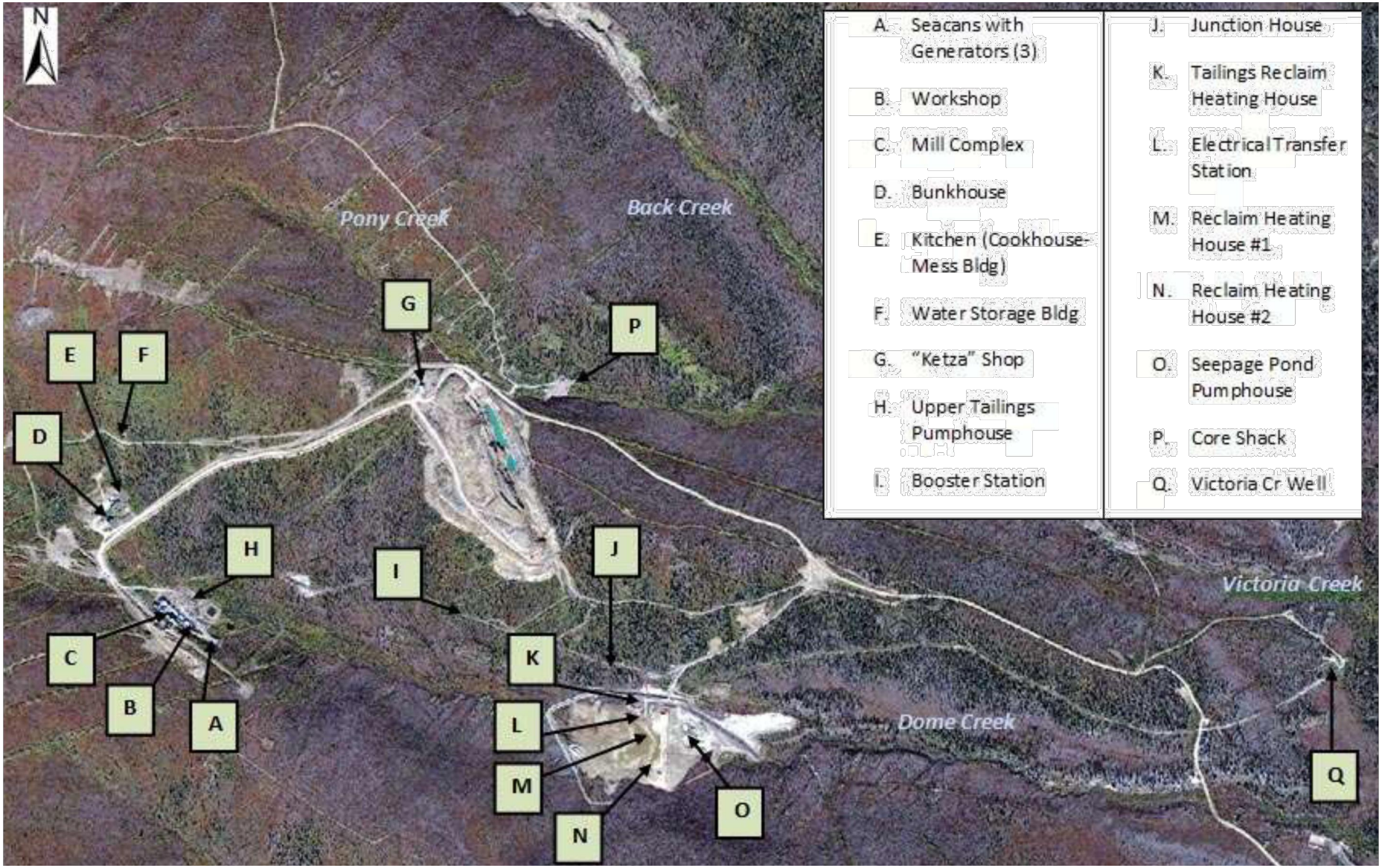
Table 6B: Fluid Sampling Summary

Sample Identification	Units	CSR AW Std	MMER Std	EBA-2011-MN004	EBA-2011-MN005	EBA-2011-MN006	EBA-2011-MN007	EBA-2011-MN008
Polychlorinated Biphenyls								
PCB-1016	ug/L	-	-	-	-	<1.0	<1.0	-
PCB-1221	ug/L	-	-	-	-	<1.0	<1.0	-
PCB-1232	ug/L	-	-	-	-	<1.0	<1.0	-
PCB-1242	ug/L	-	-	-	-	<1.0	<1.0	-
PCB-1248	ug/L	-	-	-	-	<1.0	<1.0	-
PCB-1254	ug/L	-	-	-	-	<1.0	<1.0	-
PCB-1260	ug/L	-	-	-	-	<1.0	<1.0	-
PCB-1262	ug/L	-	-	-	-	<1.0	<1.0	-
PCB-1268	ug/L	-	-	-	-	<1.0	<1.0	-
Total Polychlorinated Biphenyls	ug/L	-	-	-	-	<1.0	<1.0	-

Table 7: Analytical Soil Sampling Results

Sample ID	Units	YCSR-PL	HA-2011-001	HA-2011-002	HA-2011-003	HA-2011-004
Physical Tests						
Moisture	%	-	10.1	13.1	11.1	11.2
Volatile Organic Compounds						
Benzene	ug/g	70	<0.040	<0.040	<0.040	<0.040
Ethylbenzene	ug/g	1	<0.050	<0.050	<0.050	<0.050
Methyl t-butyl ether (MTBE)	ug/g	-	<0.20	<0.20	<0.20	<0.20
Styrene	ug/g	5	<0.050	<0.050	<0.050	<0.050
Toluene	ug/g	1.5	<0.050	<0.050	<0.050	<0.050
ortho-Xylene	ug/g	5	<0.050	<0.050	<0.050	<0.050
meta- & para-Xylene	ug/g	5	<0.050	<0.050	<0.050	<0.050
Hydrocarbons						
EPH10-19	ug/g	1000	<200	<200	<200	<200
EPH19-32	ug/g	1000	<200	<200	<200	<200
LEPH	ug/g	1000	<200	<200	<200	<200
HEPH	ug/g	1000	<200	<200	<200	<200
Volatile Hydrocarbons (VH6-10)	ug/g	200	<100	<100	<100	<100
VPH (C6-C10)	ug/g	200	<100	<100	<100	<100
Hydrocarbons						
Acenaphthene	ug/g	-	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	ug/g	-	<0.050	<0.050	<0.050	<0.050
Anthracene	ug/g	-	<0.050	<0.050	<0.050	<0.050
Benz(a)anthracene	ug/g	1	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	ug/g	1	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	ug/g	1	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	ug/g	-	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	ug/g	1	<0.050	<0.050	<0.050	<0.050
Chrysene	ug/g	-	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	ug/g	1	<0.050	<0.050	<0.050	<0.050
Fluoranthene	ug/g	-	<0.050	<0.050	<0.050	<0.050
Fluorene	ug/g	-	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	ug/g	1	<0.050	<0.050	<0.050	<0.050
2-Methylnaphthalene	ug/g	-	<0.050	<0.050	<0.050	<0.050
Naphthalene	ug/g	5	<0.050	<0.050	<0.050	<0.050
Phenanthrene	ug/g	5	<0.050	<0.050	<0.050	<0.050
Pyrene	ug/g	10	<0.050	<0.050	<0.050	<0.050

FIGURES



NOTES
- ORIGINAL FIGURE WAS PROVIDED BY ASSESSMENT AND ABANDONED MINES

- THIS DRAWING IS NOT TO SCALE

CLIENT

Yukon Government

eba A TETRA TECH COMPANY

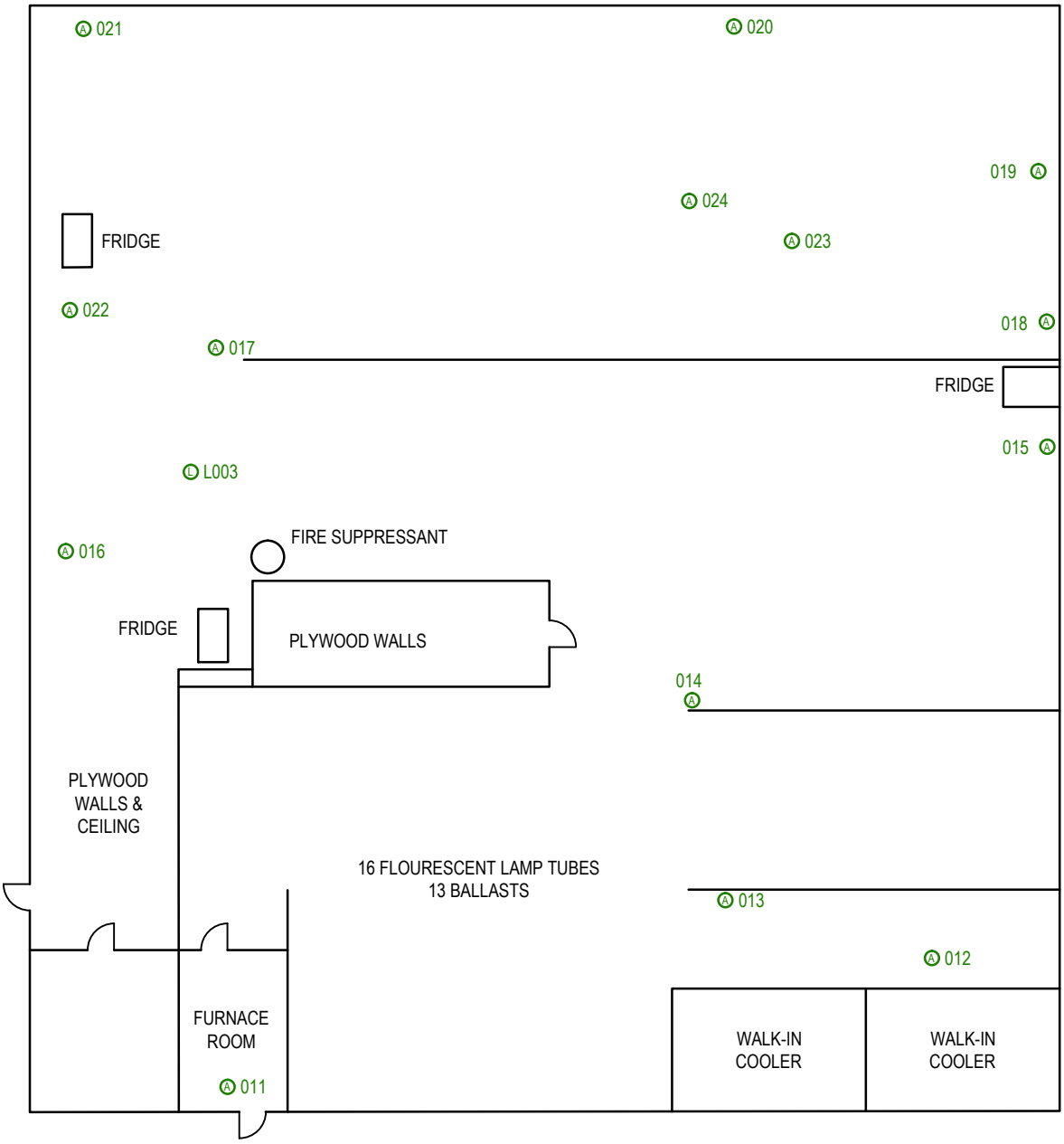
MT. NANSEN HAZARDOUS WASTE CLASSIFICATION
MT.NANSEN MINE SITE, YUKON

SITE PLAN

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 1



NOTE

THIS DRAWING IS NOT TO SCALE

LEGEND:

(A) - ASBESTOS-CONTAINING SAMPLE LOCATION

(L) - LEAD-BASED PAINT SAMPLE LOCATION

CLIENT: Yukon Government

eba A TETRA TECH COMPANY

MT. NANSEN HAZARDOUS WASTE CLASSIFICATION
MT.NANSEN MINE SITE, YUKON

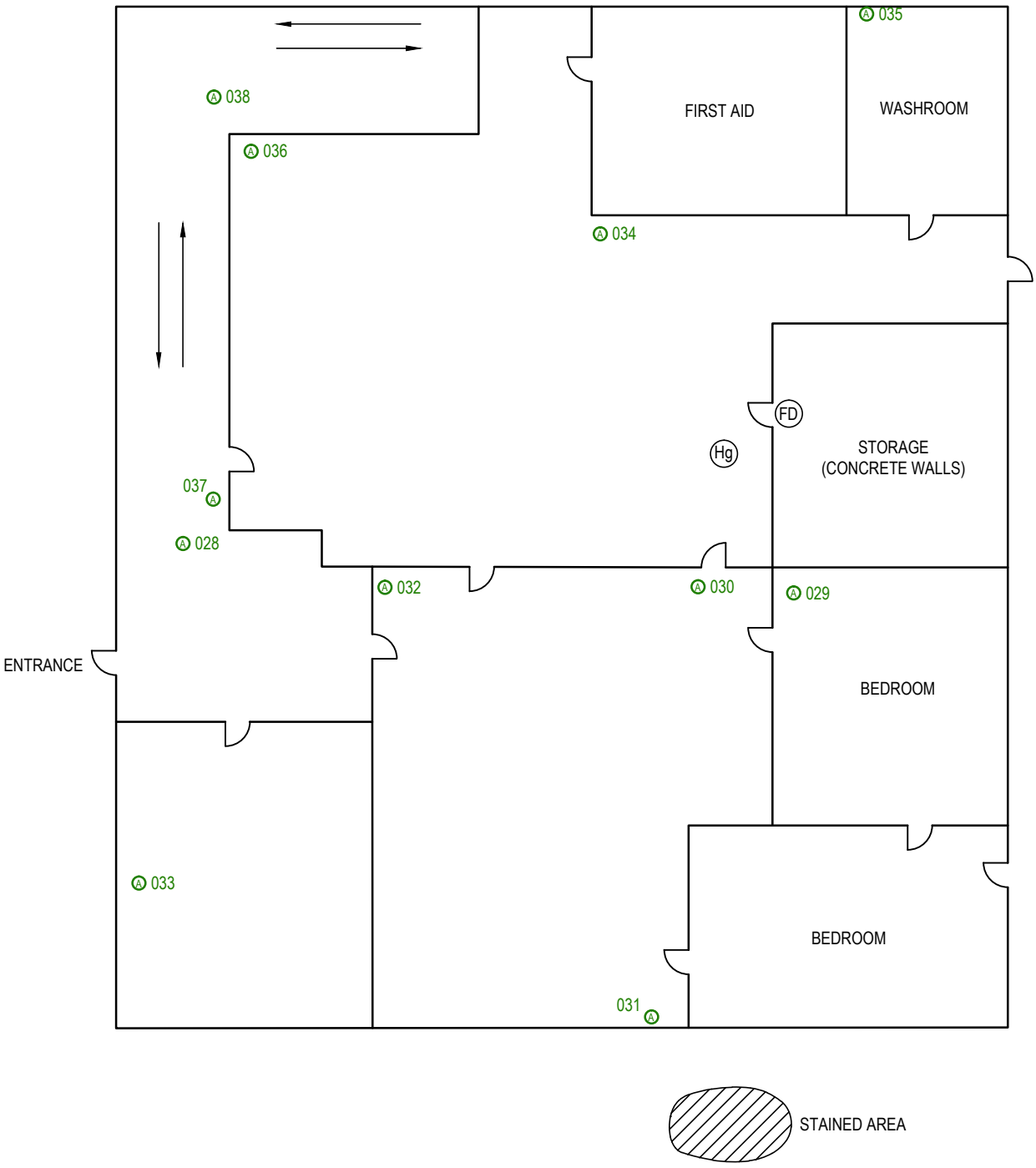
MESS BUILDING

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 2

Q:\Whitehorse\Data\0201drawings\Whitehorse\W231\W23101481 Mt Nansen Hazardous Waste Reclamation Sampling\W23101481 Fig.1_R0.dwg [FIGURE 2] January 25, 2012 - 8:43:24 am (BY: BUCHAN, CAMERON)



NOTE

THIS DRAWING IS NOT TO SCALE

LEGEND:

- (A) - ASBESTOS-CONTAINING SAMPLE LOCATION
- (L) - LEAD-BASED PAINT SAMPLE LOCATION
- Hg - MERCURY-CONTAINING SWITCH
- FD - FIRE DOOR
- - HYDROCARBON STAINING

CLIENT: Yukon Government

MT. NANSEN HAZARDOUS WASTE CLASSIFICATION
MT.NANSEN MINE SITE, YUKON

BUNKHOUSE
FLOOR 1

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

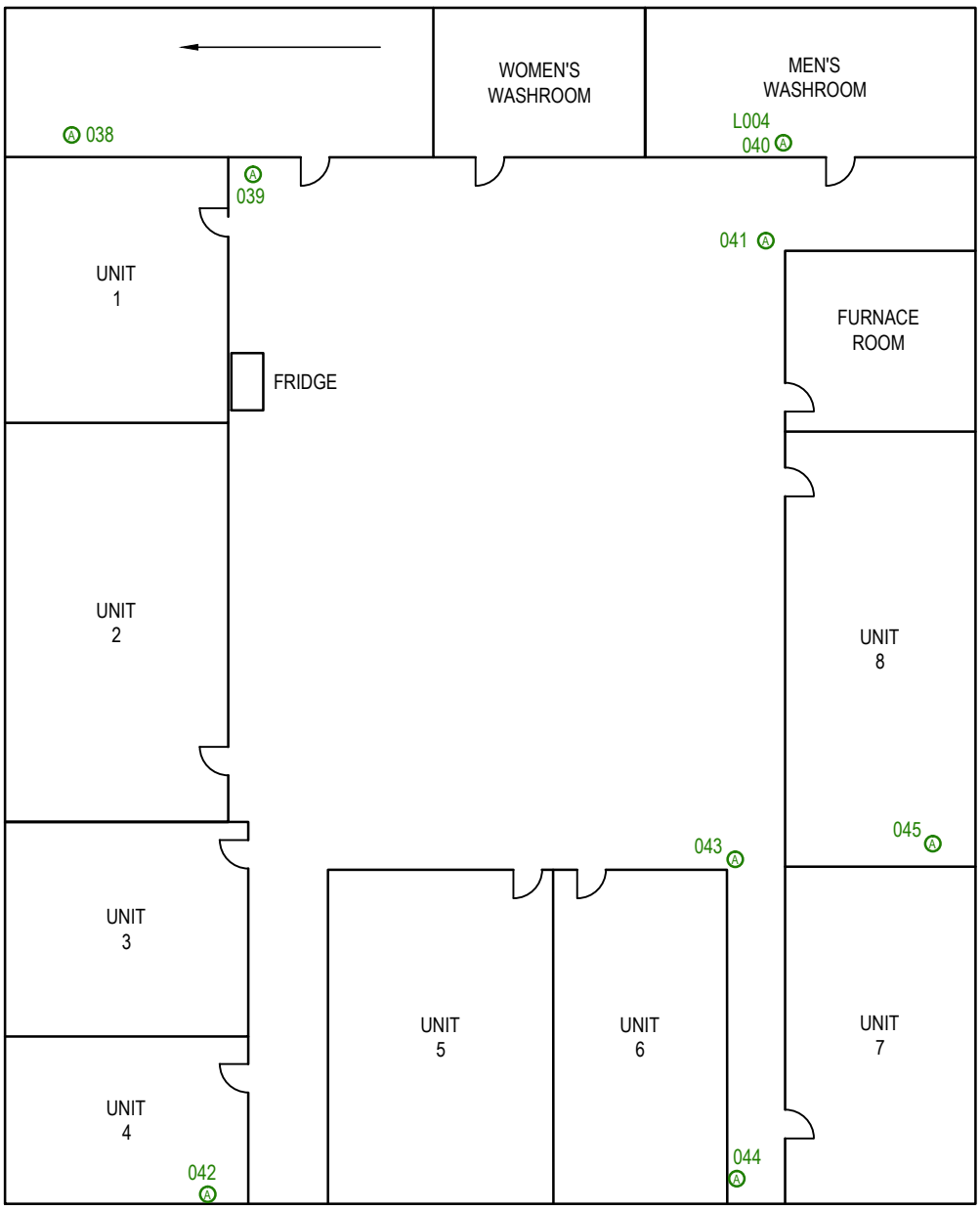
OFFICE: EBA-WHSE

DATE: November 28, 2011

Figure 3

eba A TETRA TECH COMPANY

Q:\Whitehorse\Data\0201drawings\Whitehorse\W231\W23101481 Mt Nansen Hazardous Waste Reclamation Sampling\W23101481 Fig.1_R0.dwg [FIGURE 3] December 14, 2011 - 10:54:15 am (BY: BUCHAN, CAMERON)



NOTE

THIS DRAWING IS NOT TO SCALE

LEGEND:

(A) - ASBESTOS-CONTAINING SAMPLE LOCATION

(L) - LEAD-BASED PAINT SAMPLE LOCATION

CLIENT

Yukon Government

MT. NANSEN HAZARDOUS WASTE CLASSIFICATION
MT.NANSEN MINE SITE, YUKON

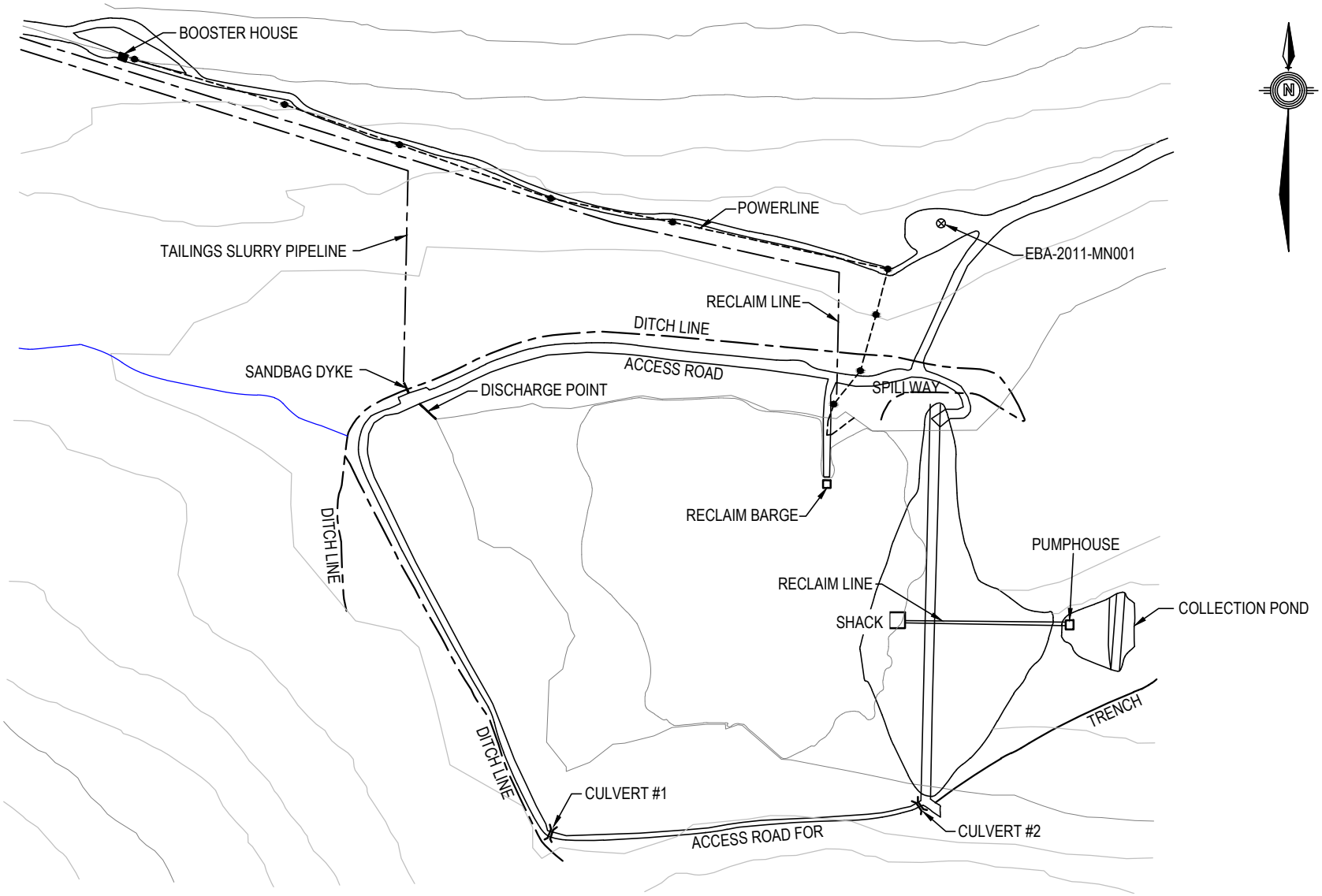
BUNKHOUSE
FLOOR 2

eba A TETRA TECH COMPANY

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 4



LEGEND:

- ● - POWER POLE LOCATION
- ⊗ - EBA SAMPLE LOCATION

NOTE

THIS DRAWING IS NOT TO SCALE

CLIENT

Yukon Government

eba A TETRA TECH COMPANY

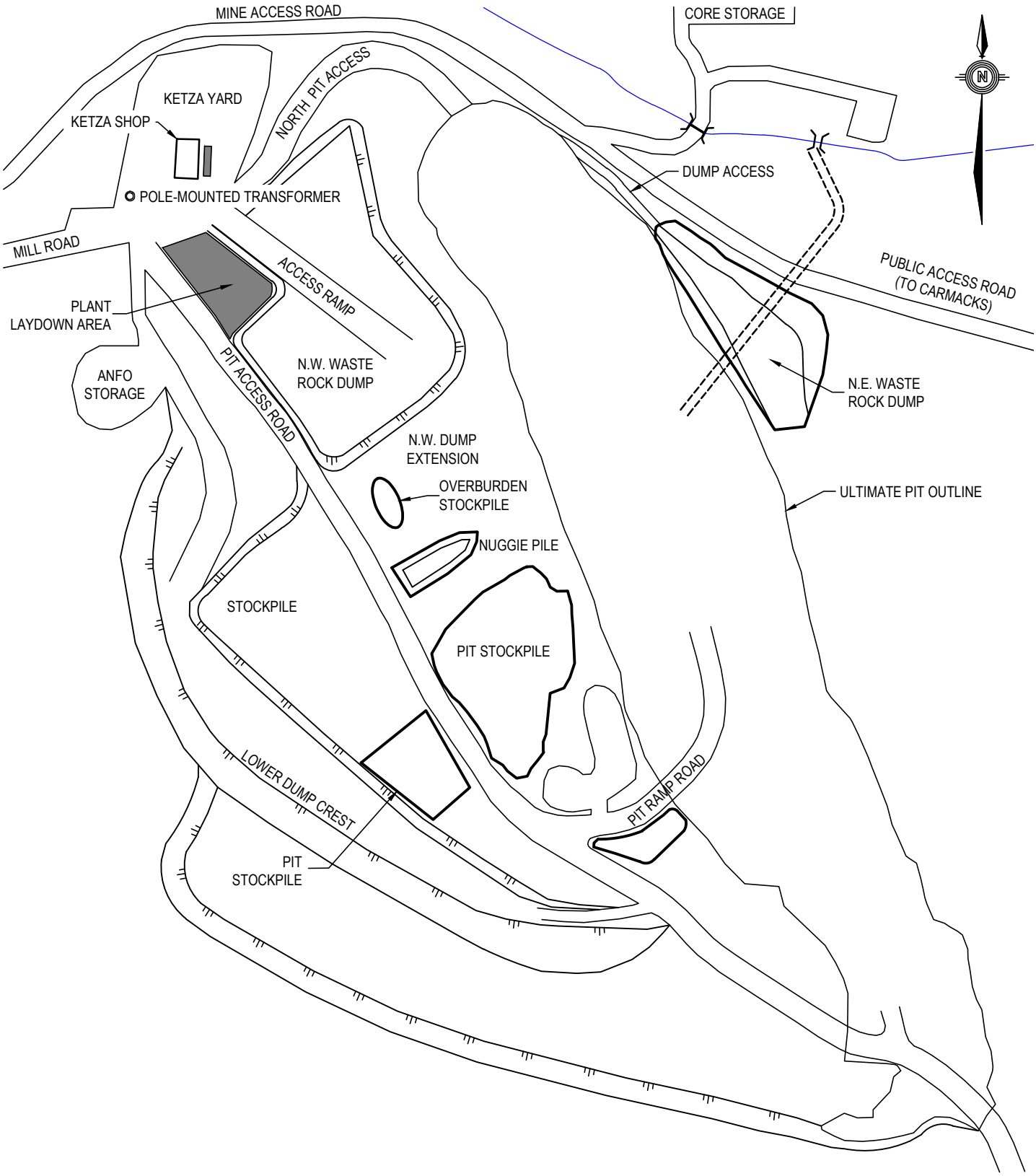
MT. NANSEN HAZARDOUS WASTE CLASSIFICATION
MT.NANSEN MINE SITE, YUKON

SITE PLAN - TAILINGS DAM

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 5



NOTES

- THIS DRAWING IS NOT TO SCALE

- DUMP LOCATIONS REFER TO DISCARDED ROCK

CLIENT

Yukon Government

HAZARDOUS WASTE CLASSIFICATION & RECLAMATION
MT. NANSEN, YUKON

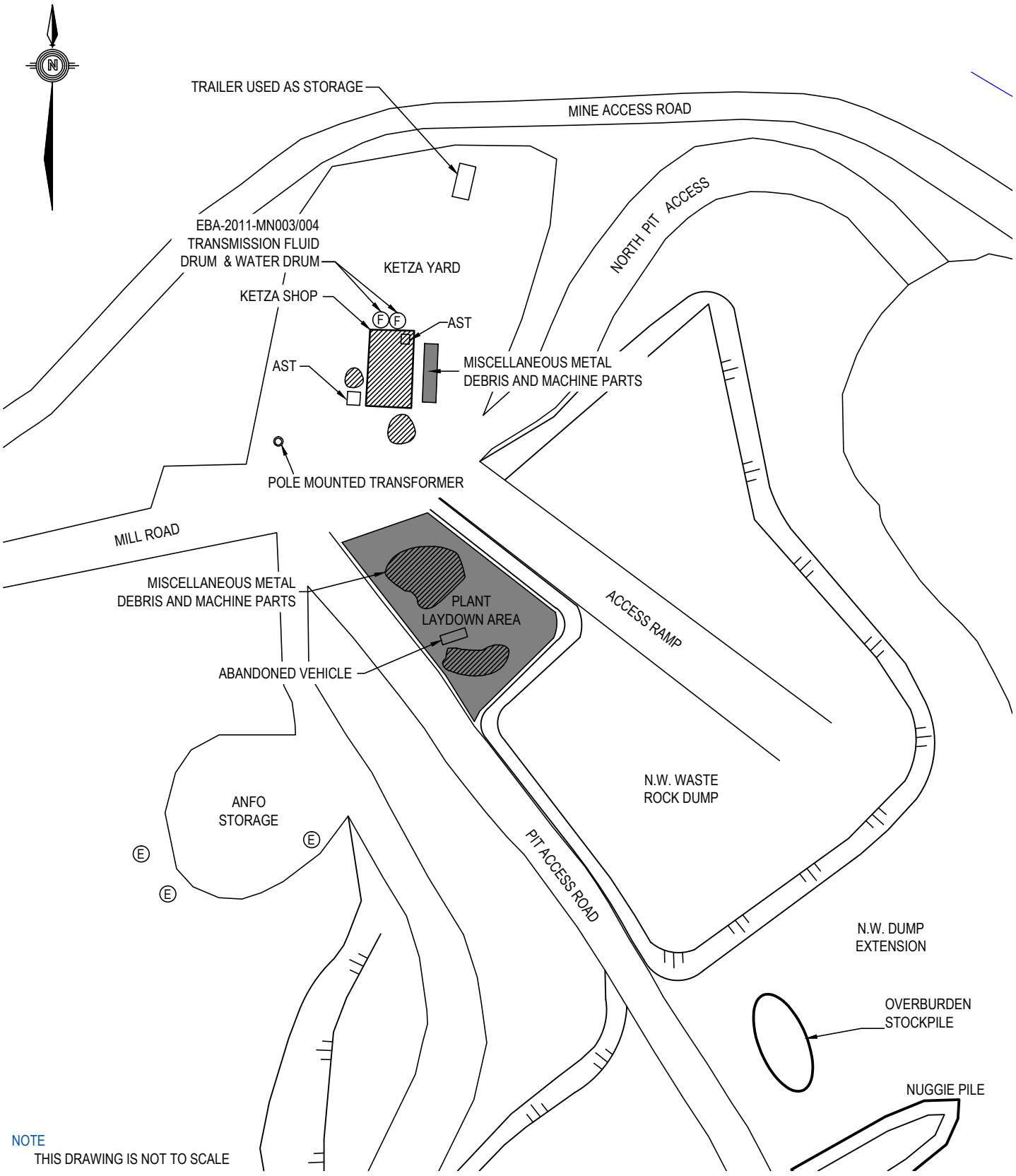
SITE PLAN - BROWN MCDADE PIT

eba A TETRA TECH COMPANY

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 6



NOTE
THIS DRAWING IS NOT TO SCALE

LEGEND:

- (E) - EMPTY DRUMS
- (F) - DRUM CONTAINING FLUID
- - HYDROCARBON STAINING
- - AREA OF METAL DEBRIS / MACHINE PARTS
- AST - ABOVE GROUND STORAGE TANK

CLIENT

Yukon Government

A TETRA TECH COMPANY

HAZARDOUS WASTE CLASSIFICATION & RECLAMATION
MT. NANSEN, YUKON

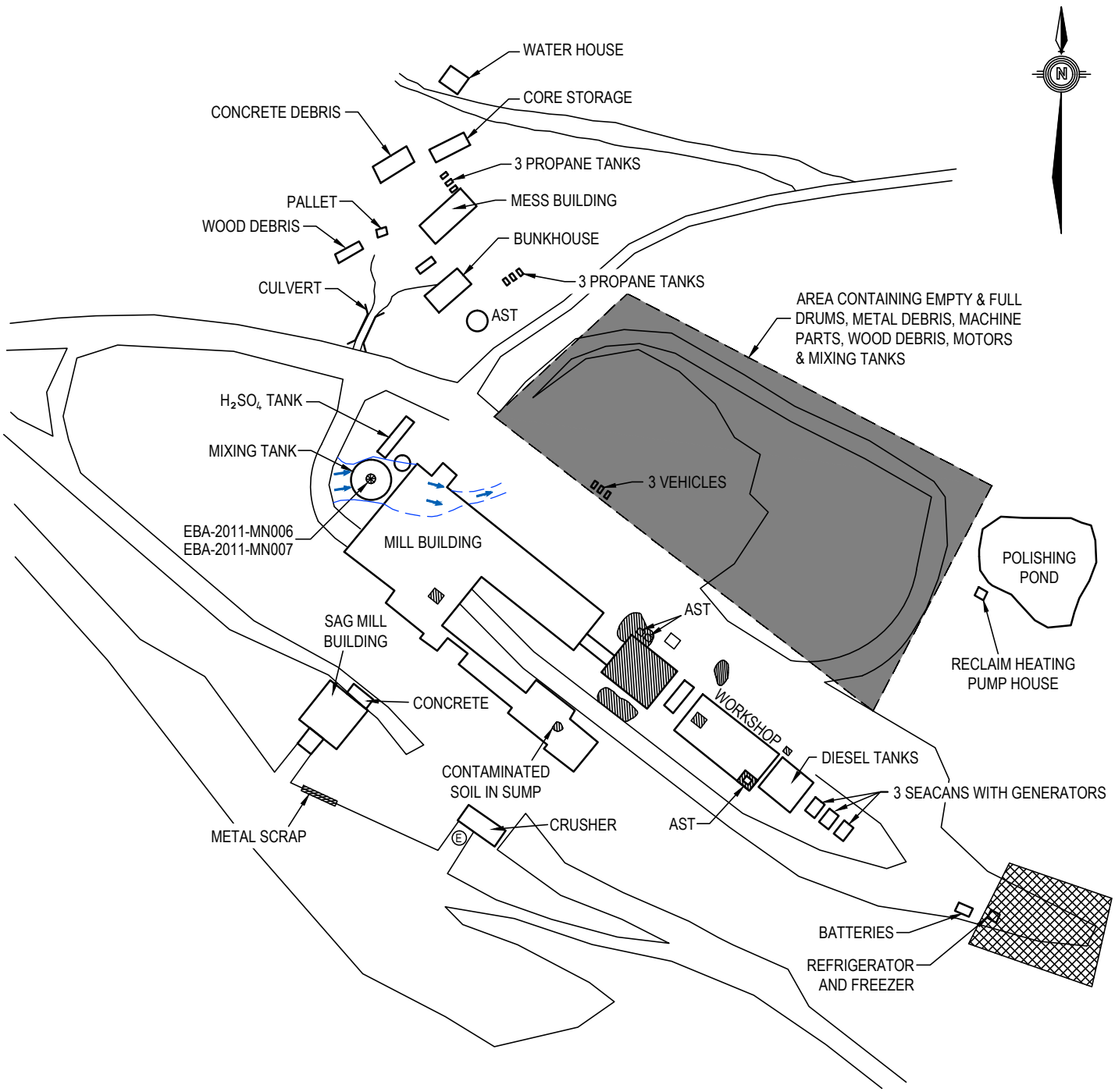
KETZA MINE SHOP

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 6a

Q:\Whitehorse\Data\0201drawings\Whitehorse\W231\W23101481 Mt Nansen Hazardous Waste Reclamation Sampling\W23101481 Fig.1_R0.dwg [FIGURE 6A] December 14, 2011 - 10:54:56 am (BY: BUCHAN, CAMERON)



NOTE
THIS DRAWING IS NOT TO SCALE

LEGEND:

- (E) - EMPTY DRUMS
- (F) - DRUM CONTAINING FLUID
- - HYDROCARBON STAINING
- - AREA OF METAL DEBRIS / MACHINE PARTS
- AST - ABOVE GROUND STORAGE TANK
- - AREA OF HISTORIC LANDFILL
- - DIRECTION OF WATER INGRESS

CLIENT: Yukon Government

HAZARDOUS WASTE CLASSIFICATION & RECLAMATION MT. NANSEN, YUKON

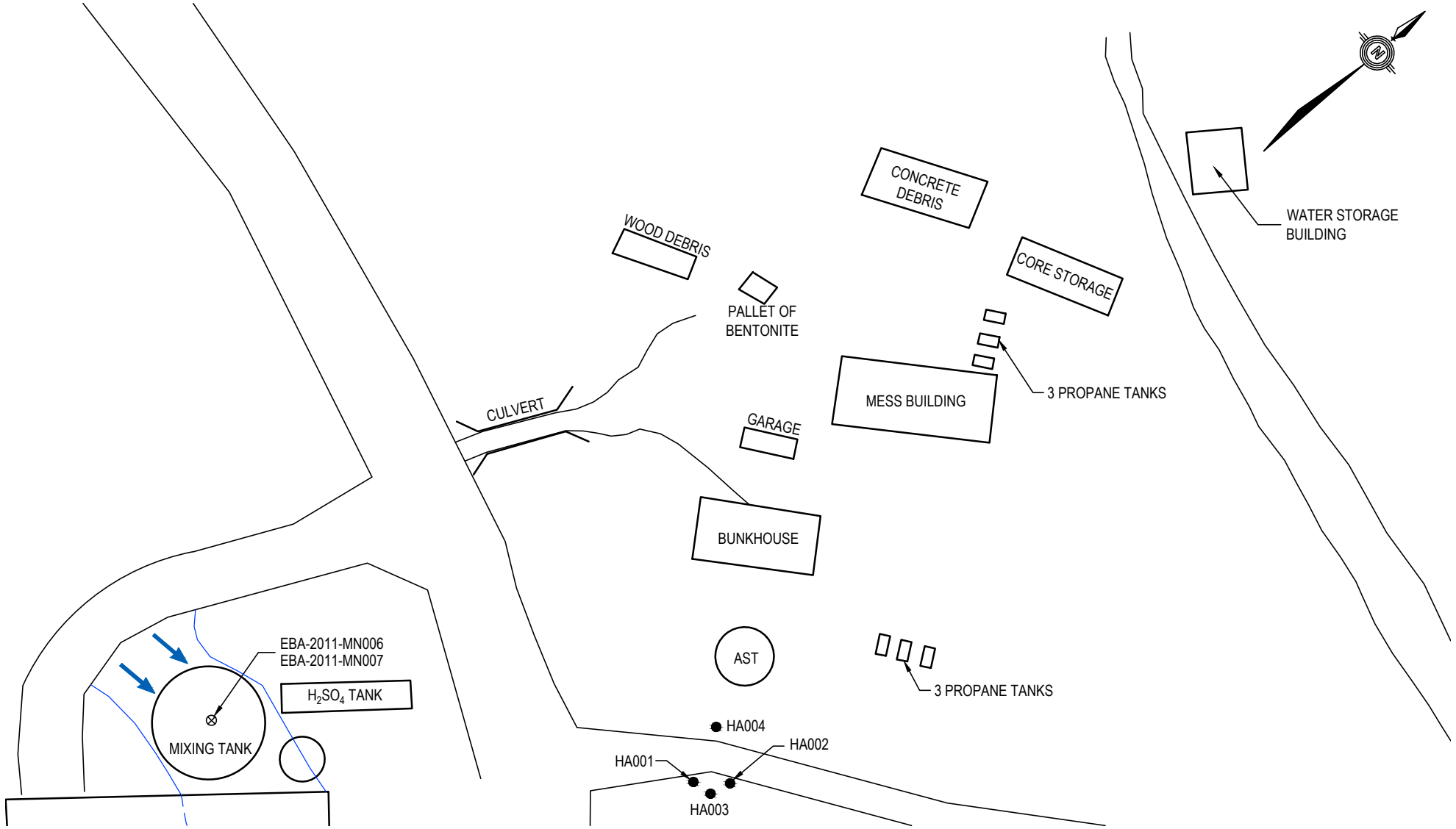
SITE PLAN - MILL AND SURROUNDING AREA

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE: EBA-WHSE
DATE: November 28, 2011

Figure 7

eba A TETRA TECH COMPANY



LEGEND:

- APPROXIMATE LOCATION OF HAND AUGERED SOIL SAMPLES
- DIRECTION OF WATER INGRESS INTO LOWER MILL LEVEL

NOTE
THIS DRAWING IS NOT TO SCALE

CLIENT
Yukon Government

eba
A TETRA TECH COMPANY

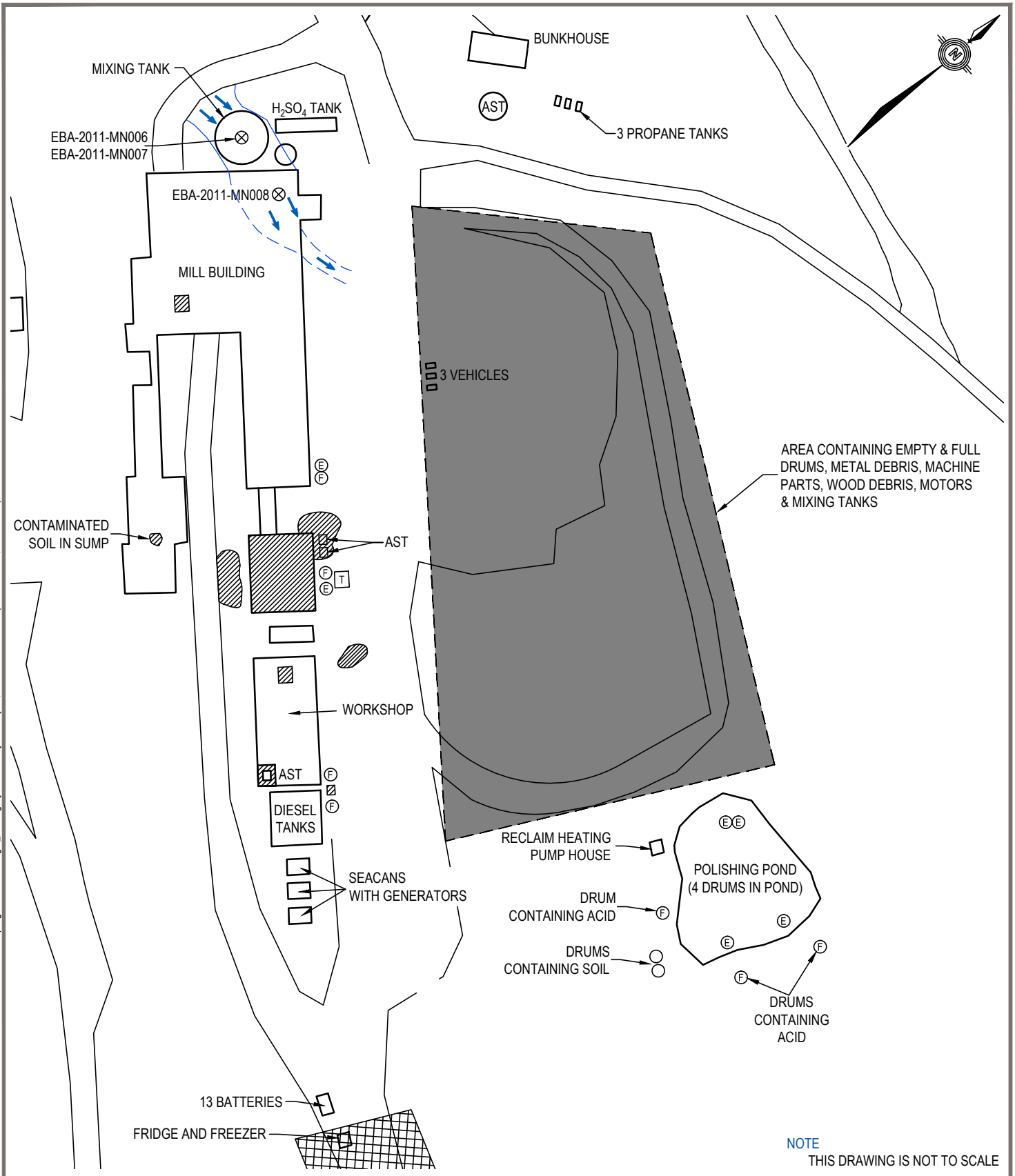
MT. NANSEN HAZARDOUS WASTE CLASSIFICATION
MT.NANSEN MINE SITE, YUKON

MESS BUILDING AND BUNKHOUSE AREA

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 7a



NOTE
THIS DRAWING IS NOT TO SCALE

LEGEND:
- ⊗ - EBA SAMPLE LOCATION
- - AREA OF HISTORIC LANDFILL
- - AREA OF HYDROCARBON STAINING
- AST - ABOVE GROUND STORAGE TANK
- (E) - EMPTY DRUM
- (F) - DRUM CONTAINING FLUID
- → - DIRECTION OF WATER INGRESS INTO MILL LOWER LEVEL
- [T] - POLE MOUNTED TRANSFORMERS

CLIENT
Yukon Government

eba A TETRA TECH COMPANY

HAZARDOUS WASTE CLASSIFICATION & RECLAMATION
MT. NANSEN, YUKON

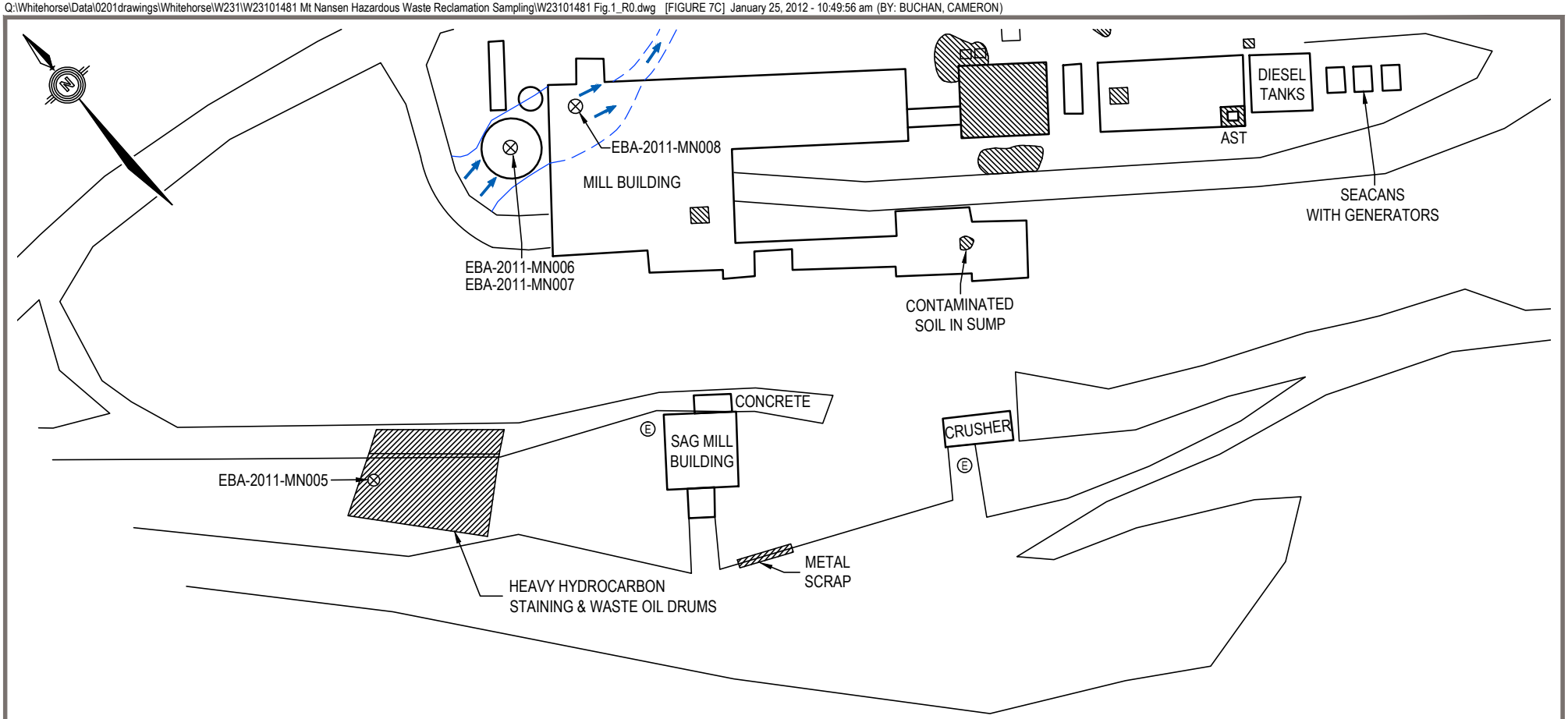
MILL - WORKSHOPS - GENERATOR AREA

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 7b

Q:\Whitehorse\Data\0201drawings\Whitehorse\W231\W23101481 Mt Nansen Hazardous Waste Reclamation Sampling\W23101481 Fig.1_R0.dwg [FIGURE 7B] January 25, 2012 - 10:49:34 am (BY: BUCHAN, CAMERON)



LEGEND:

- HYDROCARBON STAINING
- AST - ABOVE GROUND STORAGE TANK
- (E) - EMPTY DRUM
- ⊗ - EBA SAMPLE POINT

NOTE

THIS DRAWING IS NOT TO SCALE

CLIENT

Yukon Government

eba A TETRA TECH COMPANY

MT. NANSEN HAZARDOUS WASTE CLASSIFICATION
MT.NANSEN MINE SITE, YUKON

SITE PLAN SHOWING
SAG BUILDING AND CRUSHER

PROJECT NO.	DWN	CKD	REV
W23101481	CB	SGD	0

OFFICE	DATE
EBA-WHSE	November 28, 2011

Figure 7c

PHOTOGRAPHS

Photo 1: Seepage pond pump house (image supplied by AAM, November 2011)

Photo 2: Tailings reclaim heating house with reclaim heating electrical house behind, located on the north end of the Tailings Dam

Photo 3: Reclaim heating pump house #1 located on the north end of the tailings dam

Photo 4: Reclaim heating pump house #2 located on the eastern side of the tailings dam

Photo 5: Junction box house in line with the transmission towers north of the tailings dam

Photo 6: Ketza mine machine shop

Photo 7: Mill area and associated buildings as seen from the Cookhouse

Photo 8: Water tank storage building

Photo 9: Cookhouse building

Photo 10: Bunkhouse

Photo 11: Booster station in line with transmission towers

Photo 12: Core Shack

Photo 13: Reclaim heating pump house by mill

Photo 14: Victoria Creek well house

Photo 15: Asbestos containing gasket on the furnace exhaust within the Reclaim Heating House

Photo 16: Asbestos containing transite board within the furnace in the Reclaim Heating House

Photo 17: White lead based paint on mixing tank number 6 within the Mill

Photo 18: Pole mounted transformer suspect of containing PCB contaminated oil

Photo 19: Approximately 8 barrels associated within EBA sample No EBA-2011-MN001

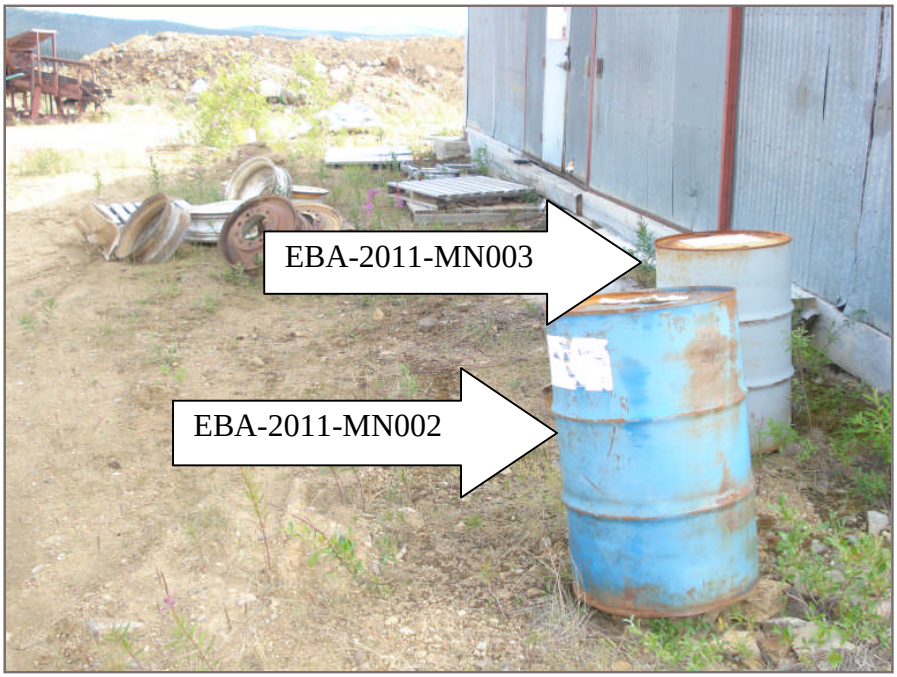


Photo 20: Barrels sampled behind Ketza shop: EBA-2011-MN002 and 003

Photo 21: Suspected 3 barrels of Hydraulic Fluid located in front of the generator building with a pail of waste oil in the fore ground

Photo 22: Suspect 5 barrels of Hydraulic Fluid located on Sag Mill road: EBA-2011-MN005

Photo 23: Exterior mixing tank north of the Mill facing east, where samples EBA-2011-MN006 and MN007 were collected

Photo 24: Top side of the historical landfill located south of the Mill facing east

Photo 25: Metal debris associated with the historical landfill located south of the Mill facing east

Photo 26: Debris protruding from the base of the historical landfill located south of the Mill facing south

Photo 27: Overview of the historical landfill looking south at the south end of the mill

Photo 28: Buried debris located to the north of the Reclaim Heating House

Photo 29: Debris protruding from the eastern slope northeast of the Mill

Photo 30: Metal debris and abandoned vehicle located south of Ketza mine shop

Photo 31: Crushed barrels and metal debris located south of the Ketza mine shop

Photo 32: Crushed barrels in the ANFO storage area facing south

Photo 33: Hydrocarbon staining on the floor of the Ketza mine shop

Photo 34: Hydrocarbon staining mixed with water under AST north of Ketza mine shop

Photo 35: Full waste oil barrel located outside Ketza mine shop with associated staining

Photo 36: Heavy hydrocarbon staining on the floor of the Generator Building

Photo 37: Heavy hydrocarbon staining on the floor next to generators in the Generator Building

Photo 38: Hydrocarbon staining on the concrete floor of the Warehouse

Photo 39: Hydrocarbon staining on the concrete floor in the Warehouse under a raised AST

Photo 40: Hydrocarbon contaminated soil in the sump of the Upper Building associated with the Mill

Photo 41: Hydrocarbon staining on soil in front of diesel tank farm

Photo 42: Hydrocarbon stained soil and oil soaked rags located on the upper road to the SAG building

Photo 43: Hydrocarbon sludge within the Mill

Photo 44: Twelve one ton bags of suspected ferric sulphate located within the Mill

Photo 45: Metal debris and abandoned vehicles located east of the Mill

Photo 46: Miscellaneous debris located east of the Mill

Photo 47: Miscellaneous debris located east of the Mill

Photo 48: Metal debris and the Sag Mill building located on the Sag Mill road

Photo 49: Hydrocarbon staining on the concrete floor in the Warehouse under a raised AST

Photo 50: Partial area where water is pooling within the Mill

APPENDIX A

APPENDIX A EBA GENERAL CONDITIONS

GENERAL CONDITIONS

GEO-ENVIRONMENTAL REPORT

This report incorporates and is subject to these “General Conditions”.

1.0 USE OF REPORT AND OWNERSHIP

This report pertains to a specific site, a specific development, and a specific scope of work. It is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site or proposed development would necessitate a supplementary investigation and assessment.

This report and the assessments and recommendations contained in it are intended for the sole use of EBA’s client. EBA does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA’s Client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA’s instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of EBA’s instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. The Client warrants that EBA’s instruments of professional service will be used only and exactly as submitted by EBA.

Electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client’s current or future software and hardware systems.

3.0 NOTIFICATION OF AUTHORITIES

In certain instances, the discovery of hazardous substances or conditions and materials may require that regulatory agencies and other persons be informed and the client agrees that notification to such bodies or persons as required may be done by EBA in its reasonably exercised discretion.

4.0 INFORMATION PROVIDED TO EBA BY OTHERS

During the performance of the work and the preparation of the report, EBA may rely on information provided by persons other than the Client. While EBA endeavours to verify the accuracy of such information when instructed to do so by the Client, EBA accepts no responsibility for the accuracy or the reliability of such information which may affect the report.

APPENDIX B

APPENDIX B ASBESTOS CONTAINING MATERIALS (ANALYTICAL CERTIFICATES)

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]
Unit 6, 151 Industrial Road
Whitehorse, YT Canada V1A 2V3

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
1	001	Furnace Gasket [Front], Hot H2O Exchange Building * Sample Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 10 - 20 % Fibrous Glass 1 - 5 % Cellulose Fibres > 75 % Non-fibrous	Sep 14 2011	GN	---
2	**002**	**Furnace Exhaust Gasket, Hot H2O Exchange Building** *** Sample Subjected To An Ashing Procedure**	**85 - 90 % Chrysotile Asbestos** **5 - 10 % Synthetic Fibres** **> 1 % Non-fibrous**	**Sep 9 2011**	**GN**	**.T.**
3	003	Flow Meter Gasket, Hot H2O Exchange Building * Sample Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 90 - 95 % Cellulose Fibres Less Than 1 % Fibrous Glass > 5 % Non-fibrous	Sep 14 2011	GN	---
4	004	H2O, Pipe Insulation, External Wrap, Throughout Site * Sample Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
5	005	Furnace Room Roofing System, Hot H2O Exchange Building * Sample Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 70 - 80 % Cellulose Fibres > 20 % Non-fibrous	Sep 9 2011	GN	---
6 . 1	006	Insulation Paper, Conveyor Housing Layer 1 Foil * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 5 %	GN	---
6 . 2	006	Insulation Paper, Conveyor Housing Layer 2 Fibrous Strands	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Sep 14 2011 LP 9 %	GN	---
6 . 3	006	Insulation Paper, Conveyor Housing Layer 3 Beige Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 85 %	GN	---
6 . 4	006	Insulation Paper, Conveyor Housing Layer 4 Dark Fibrous	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Sep 14 2011 LP 1 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
7	007	Insulation + Insulation Paper, Conveyor Housing	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Sep 9 2011	GN	---
* Sample Subjected To An Ashing Procedure						
8 . 1	008	Generator Room Boiler Gasket, Generator Room Layer 1 Brown Mastic	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
* Sample [Composite] Subjected To An Ashing Procedure				LP 3 %		
8 . 2	008	Generator Room Boiler Gasket, Generator Room Layer 2 Brown Fibrous	Asbestos Fibres Not Detected 85 - 90 % Cellulose Fibres > 10 % Non-fibrous	Sep 14 2011 LP 97 %	GN	---
9 . 1	009	White Paper Wrap, Lower Mill Layer 1 White Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 30 %	GN	---
* Sample [Composite] Subjected To An Ashing Procedure						
9 . 2	009	White Paper Wrap, Lower Mill Layer 2 Clear / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 30 %	GN	---
9 . 3	009	White Paper Wrap, Lower Mill Layer 3 White Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 35 %	GN	---
9 . 4	009	White Paper Wrap, Lower Mill Layer 4 Fibrous Strands	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Sep 14 2011 LP 5 %	GN	---
10 . 1	010	White Pipe Wrap, Lower Mill Layer 1 Clear	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
* Sample [Composite] Subjected To An Ashing Procedure				LP 10 %		
10 . 2	010	White Pipe Wrap, Lower Mill Layer 2 Fibrous Strands	Asbestos Fibres Not Detected 95 -100 % Fibrous Glass > 1 % Non-fibrous	Sep 14 2011 LP 20 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
10 . 3	010	White Pipe Wrap, Lower Mill Layer 3 Yellow Mastic	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
10 . 4	010	White Pipe Wrap, Lower Mill Layer 4 White Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 60 %	GN	---
11	011	DWJC, Kitchen Furnace Room	Asbestos Fibres Not Detected Less Than 1 % Cellulose Fibres 95 -100 % Non-fibrous	Sep 9 2011	GN	---
12 . 1	012	12x12 Blue Fleched VFT, Kitchen Layer 1 Grey * Layer Subjected To An Ashing And Acid Washing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 99 %	GN	---
12 . 2	012	12x12 Blue Fleched VFT, Kitchen Layer 2 Black Patches * Layer Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 1 %	GN	---
13 . 1	013	DWJC, Kitchen Storage Room Phase 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 60 %	GN	---
13 . 2	013	DWJC, Kitchen Storage Room Phase 2 Cream - Green Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 9 2011 LP 40 %	GN	---
14 . 1	014	DWJC, Kitchen Storage Doorway Phase 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 60 %	GN	---
14 . 2	014	DWJC, Kitchen Storage Doorway Phase 2 Cream - Green Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 9 2011 LP 40 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
15 . 1	015	DWJC, Kitchen Window Phase 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 80 %	GN	---
15 . 2	015	DWJC, Kitchen Window Phase 2 Cream - Green Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 9 2011 LP 20 %	GN	---
16	016	DWJC, Serving Area Wall	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011	GN	---
17 . 1	017	DWJC, Kitchen Trim Layer 1 Light Brown Mastic * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres 1 - 5 % Hair Fibres > 90 % Non-fibrous	Sep 9 2011 LP 50 %	GN	---
17 . 2	017	DWJC, Kitchen Trim Layer 2 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 50 %	GN	---
18	018	DWJC, Dining Area	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011	GN	---
19 . 1	019	DWJC, Dining Area Window Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 35 %	GN	---
19 . 2	019	DWJC, Dining Area Window Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 9 2011 LP 5 %	GN	---
19 . 3	019	DWJC, Dining Area Window Layer 3 White Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 60 %	GN	---
20 . 1	020	DWJC, Dining Area Window Phase 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 80 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
20 . 2	020	DWJC, Dining Area Window Phase 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 20 %	GN	---
21 . 1	021	DWJC, Dining Area Corner Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 50 %	GN	---
21 . 2	021	DWJC, Dining Area Corner Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 9 2011 LP 20 %	GN	---
21 . 3	021	DWJC, Dining Area Corner Layer 3 White Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 30 %	GN	---
22	022	DWJC, Dining Area Wall	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
23 . 1	023	12x12 Blue VFT, Dining Area Floor Layer 1 Grey * Layer Subjected To An Ashing And Acid Washing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 97 %	GN	---
23 . 2	023	12x12 Blue VFT, Dining Area Floor Layer 2 Black Patches * Layer Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres > 95 % Non-fibrous	Sep 14 2011 LP 3 %	GN	---
24	024	Insulation Tar Paper, Dining Area Attic * Sample Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 20 - 30 % Cellulose Fibres 1 - 5 % Fibrous Glass > 65 % Non-fibrous	Sep 14 2011	GN	---
25	025	H2O Tank Out Building, Roofing System * Sample Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 70 - 80 % Cellulose Fibres > 20 % Non-fibrous	Sep 9 2011	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
26	026	Roofing System, Storage Shed	Asbestos Fibres Not Detected 70 - 80 % Cellulose Fibres > 20 % Non-fibrous	Sep 14 2011	GN	---
* Sample Subjected To An Ashing Procedure						
27	027	Insulation Paper [External], Bunkhouse [B.H.]	Asbestos Fibres Not Detected 90 - 95 % Cellulose Fibres > 5 % Non-fibrous	Sep 9 2011	GN	---
* Sample Subjected To An Ashing Procedure						
28	028	12x12 VFT, Blue Flech, B.H. First Floor [F.F.]	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
* Sample Subjected To An Ashing Procedure [Insufficient Sample Size to Analyze Mastic]						
29 . 1	029	DWJC, B.H. F.F. Bedroom Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 35 %	GN	---
29 . 2	029	DWJC, B.H. F.F. Bedroom Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 15 %	GN	---
29 . 3	029	DWJC, B.H. F.F. Bedroom Layer 3 White Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 30 %	GN	---
29 . 4	029	DWJC, B.H. F.F. Bedroom Layer 4 Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 15 %	GN	---
29 . 5	029	DWJC, B.H. F.F. Bedroom Layer 5 Light Grey Patch	Asbestos Fibres Not Detected 5 - 10 % Fibrous Glass DNQ Micaceous Material > 90 % Non-fibrous	Sep 14 2011 LP 5 %	GN	---
30	030	DWJC, B.H. F.F. Door Frame	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
31	031	DWJC, B.H. F.F. Window Frame	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
32 . 1	032	DWJC, B.H. F.F. Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 35 %	GN	---
32 . 2	032	DWJC, B.H. F.F. Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
32 . 3	032	DWJC, B.H. F.F. Layer 3 White Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 30 %	GN	---
32 . 4	032	DWJC, B.H. F.F. Layer 4 Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 15 %	GN	---
32 . 5	032	DWJC, B.H. F.F. Layer 5 Light Grey Patch	Asbestos Fibres Not Detected 5 - 10 % Fibrous Glass DNQ Micaceous Material > 90 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
33	033	DWJC, B.H. Hot-Tub Room	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
34 . 1	034	DWJC, B.H. F.F. Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 70 %	GN	---
34 . 2	034	DWJC, B.H. F.F. Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 5 %	GN	---
34 . 3	034	DWJC, B.H. F.F. Layer 3 White Patches	Asbestos Fibres Not Detected 5 - 10 % Cellulose Fibres > 90 % Non-fibrous	Sep 14 2011 LP 25 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
35 . 1	035	DWJC, B.H. F.F. Laundry Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 40 %	GN	---
35 . 2	035	DWJC, B.H. F.F. Laundry Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
35 . 3	035	DWJC, B.H. F.F. Laundry Layer 3 White Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 30 %	GN	---
35 . 4	035	DWJC, B.H. F.F. Laundry Layer 4 Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 15 %	GN	---
35 . 5	035	DWJC, B.H. F.F. Laundry Layer 5 Light Grey Patch	Asbestos Fibres Not Detected 5 - 10 % Fibrous Glass DNQ Micaceous Material > 90 % Non-fibrous	Sep 14 2011 LP 5 %	GN	---
36	036	DWJC, B.H. F.F.	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
* Sample Subjected To An Ashing Procedure						
37 . 1	037	DWJC, B.H. Stairwell Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 90 %	GN	---
37 . 2	037	DWJC, B.H. Stairwell Layer 2 Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
38 . 1	038	DWJC, B.H. S.F. Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 20 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
38 . 2	038	DWJC, B.H. S.F. Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 5 %	GN	---
38 . 3	038	DWJC, B.H. S.F. Layer 3 White	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 30 %	GN	---
38 . 4	038	DWJC, B.H. S.F. Layer 4 Beige - Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
38 . 5	038	DWJC, B.H. S.F. Layer 5 Light Grey	Asbestos Fibres Not Detected 5 - 10 % Cellulose Fibres > 90 % Non-fibrous	Sep 14 2011 LP 35 %	GN	---
39 . 1	039	DWJC, B.H. S.F. Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 65 %	GN	---
39 . 2	039	DWJC, B.H. S.F. Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 25 %	GN	---
39 . 3	039	DWJC, B.H. S.F. Layer 3 White Patches	Asbestos Fibres Not Detected 5 - 10 % Cellulose Fibres > 90 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
40	040	DWJC, B.H. S.F.	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
41 . 1	041	DWJC, B.H. S.F. Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 20 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
41 . 2	041	DWJC, B.H. S.F. Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 9 2011 LP 10 %	GN	---
41 . 3	041	DWJC, B.H. S.F. Layer 3 White	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 9 2011 LP 15 %	GN	---
41 . 4	041	DWJC, B.H. S.F. Layer 4 Beige-Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 9 2011 LP 15 %	GN	---
41 . 5	041	DWJC, B.H. S.F. Layer 5 Light Grey	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres > 95 % Non-fibrous	Sep 9 2011 LP 40 %	GN	---
42	042	DWJC, B.H. S.F.	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011	GN	---
43 . 1	043	DWJC, B.H. S.F. Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 35 %	GN	---
43 . 2	043	DWJC, B.H. S.F. Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 15 %	GN	---
43 . 3	043	DWJC, B.H. S.F. Layer 3 White Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 30 %	GN	---
43 . 4	043	DWJC, B.H. S.F. Layer 4 Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 15 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
43 . 5	043	DWJC, B.H. S.F. Layer 5 Light Grey Patch	Asbestos Fibres Not Detected 5 - 10 % Fibrous Glass DNQ Micaceous Material > 90 % Non-fibrous	Sep 14 2011 LP 5 %	GN	---
44 . 1	044	DWJC, B.H. S.F. Layer 1 White / Coating	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 40 %	GN	---
44 . 2	044	DWJC, B.H. S.F. Layer 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
44 . 3	044	DWJC, B.H. S.F. Layer 3 White Patches	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 35 %	GN	---
44 . 4	044	DWJC, B.H. S.F. Layer 4 Brown Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 10 %	GN	---
44 . 5	044	DWJC, B.H. S.F. Layer 5 Light Grey Patch	Asbestos Fibres Not Detected 5 - 10 % Fibrous Glass DNQ Micaceous Material > 90 % Non-fibrous	Sep 14 2011 LP 5 %	GN	---
45 . 1	045	Ceiling Texture Coat + DWJC, B.H. S.F. Phase 1 White / Coating * Sample [Composite] Subjected To An Ashing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 80 %	GN	---
45 . 2	045	Ceiling Texture Coat + DWJC, B.H. S.F. Phase 2 Cream Fibrous	Asbestos Fibres Not Detected 95 -100 % Cellulose Fibres > 1 % Non-fibrous	Sep 14 2011 LP 20 %	GN	---
46 . 1	046	12x12 Blue VFT, B.H. F.F. Bath Layer 1 Grey * Layer Subjected To An Ashing And Acid Washing Procedure	Asbestos Fibres Not Detected 95 -100 % Non-fibrous	Sep 14 2011 LP 98 %	GN	---

Wes-Har Asbestos Analysis & Consulting Ltd.

Bulk Asbestos Report

For EBA Engineering Cons. Ltd. [Yukon]

Location : W23101481

Project : W23101481

10861	23101481	Sample Location / Description	Result(s)	Analyzed	Analyst	ACM
46 . 2	046	12x12 Blue VFT, B.H. F.F. Bath Layer 2 Black Patch	Asbestos Fibres Not Detected 1 - 5 % Cellulose Fibres	Sep 14 2011	GN	---
* Layer Subjected To An Ashing Procedure			Less Than 1 % Hair Fibres > 95 % Non-fibrous	LP 2 %		

Comments

Samples Analyzed In Accordance With The NIOSH ASBESTOS (bulk) by PLM Method 9002 [15 August 1994]
Quantitation Limit For Asbestos Analysis Is 1 %
ACM Means Asbestos Containing Material; T - Present
LP - Means Percent : Layer or Phase of Whole Sample
DNQ - Means Detected Not Quantitated
Samples Submitted Will Be Retained For 30 Days After Receipt And Will Be Disposed Of Thereafter Unless Otherwise Notified In Writing
Sample Submitted By EBA Engineering Cons. Ltd. [Yukon]

September 14, 2011 [Facsimile]

G. Nawrocki
Analyst

G. Nawrocki
Reviewed By

APPENDIX C

APPENDIX C LEAD BASED PAINTS (ANALYTICAL CERTIFICATES)

EBA ENGINEERING CONSULTANTS LTD.
ATTN: Shane Dooley
Calcite Business Centre
Unit 6 - 151 Industrial Road
Whitehorse YT Y1A 2V3

Date Received: 30-AUG-11
Report Date: 15-SEP-11 16:28 (MT)
Version: FINAL REV. 2

Client Phone: 867-668-3068

Certificate of Analysis

Lab Work Order #: L1051784

Project P.O. #: NOT SUBMITTED
Job Reference: W23101481
C of C Numbers: 10-152242
Legal Site Desc:

Comments: ADDITIONAL 13-SEP-11 09:34

Catherine Evaristo-Cordero
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1051784-1	L1051784-2	L1051784-3	L1051784-4	
	Description	PAINT	PAINT	PAINT	PAINT	
	Sampled Date	26-AUG-11	26-AUG-11	26-AUG-11	26-AUG-11	
	Sampled Time	09:00	09:00	09:00	09:00	
	Client ID	1481-L001 : TANK "B" BLUE PAINT	1481-L002 : WHITE PAINT, MILL BLDG	1481-L003 : WHITE, INTERIOR	1481-L004 : BUNKHOUSE, SECOND FLOOR	
Grouping	**Analyte**					
BULK						
Metals	Lead (Pb) (mg/kg)	69	3570	81	<10	

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1051784-2				
	Description	PAINT				
	Sampled Date	26-AUG-11				
	Sampled Time	09:00				
	Client ID	1481-L002 : WHITE PAINT, MILL BLDG				
Grouping	**Analyte**					
WASTE						
TCLP Metals	Lead (Pb)-Leachable (ug/L)	1140				

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PB-200.2-ICP-ED	Bulk	Lead in Paint by ICPOES	EPA 200.2/6010B
PB-TCLP-ED	Waste	Leachable Lead (Pb), TCLP	SW 846 -1311/6020-ICPMS on TCLP Leachate

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA

Chain of Custody Numbers:

10-152242

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

10 - [illegible]

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Page 1 of 1

Report To	Steve Daley
Company	EBA Engineering
Contact	Steve Daley
Address	151 Industrial rd. Unit 6
Phone	867-668-3065 Fax
Invoice To	Same as Report ? (circle) Yes or No (if No, provide details)
	Copy of Invoice with Report? (circle) Yes or No
Company	Same as above
Contact	
Address	
Phone	Fax
Lab Work Order # (lab use only)	L1051784

Report Format / Distribution

Standard ✓ Other (specify)

Select: PDF ✓ Excel ✓ Digital ✓ Fax

Email 1: Sdaley@eba.ca

Email 2:

Client / Project Information

Job #: W23601451

PO / AFE

LSD

Quote #

ALS Contact:

Sampler:

Service Request (Rush subject to availability - contact ALS to confirm TAT)

- ✗ Regular (Standard Turnaround Times - Business Days)
- Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to confirm TAT
- Emergency (1 Business Day) - 100% Surcharge - Contact ALS to confirm TAT
- Same Day or Weekend Emergency - Contact ALS to confirm TAT

Analysis Request

(Indicate Filtered or Preserved: F, P)

Lead, dissolved (F)

Number of Containers

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type
	1451 - LCC1 Tank "B", blue light	26/8/11		Paint
	1451 - LCC2 white paint, mill bldg.	↓		↓
	1451 - LCC3 white, interior			
	1451 - LCC4 Bunkhouse, wood floor			

Special Instructions / Regulation with water or land use (CCME- Freshwater Aquatic Life/BC CSR-Commercial/AB Tier 1-Natural/ETC) / Hazardous Details

If low concentrations, use white 40 ppm, please run TCLP

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by	Date	Time	Received by	Date	Time	Temperature	Verified by	Date	Time	Observations Yes / No ? If Yes add SIF
C. Hansen	30/08/11	—	A. SAMIN	30/08/11	13:30	°C				

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

GENF 18.01 Front

APPENDIX D

APPENDIX D FLUID SAMPLES (ANALYTICAL CERTIFICATES)

EBA ENGINEERING CONSULTANTS LTD.
ATTN: Shane Dooley
Calcite Business Centre
Unit 6 - 151 Industrial Road
Whitehorse YT Y1A 2V3

Date Received: 29-AUG-11
Report Date: 16-SEP-11 16:16 (MT)
Version: FINAL

Client Phone: 867-668-3068

Certificate of Analysis

Lab Work Order #: L1051236

Project P.O. #: NOT SUBMITTED
Job Reference: W23101481
C of C Numbers: 10-055066
Legal Site Desc:

Comments: Please note that the pH results presented in the following data tables were determined through the use of Litmus Paper. pH could not be determined on the sample called 'EBA.2011.MN006' due to sample volume constraints.

Brent Mack
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1051236-1	L1051236-2			
	Description	LIQUID	LIQUID			
	Sampled Date	26-AUG-11	26-AUG-11			
	Sampled Time	09:00	09:00			
	Client ID	EBA.2011.MN004	EBA.2011.MN005			
Grouping	**Analyte**					
PRODUCT						
Hydrocarbons	EPH10-19 (mg/kg)	14200	9610			
	EPH19-32 (mg/kg)	720000	95000			

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1051236-1 LIQUID 26-AUG-11 09:00 EBA.2011.MN004	L1051236-2 LIQUID 26-AUG-11 09:00 EBA.2011.MN005	L1051236-3 LIQUID 26-AUG-11 09:00 EBA.2011.MN006	L1051236-4 LIQUID 26-AUG-11 09:00 EBA.2011.MN007	L1051236-5 LIQUID 26-AUG-11 09:00 EBA.2011.MN008
Grouping	**Analyte**					
WATER						
Physical Tests	pH (pH)	5.50	5.50		7.10	8.00
Cyanides	Cyanide, Total (ug/L)			<5.0	<5.0	
Total Metals	Aluminum (Al)-Total (ug/L)			<200	5000	1160
	Antimony (Sb)-Total (ug/L)			<200	<200	480
	Arsenic (As)-Total (ug/L)			<200	630	440
	Barium (Ba)-Total (ug/L)			<10	96	26
	Beryllium (Be)-Total (ug/L)			<5.0	<5.0	<10
	Bismuth (Bi)-Total (ug/L)			<200	<200	<400
	Boron (B)-Total (ug/L)			<100	<100	<200
	Cadmium (Cd)-Total (ug/L)			<10	<10	<20
	Calcium (Ca)-Total (ug/L)			84900	94400	305000
	Chromium (Cr)-Total (ug/L)			<10	<10	<20
	Cobalt (Co)-Total (ug/L)			<10	<10	50
	Copper (Cu)-Total (ug/L)			<10	97	<20
	Iron (Fe)-Total (ug/L)			623	13300	1340
	Lead (Pb)-Total (ug/L)			<50	539	<100
	Lithium (Li)-Total (ug/L)			<10	<10	<20
	Magnesium (Mg)-Total (ug/L)			7740	9180	32300
	Manganese (Mn)-Total (ug/L)			26.8	712	600
	Molybdenum (Mo)-Total (ug/L)			<30	<30	<60
	Nickel (Ni)-Total (ug/L)			<50	<50	<100
	Phosphorus (P)-Total (ug/L)			<300	<300	<600
	Potassium (K)-Total (ug/L)			3200	5900	42700
	Selenium (Se)-Total (ug/L)			<200	<200	<400
	Silicon (Si)-Total (ug/L)			543	8890	20500
	Silver (Ag)-Total (ug/L)			<10	<10	<20
	Sodium (Na)-Total (ug/L)			6100	6500	1260000
	Strontium (Sr)-Total (ug/L)			162	194	840
	Thallium (Tl)-Total (ug/L)			<200	<200	<400
	Tin (Sn)-Total (ug/L)			<30	<30	<60
	Titanium (Ti)-Total (ug/L)			<10	47	39
	Vanadium (V)-Total (ug/L)			<30	<30	<60
	Zinc (Zn)-Total (ug/L)			24.1	662	1700
Glycols	Diethylene Glycol (ug/L)			<5000	<5000	<5000
	Ethylene Glycol (ug/L)			<5000	<5000	<5000
	1,2-Propylene Glycol (ug/L)			<5000	<5000	<5000
Polychlorinated Biphenyls	PCB-1016 (ug/L)			<1.0	<1.0	

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1051236-1	L1051236-2	L1051236-3	L1051236-4	L1051236-5
	Description	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
	Sampled Date	26-AUG-11	26-AUG-11	26-AUG-11	26-AUG-11	26-AUG-11
	Sampled Time	09:00	09:00	09:00	09:00	09:00
	Client ID	EBA.2011.MN004	EBA.2011.MN005	EBA.2011.MN006	EBA.2011.MN007	EBA.2011.MN008
Grouping	**Analyte**					
WATER						
Polychlorinated Biphenyls	PCB-1221 (ug/L)			<1.0	<1.0	
	PCB-1232 (ug/L)			<1.0	<1.0	
	PCB-1242 (ug/L)			<1.0	<1.0	
	PCB-1248 (ug/L)			<1.0	<1.0	
	PCB-1254 (ug/L)			<1.0	<1.0	
	PCB-1260 (ug/L)			<1.0	<1.0	
	PCB-1262 (ug/L)			<1.0	<1.0	
	PCB-1268 (ug/L)			<1.0	<1.0	
	Total Polychlorinated Biphenyls (ug/L)			<1.0	<1.0	

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN Cyanide

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.

EPH-OIL-FID-VA	Product	EPH in Oil by GCFID	EPA METHOD 8015.

Hydrocarbon Scan in Oil and Product Samples
This analysis is carried out using a procedure adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 8015, published by the United States Environmental Protection Agency (EPA). A portion of the oil or product is diluted with an appropriate solvent. This extract is then analysed by capillary column gas chromatography with flame ionization detection (GC/FID). The chromatogram or hydrocarbon distribution report produced from the analysis can then be compared to known petroleum products for possible identification.

GLY-WAT-FID-VA	Water	Glycols in Water by GCFID	SW-846, METHOD 8015B, EPA

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 8015B, published by the United States Environmental Protection Agency (EPA). The procedure involves treatment of the sample with a strong base (NaOH) and benzoyl chloride to form the corresponding benzoate esters. The benzoate esters are then extracted with iso-octane and the extract is analyzed by capillary column gas chromatography with flame ionization detection (FID).

MET-TOT-ICP-VA	Water	Total Metals in Water by ICPOES	EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

PCB-SF-ECD-VA	Water	PCB by Extraction with GCECD	EPA 3510/8082 Liq-Liq GCECD

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3510, 3620, 3660, 3665 & 8082, published by the United States Environmental Protection Agency (EPA). The procedure involves a liquid-liquid extraction of the entire water sample using dichloromethane. The extract is then solvent exchanged to hexane followed by one or more of the following clean-up procedures (if required): florisil clean-up, sulphur clean-up and/or sulphuric acid clean-up. The final extract is analysed by capillary column gas chromatography with electron capture detection (GC/ECD).

PCB-SUM-CALC-VA	Water	Total PCBs in water	CALCULATION

Calculation of Total PCB. Total PCB is the sum of the concentrations of PCB aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262, and 1268. Results below detection limit (DL) are treated as zero. The Total PCB detection limit is equal to the highest of the aroclor detection limits used in the sum.

PH-MAN-VA	Water	pH by Manual Meter	APHA 4500-H "pH Value"

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.

It is recommended that this analysis be conducted in the field.

PH-MAN-VA	Water	pH by Manual Meter	APHA 4500-H pH Value

This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode.

It is recommended that this analysis be conducted in the field.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

10-055066

Reference Information

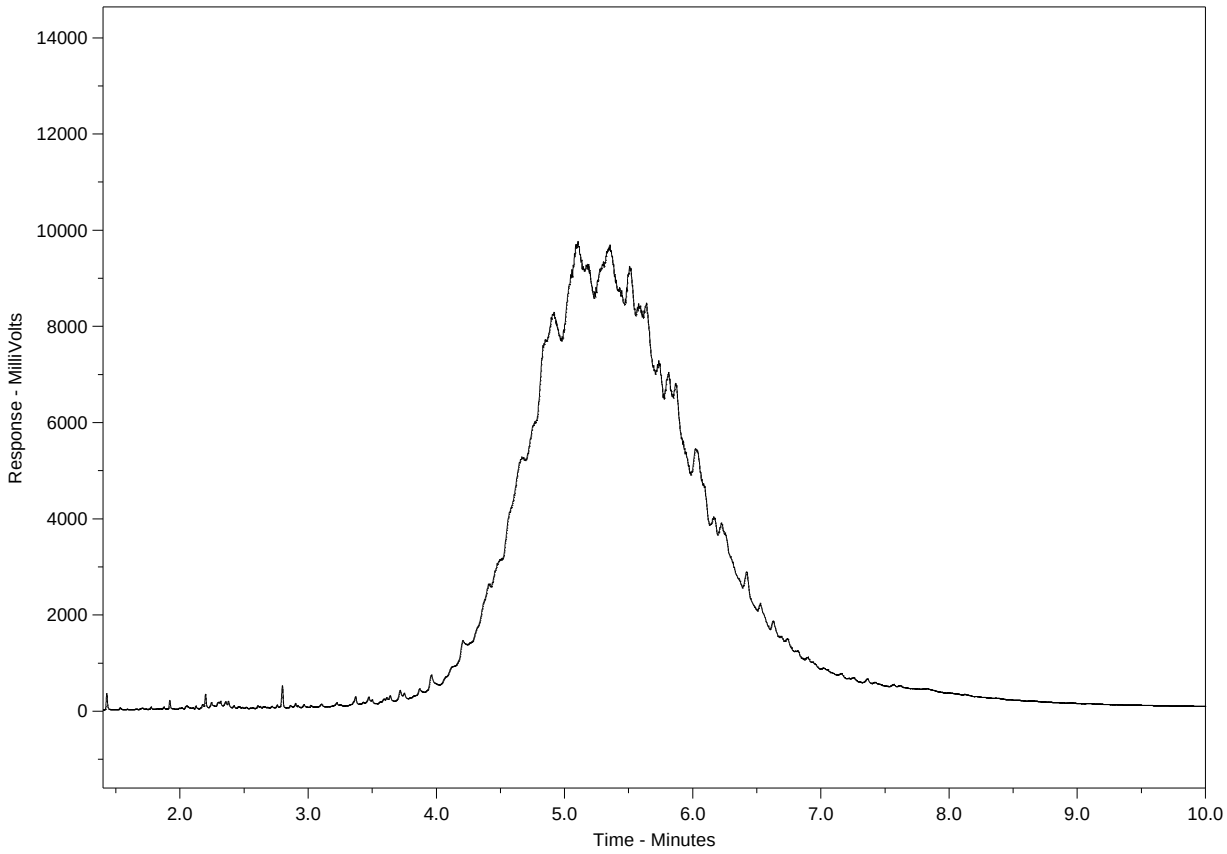
GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Hydrocarbon Distribution Report

ALS Sample ID: L1051236-1
Client Sample ID: EBA.2011.MN004



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Motor Oils / Lube Oils / Grease →	
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

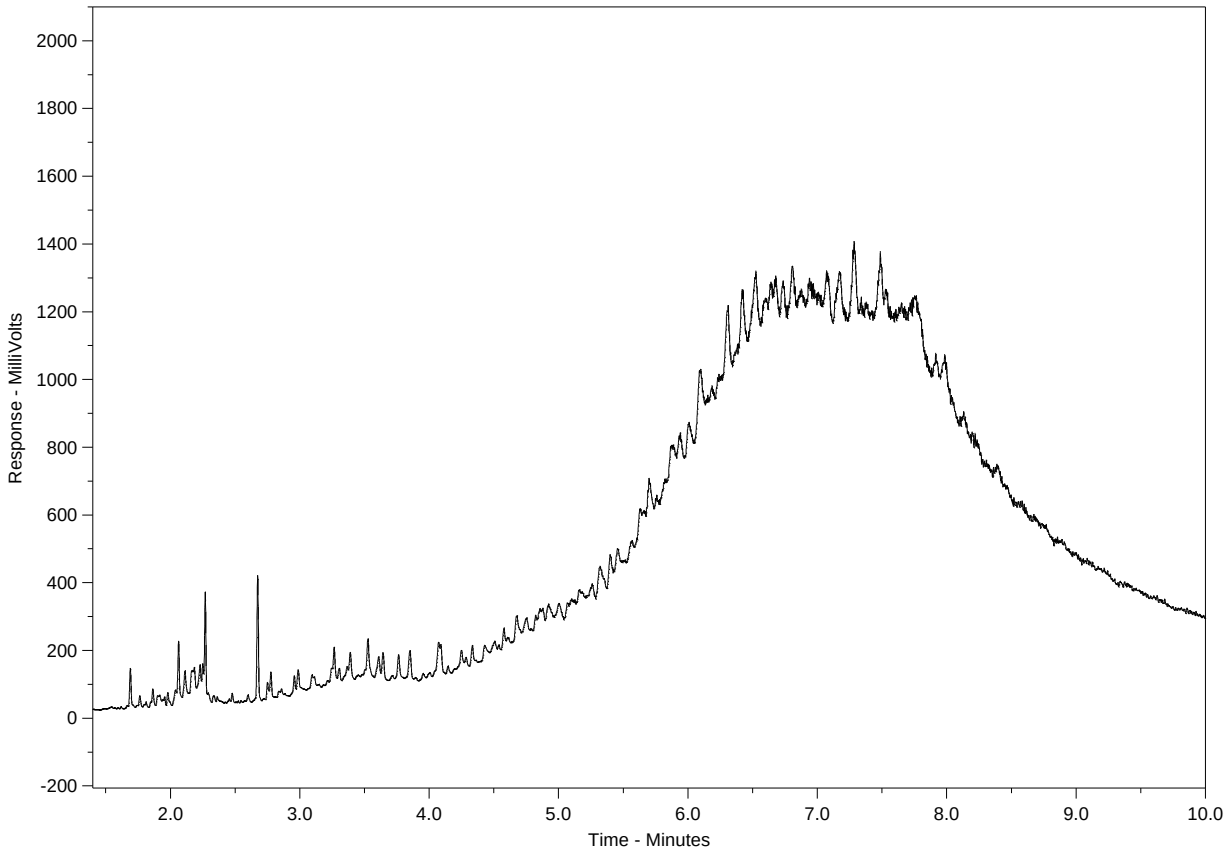
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report

ALS Sample ID: L1051236-2
Client Sample ID: EBA.2011.MN005



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Motor Oils / Lube Oils / Grease →	
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

ALS Laboratory Group

Environmental Division

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

10-

Page

Report To

Company

Contact

Address

Phone

Report Format / Distribution

Standard Other (specify)

Select: PDF Excel Digital Fax

Email 1

Email 2

Service Requested (Rush surcharges may apply)

Regular (Standard Turnaround Times)

Priority (Date Required) (Surcharges apply)

Emergency (1 Business Day - 100% Surcharge)

For Emergency < 1 Day, ASAP or Weekend - Contact ALS

Invoice To Same as Report? (Yes or No) If No, provide details

Copy of Invoice with Report? (Yes or No)

Company

Contact

Address

Phone Fax

Client / Project Information

Job #

PO / AFE

LSD

Quote #

Analysis Request

Indicate Filtered or Preserved (F/P)

Number of Containers

Lab Work Order # (lab use only) 1051236

ALS Contact

Sampler

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type

1051236-COFC

Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by	Date	Time	Received by	Date	Time	Temperature	Verified By	Date	Time	Observations Yes / No? If Yes add SIF
	Aug 24/11					°C				

REFER TO BACK PAGE FOR ADDITIONAL INFORMATION

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

ENF 3670 Front

APPENDIX E

APPENDIX E SOIL SAMPLING (ANALYTICAL CERTIFICATES)

EBA ENGINEERING CONSULTANTS LTD.
ATTN: Shane Dooley
Calcite Business Centre
Unit 6 - 151 Industrial Road
Whitehorse YT Y1A 2V3

Date Received: 29-AUG-11
Report Date: 09-SEP-11 16:49 (MT)
Version: FINAL

Client Phone: 867-668-3068

Certificate of Analysis

Lab Work Order #: L1051217

Project P.O. #: NOT SUBMITTED
Job Reference: W23101481
C of C Numbers: 10-055067
Legal Site Desc:

Brent Mack
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1051217-1	L1051217-2	L1051217-3	L1051217-4	
Description	SOIL	SOIL	SOIL	SOIL	
Sampled Date	02-AUG-11	02-AUG-11	02-AUG-11	02-AUG-11	
Sampled Time	09:00	09:00	09:00	09:00	
Client ID	HA-2011-001	HA-2011-002	HA-2011-003	HA-2011-004	
Grouping	**Analyte**				
SOIL					
Physical Tests	Moisture (%)	10.1	13.1	11.1	11.2	
Volatile Organic Compounds	Benzene (mg/kg)	<0.040	<0.040	<0.040	<0.040	
	Ethylbenzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Methyl t-butyl ether (MTBE) (mg/kg)	<0.20	<0.20	<0.20	<0.20	
	Styrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Toluene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	ortho-Xylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	meta- & para-Xylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Surrogate: 4-Bromofluorobenzene (SS) (%)	104	79	109	80	
	Surrogate: 1,4-Difluorobenzene (SS) (%)	92	85	95	86	
Hydrocarbons	EPH10-19 (mg/kg)	<200	<200	<200	<200	
	EPH19-32 (mg/kg)	<200	<200	<200	<200	
	LEPH (mg/kg)	<200	<200	<200	<200	
	HEPH (mg/kg)	<200	<200	<200	<200	
	Volatile Hydrocarbons (VH6-10) (mg/kg)	<100	<100	<100	<100	
	VPH (C6-C10) (mg/kg)	<100	<100	<100	<100	
	Surrogate: 3,4-Dichlorotoluene (SS) (%)	83	50	104	160 SURR-ND	
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Acenaphthylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Anthracene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Benz(a)anthracene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Benzo(a)pyrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Benzo(b)fluoranthene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Benzo(g,h,i)perylene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Benzo(k)fluoranthene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Chrysene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Dibenz(a,h)anthracene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Fluoranthene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Fluorene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Indeno(1,2,3-c,d)pyrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	2-Methylnaphthalene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Naphthalene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Phenanthrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Pyrene (mg/kg)	<0.050	<0.050	<0.050	<0.050	
	Surrogate: Acenaphthene d10 (%)	90	92	89	88	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1051217-1	L1051217-2	L1051217-3	L1051217-4	
	Description	SOIL	SOIL	SOIL	SOIL	
	Sampled Date	02-AUG-11	02-AUG-11	02-AUG-11	02-AUG-11	
	Sampled Time	09:00	09:00	09:00	09:00	
	Client ID	HA-2011-001	HA-2011-002	HA-2011-003	HA-2011-004	
Grouping	**Analyte**					
SOIL						
Polycyclic Aromatic Hydrocarbons	Surrogate: Chrysene d12 (%)	79	75	70	75	
	Surrogate: Naphthalene d8 (%)	89	93	88	89	
	Surrogate: Phenanthrene d10 (%)	83	82	77	80	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	2-Methylnaphthalene	DLM	L1051217-1, -2, -3, -4
Duplicate	Acenaphthene	DLM	L1051217-1, -2, -3, -4
Duplicate	Acenaphthylene	DLM	L1051217-1, -2, -3, -4
Duplicate	Anthracene	DLM	L1051217-1, -2, -3, -4
Duplicate	Benz(a)anthracene	DLM	L1051217-1, -2, -3, -4
Duplicate	Benzo(a)pyrene	DLM	L1051217-1, -2, -3, -4
Duplicate	Benzo(g,h,i)perylene	DLM	L1051217-1, -2, -3, -4
Duplicate	Benzo(k)fluoranthene	DLM	L1051217-1, -2, -3, -4
Duplicate	Dibenz(a,h)anthracene	DLM	L1051217-1, -2, -3, -4
Duplicate	Indeno(1,2,3-c,d)pyrene	DLM	L1051217-1, -2, -3, -4
Duplicate	Naphthalene	DLM	L1051217-1, -2, -3, -4
Duplicate	Moisture	DUP-H	L1051217-1, -2, -3, -4
Method Blank	Fluorene	MB-LOR	L1051217-1, -2, -3, -4

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
MB-LOR	Method Blank exceeds ALS DQO. LORs adjusted for samples with positive hits below 5 times blank level. Please contact ALS if re-analysis is required.
SURR-ND	Surrogate recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
EPH-TUMB-FID-VA	Soil	EPH in Solids by Tumbler and GCFID	BCMELP CSR

Extractable Hydrocarbons in Sediment/Soil
This analysis is carried out in accordance with the British Columbia Ministry of Environment, Lands and Parks (BCMELP) Analytical Method for Contaminated Sites "Extractable Petroleum Hydrocarbons in Solids by GC/FID, Version 2.1 July 1999". The procedure, based on EPA 3570, uses a rotary extraction technique to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene or kept in hexane/acetone and analyzed by capillary column gas chromatography with flame ionization detection (GC/FID). EPH results include Polycyclic Aromatic Hydrocarbons (PAH) and are therefore not equivalent to Light and Heavy Extractable Petroleum Hydrocarbons (LEPH/HEPH).

Accuracy target values for Reference Materials used in this method are derived from averages of long-term method performance, as certified values do not exist for the reported parameters.

LEPH/HEPH-CALC-VA	Soil	LEPHs and HEPHs	BC MOE LABORATORY MANUAL (2005)

Light and Heavy Extractable Petroleum Hydrocarbons in Solids. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated
by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenz(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, and Pyrene
are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Solids by GC/FID" (Version 2.1, July 20, 1999).

MOISTURE-VA	Soil	Moisture content	ASTM D2974-00 Method A

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

PAH-TMB-H/A-MS-VA	Soil	PAH - Rotary Extraction (Hexane/Acetone)	EPA 3570/8270

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3545 & 8270, published by the United States Environmental Protection Agency (EPA). The procedure uses a mechanical shaking technique to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene. The final extract is analysed by capillary column gas chromatography with mass spectrometric detection (GC/MS). Surrogate recoveries may not be reported in cases where interferences from the sample matrix prevent accurate quantitation. Because the two isomers cannot be readily chromatographically separated, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.

VH-HSFID-VA	Soil	VH in soil by Headspace GCFID	B.C. MIN. OF ENV. LAB. MAN. (2009)

This analysis involves the extraction of a subsample of the sediment/soil with methanol. Aliquots of the methanol extract are then added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is analyzed for Volatile Hydrocarbons (VH) by capillary column gas chromatography with flame-ionization detection (GC/FID). The methanol extraction and VH analysis are carried out in accordance with the British Columbia Ministry of Environment, Lands and Parks (BCMELP) Analytical Method for Contaminated Sites "Volatile Hydrocarbons in Solids by GC/FID"

Reference Information

(Version 2.1 July 1999).

VH-SURR-FID-VA	Soil	VH Surrogates for Soils	BCMELP CSR ANALYTICAL METHOD 2
VOC7-L-HSMS-VA	Soil	VOCs in soil by Headspace GCMS	EPA8260B, 5021, BC MELP

The soil methanol extract is added to water and reagents, then heated in a sealed vial to equilibrium. The headspace from the vial is transferred into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

VOC7/VOC-SURR-MS-VA	Soil	VOC7 and/or VOC Surrogates for Soils	EPA METHODS 8260B & 524.2
VPH-CALC-VA	Soil	VPH is VH minus select aromatics	BC MOE LABORATORY MANUAL (2005)

These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Volatile Petroleum Hydrocarbons in Solids or Water" (Version 2.1, July 20, 1999). According to this method, the concentrations of specific Monocyclic Aromatic Hydrocarbons (Benzene, Toluene, Ethylbenzene, Xylenes and Styrene) are subtracted from the collective concentration of Volatile Hydrocarbons (VH) that elute between n-hexane (nC6) and n-decane (nC10). Analysis of Volatile Hydrocarbons adheres to all prescribed elements of BCMELP method "Volatile Hydrocarbons in Solids by GC/FID" (Version 2.1, July 20, 1999).

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

10-055067

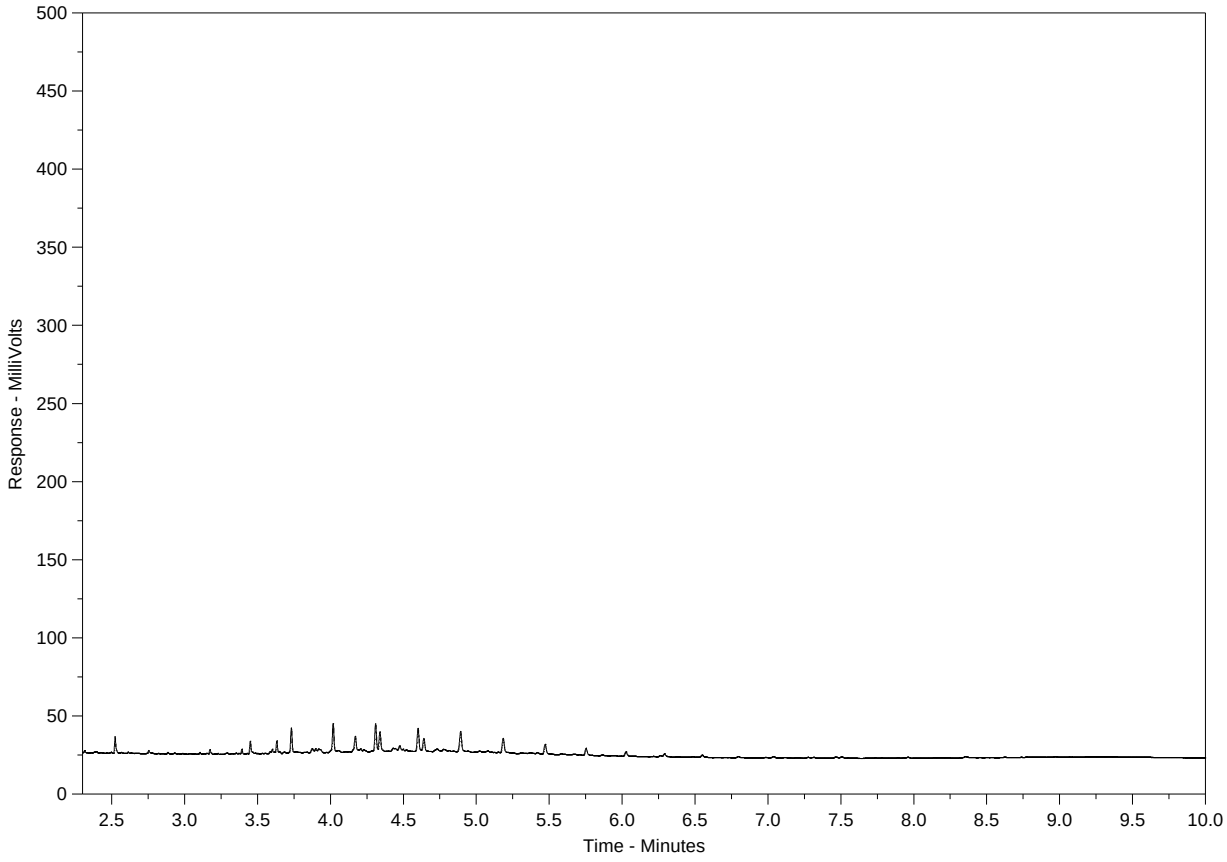
GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Hydrocarbon Distribution Report

ALS Sample ID: L1051217-1
Client Sample ID: HA-2011-001



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Motor Oils / Lube Oils / Grease →	
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

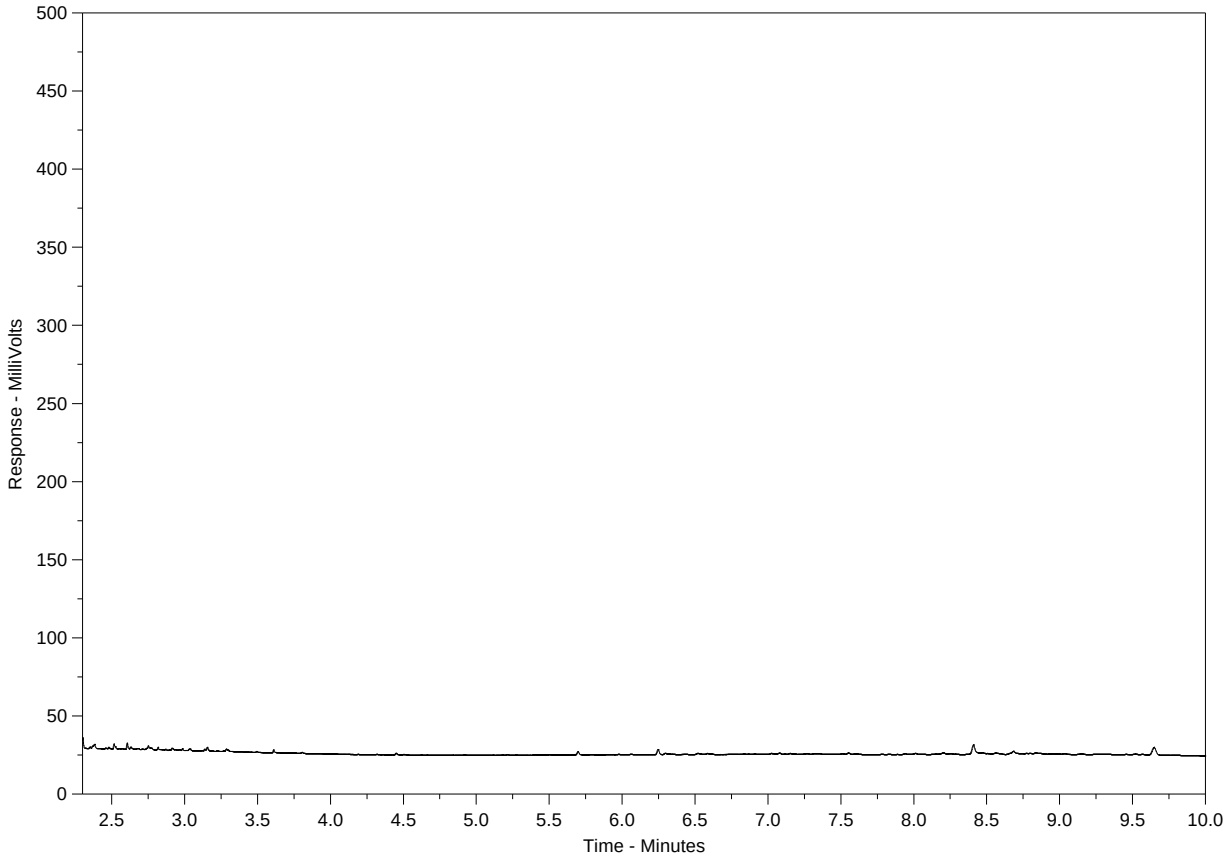
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report

ALS Sample ID: L1051217-2
Client Sample ID: HA-2011-002



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Motor Oils / Lube Oils / Grease →	
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

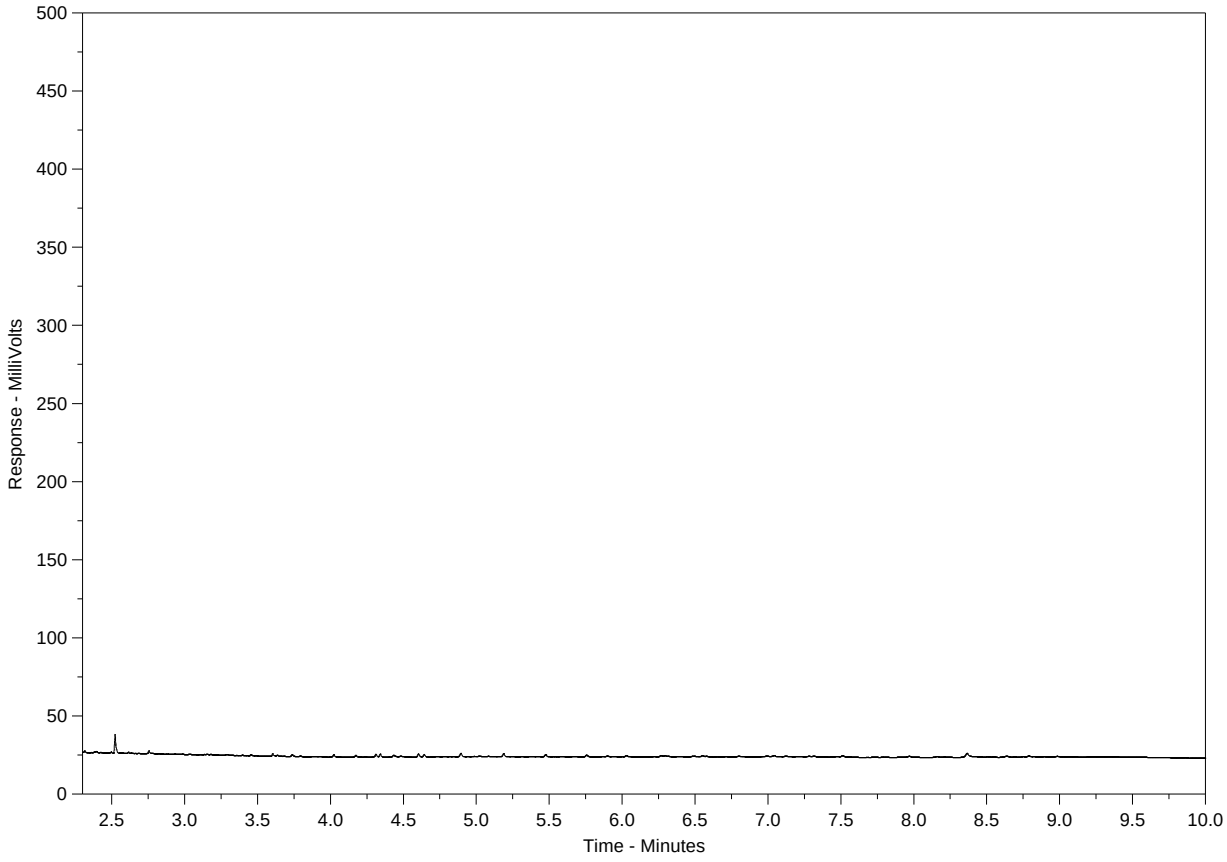
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report

ALS Sample ID: L1051217-3
Client Sample ID: HA-2011-003



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Motor Oils / Lube Oils / Grease →	
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

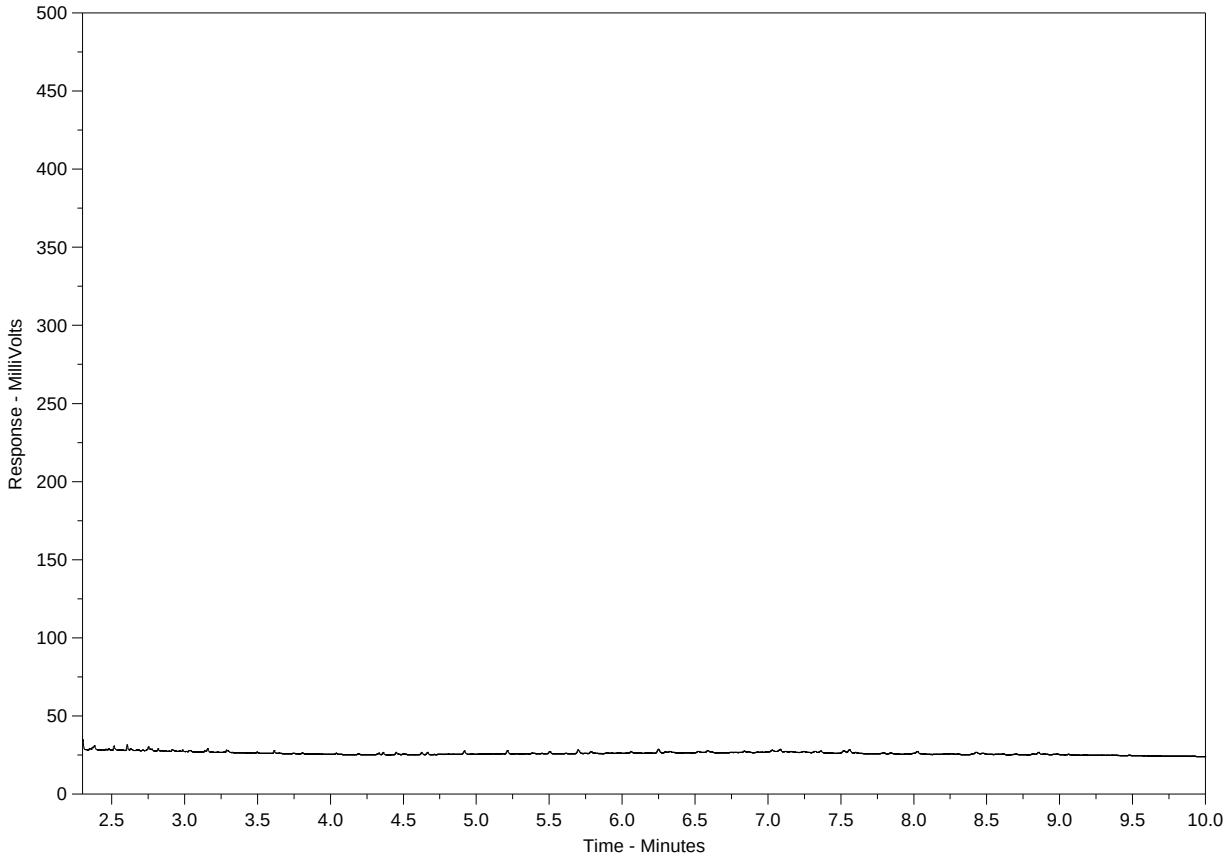
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

Hydrocarbon Distribution Report

ALS Sample ID: L1051217-4
Client Sample ID: HA-2011-004



nC10	nC19	nC32
174°C	330°C	467°C
346°F	626°F	873°F
← Gasoline →	← Motor Oils / Lube Oils / Grease →	
← Diesel / Jet Fuels →		

The EPH Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available on www.alsglobal.com or upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds. Retention times may vary between samples by as much as 0.5 minutes.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

A "-L-" in the sample ID denotes a low level sample. A "-S-" denotes a silica gel cleaned sample.

ALS Laboratory Group

Environmental Division

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

10-

Page

Report To Shane Dooley	**Report Format / Distribution**	**Service Requested** (Rush subject to availability)
Company: EBA Eng.	Standard ✓ (Other specify)	Regular (Standard) Turn-around Time (TAT)
Contact: Shane Dooley	Select: PDF ✓ Excel ✓ Digital ✓ Fax	Priority (Date Required:) (Surcharges apply)
Address: Bldg 6, 151 Industrial Road, Whitehorse, YT.	Email 1: sdooley@eba.ca	Emergency (1 Business Day) (100% Surcharge)
Phone: 867-668-3068 Fax:	Email 2: cherwood@eba.ca	For Emergency (1 Day, ASAP or Weekend - contact ALS)
Invoice To Same as Report? (Yes or No) (If No, provide details)	**Client / Project Information**	**Analysis Request** (Indicate Filtered or Preserved: F, P)
Copy of Invoice with Report? (Yes or No)	Job #: W2312481	
Company: EBA	PO / AFE:	
Contact: Ingrid Fuller	LSD:	
Address:		
Phone: 867-668-3068 Fax:	Quote #:	
Lab Work Order # (lab use only): L0S1217	ALS Contact: Brent Mack	Sampler: SD/CH

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	LEPH/HEPH/PAH/VOC	Number of Containers
	HA-2011-001	2/8/11		Soil		
	HA-2011-002	↓		↓		
	HA-2011-003					
	HA-2011-004					

Special Instructions / Regulations / Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by	Date	Time	Received by	Date	Time	Temperature	Verified by	Date	Time	Observations Yes / No If Yes add SIF
	Feb 9/11	8:00am				°C				

REFER TO BACK PAGE FOR ADDITIONAL TERMS AND CONDITIONS INFORMATION | WHITE - LABORATORY COPY | YELLOW - CLIENT COPY | GENERIC 001 Front