Site Specific Spill Contingency Plan
Clifton Point PIN-B Cleanup

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Effective to: October 30, 2011

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1. Introduction

Clifton Point PIN-B is located in the western Canadian Arctic, on the mainland shore of Amundsen Gulf between Paulatuk, NT and Kugluktuk, NU. The coordinates for PIN-B are N68*55'23" and W118*38'00". It was abandoned as a North American Distant Early Warning (DEW) Line site in 1963. It is located within Nunavut Territory and subject to the terms of the Nunavut Comprehensive Land Claim Agreement (CLCA). [See site map in Appendix A]

E. Gruben's Transport Ltd. (EGT) of Tuktoyaktuk is the prime contractor responsible for the cleanup of the Clifton Point PIN-B site, contracted to Public Works and Government Services Canada.

Work on the site will include contaminated soil treatment and containerization, facility demolition and containerization, debris cleanup and storage for off-site transport of hazardous and non-hazardous materials.

Mobilization to the site took place via Northern Transportation Company Limited (NTCL) barge in late-July of 2009. Contract work was conducted through the summer of 2009 and will resume in June 2010. Demobilization from the site will take place in July or August of 2011.

2. Spill Prevention

EGT emphasizes the prevention of spills through training, refueling procedures and the provision of adequate and appropriate equipment.

Contractor's fuel storage tanks designated for the site are steel-bermed tanks with berm capacity of 110% of tank volume. None of the existing on site tanks will be used for EGT fuel storage. Fuel will be delivered to the site by NTCL barges and will be stored in NTCL barge tanks during transport. A suitable Fuel Truck owned and operated by EGT using an experienced TDG certified fuel handler will transfer fuel from the barge tanks to the EGT site storage tanks once the site storage tanks have been placed on site. Site storage tanks will be filled to 85% capacity to allow for expansion of fuel as it warms.

Contractor's fuel storage tanks will be located adjacent to the camp generator building. Fuel storage tanks will be located greater than 30 meters from the closest body of water.

Gasoline will be stored in a 500 gallon integrally-bermed fuel tank. All gasoline fueling will take place over drip trays, including use of day-use jerry-cans for gasoline powered tools (cut-off saws and chain-saws).

There will be no bulk storage of oils, lubes, antifreeze in containers larger than 45 gallon drums. All will be supplied to site in 45 gallon drums and 5 gallon (22.5 l) pails or smaller containers. All drums will be new.

Propane will be used onsite for the camp facilities and will be stored in 1000 lb propane tanks and 350 lb "pig" tanks. Propane for shop use will be supplied in 100 lb and 20 lb cylinders.

Tanks, drums and cylinders belonging to EGT will be clearly marked with spray paint and stencils to distinguish them from tanks, drums and cylinders belonging to others on site.

MSDS will be available for all consumable products on site and hard copies will be located in the offices of the Supervisor, Safety Advisor and Medic. All EGT personnel will have received WHMIS training. All handling and transport of dangerous goods will be supervised by TDG certified personnel.

Vehicles will be parked over drip trays.

The Equipment Foreman will inspect all fuel storage tanks daily. Wildlife monitors will also be required to conduct daily checks of fuel storage facilities as part of their normal rounds of inspection.

See attached fueling and fuel transfer procedures.

3. Spill Response

All pick-ups and heavy equipment will carry small "equipment" spill kits. The foreman's truck, the generator shack, fuel storage tanks and refueling areas will have more substantial "drum" spill kits. All vehicles will carry a small quantity of oil absorbent rags. All mobile equipment will have company frequency "truck-to-truck" radios, as will the EGT site office and the Medic.

All spills will be reported and recorded for internal records. Minor spills will be reported to the Equipment Foreman by radio. The Equipment Foreman will assess the situation, including the potential risks to personnel, will decide on the most appropriate immediate response and will report to the Site Superintendent. This may simply involve applying sorbent pads or shoveling of granular materials into plastic bags for transfer to the PHC soils treatment area for on-site treatment or possibly boxing soils in 2.3 cu.m. sea-cans with hydro-carbon resistant liner.

A larger, more catastrophic spill would result in Emergency Response Procedures. The same emergency radio procedures will apply as for a medical emergency. The person who discovers the spill will use the radio call, "MEDIC! MEDIC! MEDIC!". This will signal all site personnel to cease any other radio use, cease other work and stand by for further direction. The Medic will take charge but in this case pass control of the situation to the Equipment Foreman and/or Site Superintendent as soon as the emergency situation has been identified as a fuel spill.

The response to a larger spill may involve allocating heavy equipment and/or allocating personnel to the task. Appropriate PPE for the task will be checked and a Job Safety Analysis will be conducted for cleanup effort.

4. Containment and Recovery of Fuel, Oil and Other Hazardous Products

The safety of all personnel will be the first consideration in any containment and recovery operations.

Containment may be performed by hand or with the use of heavy equipment. Sand or soil berms can be constructed and booms can be deployed. Leaks can be plugged using patches, plugs and plugging compounds. Product can be pumped out or suctioned out of leaking containers

Recovery of spilled/leaked product could involve pumping, direct suction into vacuum tank on truck or pumping into suck-on tank mounted on the bed truck, shoveling of contaminated soil by hand or with heavy equipment, transfer to portable tanks or drums or to fixed tanks.

As well as a supply of heavy equipment (3 excavators, 2 loaders, 2 cats, 2 rock trucks, 1 body job dump truck, bed truck and pickup trucks) and a ready and plentiful supply of labor, we have at the site considerable other materials and equipment for the purposes of our contract work which could be used for spill containment and recovery. These include:

Drum Spill Kits: Polyethylene overpack drum containing 2 ea. 10’ socks, 5 ea 4’ socks, 1 lb. pre-mixed plugging compound, 50 pads, 5 pillows, 1 drain cover, 1 caution tape, 2 prs nitrile gloves, 2 ea safety goggles, 2 coveralls, 10 disposal bags.

Equipment Spill Kits: Nylon carry bag containing 1 ea 10’ sock, 30 pads, 1 pillow, 1 lb pre-mixed plugging compound, 1 lb dry plugging compound, 1 pr nitrile gloves.

50 bundles (100 ea) sorbent pads,
10 polyethylene overpack drums
50 bags floor-dry sorbent
50 2.3 cu.m. wooden 2.3 sea-cans surplus to identified contract needs
50 hydrocarbon resistant sea-can liners surplus to identified contract needs
100 6 mil poly sea-can liners surplus to identified contract needs
steel garbage sloops
fuel transfer pumps
steel barrel wash tray
empty steel drums
sorbent booms, shovels, 6 mil poly bags

5. Grey Water/Sewage (Effluent) Water Containment and Disposal

All grey water and sewage (effluent) generated from the camp facility will be discharged into a single 1,135 liter surge tank adjacent to the camp. The surge tank will be fitted with a submersible macerator lift pump controlled by level switches to start and stop automatically as required. This submersible pump will pump the effluent to a lagoon situated at least 100 meters downgrade and downwind from the camp, at least 100 meters from a drainage course and 450 meters from fish bearing waters as agreed with the Department Representative (DR).
The lagoon will consist of two spate lagoons adjacent to each other and constructed to the agreed upon dimensions. The lagoon base will be excavated approximately 0.5 meters into the existing ground. Perimeter berms will be constructed to a finished height of 1.5 meters allowing for a maximum depth of effluent of 1 meter and a freeboard of 0.5 meters. The lagoon base excavated material and/or Type 2 material obtained from Borrow #4 will be used to construct the lagoon berms as agreed with the DR. The berms will be compacted with the onsite vibratory compactor.

Based upon an estimated daily camp water usage of 7,000 liters per day and the same becoming effluent generated daily, allowing for 50 days of total capacity in the lagoons at a maximum effluent depth of 1 meter. The total lagoon capacity, not including the 0.5 meter freeboard, will accommodate 350,000 liters or 175,000 liters per lagoon, which will be sufficient to ensure waste water is contained and treated properly.

The lagoon discharge pipe from the camp will feed into the closest lagoon. A tee overflow pipe connecting the two lagoons will be placed so that liquid from beneath any “scum” layer at the surface can pass to the second lagoon.

The camp will be fitted with 2 separate grease traps that will remove visible mineral oil and grease from the camp generated effluent. EGT and our Inuit catering contractor, Kitikmoet Caters Ltd., are very experienced in the operation of remote camps, the required wastewater discharge criteria, cooking and housekeeping practices and the “green” biodegradable products that will be used as well as those products that must not be used to ensure that all effluent will meet the discharge criteria. To improve water conservation all bathroom faucets are self closing and shower heads are water saving. All workers will be asked to minimize water consumption, by limiting unnecessary shower and water faucet run times and to refrain from using the toilet to dispose of garbage.

The operation, discharge and closure of the lagoons will be in compliance with the Water License for PIN-B. The effluent will be sampled and tested at an approved third party testing facility (Maxxam Analytics, Edmonton Laboratory) to determine if the required discharge criterion has been met. EGT will take all required steps to ensure samples arrive at the test location within the allowable limits. Once testing confirms discharge criteria is met and discharge is approved the effluent will be pumped and released onto the ground at a location as agreed and approved by the DR that is a minimum of 30 meters from a natural drainage course, and 100 meters from any river or fish bearing lake.

6. Training

Site personnel will be trained on refueling procedures and on spill response. Spill response training will include site layout and identification of storage areas, how to initiate the spill response system, safety concerns related to spills including fire and explosion, personal exposure risks to potentially hazardous materials and the PPE which may be required to handle spills, environmental risks to both ground and waterways, approaches and options to containment and cleanup utilizing the various materials and equipment available onsite, the deployment of booms and other absorbents, the use of spill kits and their contents including the use of plugs and plugging compounds, reporting requirements.

7. Reporting

All fuel spills will be reported and recorded internally. The EGT Operations Manager, Doug Saunders (24 Hour Contact #1-867-678-0045) c/o EGT, Box 177, Tuktoyaktuk, NWT X0E 1C0 will be advised of all spills and will assume responsibility of making all notifications related to reportable spills.

Spills greater than 100 liters on land and 20 liters on water will be reported to the **NWT/NU Spill Line at 867-920-8130** (NWT/NU Spill Line Fax 867-873-6924). NWT/NU Spill Report Forms will be kept in the Site Superintendent's office.

The Site Superintendent will be responsible for all reporting and incident investigation requirements to the Operations Manager. The Operations Manager will be responsible for making all notifications.

Other useful contact numbers include:

EGT 24 Hour Contact Number	867-678-0045
GNU, Environmental Protection	867-975-7700
GNU, Water Board	867-360-6338
GNWT, Environmental Protection:	867-873-7654
INAC, Manager of Field Operations	867-975-4295
Environment Canada:	867-975-4644

8. NT/NU Spill Report Document

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR	REPORT TIME	☐ ORIGINAL SPILL REPORT, OR	REPORT NUMBER
B	OCCURRENCE DATE: MONTH – DAY – YEAR	OCCURRENCE TIME	☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	____-_____
C	LAND USE PERMIT NUMBER (IF APPLICABLE)	WATER LICENCE NUMBER (IF APPLICABLE)		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION	REGION ☐ NWT ☐ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES MINUTES SECONDS	LONGITUDE DEGREES MINUTES SECONDS		
F	RESPONSIBLE PARTY OR VESSEL NAME	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION		
G	ANY CONTRACTOR INVOLVED	CONTRACTOR ADDRESS OR OFFICE LOCATION		
H	PRODUCT SPILLED	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF APPLICABLE)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
I	SPILL SOURCE	SPILL CAUSE	AREA OF CONTAMINATION IN SQUARE METRES	
J	FACTORS AFFECTING SPILL OR RECOVERY	DESCRIBE ANY ASSISTANCE REQUIRED	HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS			

L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130

LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC | SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN | FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			

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Appendix A

Detailed Site Map

Please see the attached detailed map showing site structures including waste disposal areas, fuel/hazardous material storage location and spill kits in relation to ecologically sensitive areas and local water bodies.

Appendix B

Site Inventory of POL's and Hazardous Materials

Structure	Description	Hazardous Materials	Types of Hazardous Materials	Estimated Volume
POL Pumphouse		None	None	
Inuit House	Prefab wood and metal clad panels with rigid insulation	Asbestos containing materials in chimney components, stove, floor tiles	Asbestos	3 cu. m
Fallen Radar Tower		None	None	
Module Train	Five joined 4.9 m long modules with wood frame construction	PCB paint on interior and exterior plywood, floors, ceilings and walls, concrete floors, fuel tanks, mechanical and piping asbestos wrap, exterior stairs and miscellaneous electrical Asbestos core doors Mercury thermometer	PAP Asbestos	65 cu. m
Warehouse	Wood foundation structure and concrete pads	PCB paint on interior metal cladding walls, all plywood walls and ceiling, access steps, interior walls of vestibule, plywood floors in dormitory and vestibule areas. Asbestos containing materials in chimney, fire doors, furnace room wall panels	PAP Asbestos	9 cu. m
Garage	Structural steel braced frame with exterior metal cladding	PCB paint on concrete floor Asbestos wrap on furnace and chimney	PAP Asbestos	1.5 cu. m
Camp Building 1	Wood frame structure with partial wood/canvas roof on a shallow wood foundation	PCB painted plywood walls and ceilings 4 batteries	PAP Lead	4 cu. m
Camp Building 2	Wood frame structure with partial wood/canvas roof on a shallow wood foundation	PCB painted plywood walls and ceilings Asbestos sheeting 2 paint cans	PAP Asbestos	2.1 cu. m
Boat		None	None	
POL Line and Runway Lights		None	None	

Site Debris Hazardous Material Inventory - Continued

Site Debris Areas	Approx. Location, Description and Type of Debris	Approx. Liquid Volume (L)	Number of Barrels	Crushed Volume of Hazardous Material
Site Debris Area 1	Station Area Miscellaneous scattered debris Asbestos board and tile Scrap wood Scrap metal Heavy equipment parts Glass Creosote power pole Propane tank Electrical panel and cables Barrels	600 L	55	3 cu. m
Site Debris Area 2	Construction Camp Area Barrels Miscellaneous scattered debris Asbestos board and tile Scrap wood Scrap metal	4,800 L	130	0.5 cu. m
Site Debris Area 11	Abandoned Airstrip and Water Lake Airstrip markers Runway lights Barrels of jet-B fuel Barrels Miscellaneous scattered debris Scrap wood Scrap metal Asbestos core door	1,000 L	30	0,8 cu. m
Site Debris Area 12	Beach Area Miscellaneous scattered debris Scrap wood Scrap metal Barrels Batteries Runway lights Asbestos board	500 L	51	1.2 cu. m

Asbestos Inventory

Structure	Asbestos – Containing Material Identified on Site
Inuit House	4.0 cu. m – likely asbestos in chimney components and stove and potentially in floor tiles
Module Train	3.2 cu. m – Miscellaneous mechanical and piping: PAP over asbestos wrap; asbestos core doors
Warehouse	2.0 cu. m – Asbestos containing materials in chimney, fire doors and furnace room wall panels
Garage	1.3 cu. m – Furnace and chimney: asbestos wrap
Camp Building 2	0.3 cu. m – Asbestos containing sheeting (1 piece)
Debris Areas	1.5 cu. m – Miscellaneous debris

Other hazardous materials that may be encountered on the site or in landfill excavations include:

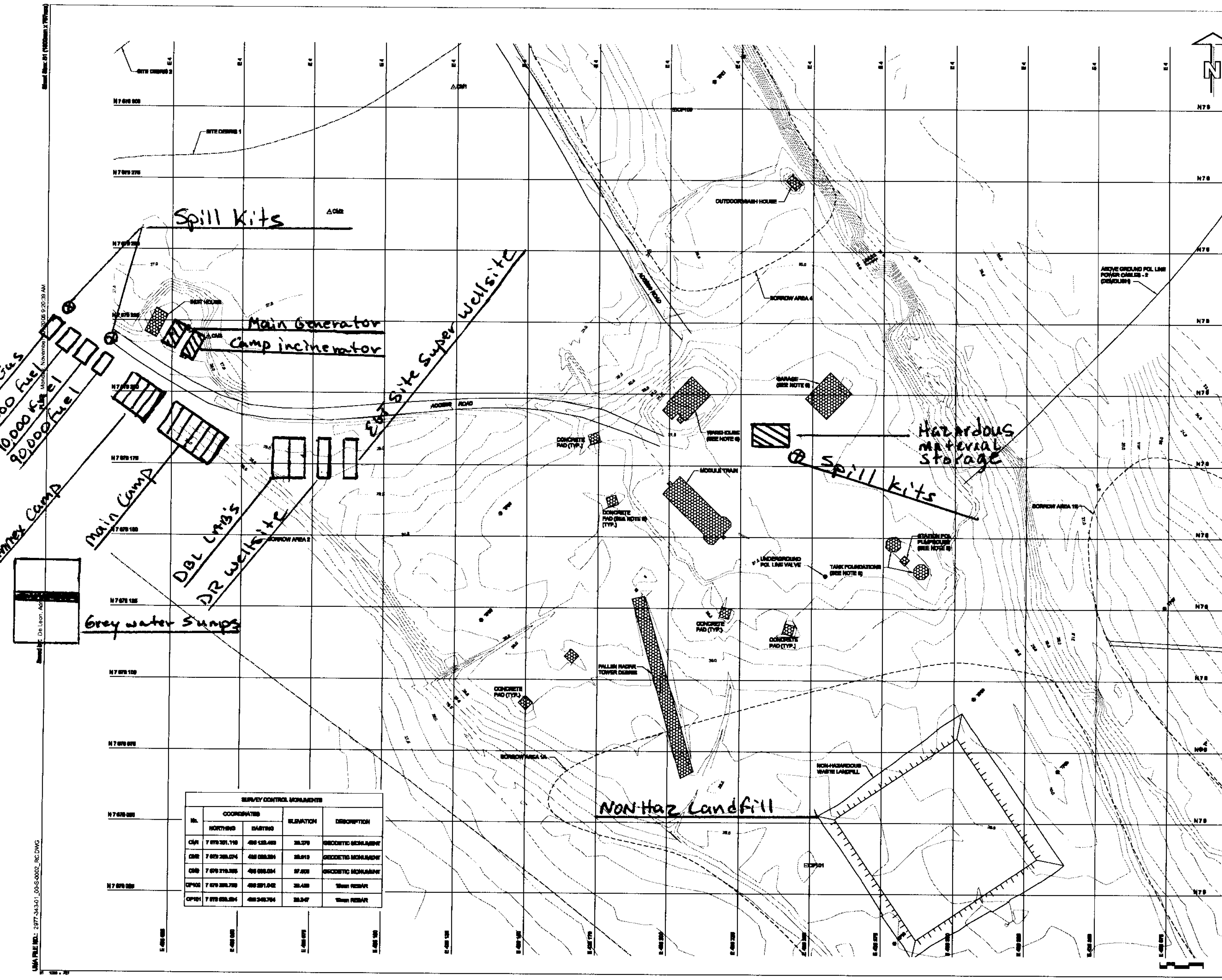
Waste oil	Ocillators	Meters
Asbestos	PCB transformers	PCB Capacitors
Sewage	Copper wire	Transmission fluid
Lead-based paints	1-1-1-trichloroethane	PBX telephone equipment
Radioactive tubes	Mercury vapor rectifier tube	Paint thinner
Scrap metal	Batteries	Chlorinated hydrocarbons
Radar components	Corrosion inhibitors	Lye
Fuel drums	Corrosives	Paper
Lime	Plastics	Solvent
Antifreeze	Dynamite	RF interference filters
AVGAS (Aviation fuel)	Generators	Scopes
Sulfamic acid	Vehicles	Rubber fuel bladders
Cathode-ray tubes/screens	Filtron tubes	

EGT will bring the following products to Clifton Point PIN-B in order to carry out contract work.

EGT will provide and keep hard copy on-site MSDS in the offices of the Supervisor, Safety Advisor and Medic and the MSDS can also be accessed online through Debolt Data Depository at deboltdata.com for all of these products and any other WHMIS regulated products we bring to the site.

Diesel fuel
Gasoline
Grease
Lubricating oils
Transmission Fluid
Methyl Hydrate

Compressed oxygen and acetylene
Compressed propane
Compressed medical oxygen
Compressed helium
Antifreeze
Liquid bleach
Isobutylene (calibration gas)
Spray Paint
Spray Adhesive
Camp cleansers and disinfectants



Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Western Region

Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

Canadä

NUNAVUT REGIONAL OFFICE
IQALUIT, NUNAVUT

PRELIMINARY
NOT FOR CONSTRUCTION

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. ALL COORDINATES ARE REFERENCED TO NAD83(CSRS). ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL, RELATIVE TO GEOID MODEL CANADIAN HT2_0.
3. DEMOLITION INCLUDES HATCHED STRUCTURES AND ANY ADDITIONAL STRUCTURES OTHER THAN ARCHAEOLOGICAL FEATURES IDENTIFIED UPON MOBILIZATION.
4. DECOMMISSION HAUL AND SITE ROADS, INCLUDING ANY UPGRADES CONSTRUCTED BY THE CONTRACTOR AT CROSS DRAINAGE LOCATIONS.
5. CHANNELS TO BE EXCAVATED TO MATCH EXISTING CHANNEL GEOMETRY UPSTREAM AND DOWNSTREAM.
6. PROVIDE REGRADING AROUND ALL CONCRETE PADS, AS PER TYPICAL DETAIL ON DRAWING C12, THAT ARE DESIGNATED TO REMAIN.

DO NOT SCALE THIS DOCUMENT. ALL MEASUREMENTS MUST BE OBTAINED FROM STATED DIMENSIONS OR COORDINATES.

LEGEND:

- APPROXIMATE EXTENT OF BORROW AREA
- ACCESS ROAD
- STRUCTURES TO BE DEMOLISHED
- TESTPIT LOCATIONS
- SURVEY CONTROL MONUMENT
- SURVEY CONTROL POINTS

UMA | AECOM

revisions	description	date
C	ISSUED FOR TENDER	[illegible]
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