



SCREENING PART 2 FORM PROJECT SPECIFIC INFORMATION REQUIREMENTS (PSIR)

1. SUBMISSIONS

The Proponent must submit all information pertaining to the Project as a whole. The information requirements below are designed for the purpose of environmental assessment and are not limited to the scope of a single permit or license application.

IMPORTANT: Please be advised of the following:

1. NIRB does not accept references to an ftp site as a submission.
2. The Proponent must provide NIRB with 1 (one) electronic copy and 1 (one) hardcopy of the required information in English.
3. All maps should be legible, and should include grids, be of appropriate scale, indicate the scale, include latitude and longitude references, title, legend and a north arrow. To the extent possible, avoid hand-drawn demarcations; and,
4. Please complete all required information in each section below. If the required information is not applicable to the project proposal, please indicate this in the response with "n/a". If the request has been provided in a different section or report, please note the section or report where the response can be found.

2. GENERAL PROJECT INFORMATION REQUIREMENTS

Project Coordinates and Maps

1. The preferred method for submitting project coordinates information is through the use of a Geographic Information System (GIS) compatible digital file. Although an ESRI ArcView 3.x shape file (in decimal degrees) is the preferred interchange format, the NIRB has the capacity to receive over 100 GIS and CAD related formats, including MapInfo and AutoCAD, provided proper format and projection metadata is also submitted. The NIRB requires coordinates for the project proposal which reflect the entire project area as defined by:

- the area/sites of investigation;

Please refer to map provided by INAC showing the proposed route as well as the attached GPS waypoint coordinates.

- the boundaries of the foreseen land use permit/right-of-way area(s) to be applied for;

Please refer to map provided by INAC showing the proposed route as well as the attached GPS waypoint coordinates.

- the location of any proposed infrastructure or activity(s); and,
Please refer to map provided by INAC showing the proposed route as well as the attached GPS waypoint coordinates.

- the boundaries of the mineral claim block(s) where proposed activities will be undertaken.

N/A

2. Map of the project site within a regional context indicating the distance to the closest communities.

Please refer to map attached as well as the attached GPS waypoint coordinates.

3. Map of any camp site including locations of camp facilities.

Please refer to the attached GPS waypoint coordinates.

4. Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.

Please refer to map provided by INAC showing the proposed route as well as the attached GPS waypoint coordinates.

Project General Information

5. Discuss the need and purpose of the proposed project.

Biogenie will undertake the FOX-3 DEW Line cleanup in the spring of 2009 and needs to mobilize its camp, equipment and supplies to do so. Supplies were sealifted to FOX-2 in the fall of 2008 and will be transported to FOX-3 via an overland route (approximately 185 km) from March to May 2009. The material will be placed on sleighs and transported using track tractors and bulldozers over frozen waterways and areas with ample snow cover.

6. Discuss alternatives to the project and alternatives to project components, including the no-go alternative. Provide justification for the chosen option(s).

The alternative to the CAT-train would have been aerial transport but this was considered logistically as well as economically unfeasible due to the magnitude of the undertaking. If the CAT-train does not take place, the remediation of the DEW line could not take place.

7. Provide a schedule for all project activities.

A 25-man crew (1400 person-days) will be necessary for the Cat-train, and it will include a superintendent, a foreman, operators, mechanics, scout/bear monitors, labourers, and cooks. A back-up crew will replace the original team after 3 weeks. They will be flown to FOX-2 or FOX-3 via a Twin-Otter equipped with skis during the first half of March, depending on prevailing weather conditions at that time. Specialized devices such as satellite phones, mobile two-way radios, global positioning system (GPS), and ground penetrating radar (GPR) will also be brought on site by air at that point, and weekly flights out of FOX-2 and FOX-3 will ensure re-

supply and crew rotation. It is anticipated that 8 weeks of intense activities will be necessary to conduct scouting and marking of the route, ice profiling, and transportation of the material and equipment. Scouting of the route will be performed around the beginning of March 2009 via snowmobiles and Bombardiers to evaluate, validate and mark the route. The following items will be validated at that time:

- Identified obstacles, and if required, alternate routes
- Snow accumulation: thickness and compaction
- Ice thickness
- Location of emergency shelters

Once the final route has been plotted, the transport of material will commence. We anticipate transport of more than 85 sleigh loads over approximately 185 km to reach FOX-3 from FOX-2. Once at FOX-3 (Dewar Lakes), material and equipment will be placed on a staging area that was previously authorized, inspected, GPS-referenced and marked before snowfalls to avoid parking over water bodies or on steep slopes which in winter can be hidden by snow or ice cover

8. List the acts, regulations and guidelines that apply to project activities.

The Canadian Environmental Protection Act (CEPA)
The Transportation of Dangerous Goods Act and Regulations
The Fisheries Act
The Migratory Birds Convention Act
The Arctic Waters Pollution Prevention Act and Regulations
The Canada Wildlife Act
The Territorial Lands Act
The Territorial Land Use Regulations
The Nunavut Waters Act and Regulations
Canada Labour Act and Regulations
National Fire Code
The Nunavut Wildlife Act
The Environmental Protection Act (Nunavut)
The Spill Contingency Planning and Reporting Regulations (Nunavut)
The Northwest Territories Archaeological Sites Regulations (The NWT Act)
The Fire Prevention Act (Nunavut)
Safety Act: Occupational Health Regulations (Nunavut)
Canada Labour Act and Regulations
Canadian Drinking Water Guidelines
Public Health Act (Nunavut) – General Sanitation Regulations and Camp Sanitation Regulations
Guidelines for Contingency Planning (NWT)
Species at Risk Act

9. List the approvals, permits and licenses required to conduct the project.

Permit to Access Inuit-owned Land
INAC Land Use permit

DFO Operational Statement (OS) Conformity

10. Indicate whether any of the following Department of Fisheries and Oceans (DFO) Operational Statement (OS) activities apply to the project proposal:

- Bridge Maintenance
- Clear Span Bridge
- Culvert Maintenance
- Ice Bridge
- Routine Maintenance Dredging
- Installation of Moorings

Please see DFO's OS for specific definitions of these activities available from either NIRB's ftp site at http://ftp.nunavut.ca/nirb/NIRB_ADMINISTRATION/ or DFO's web-site at http://www.dfo-mpo.gc.ca/canwaters-eauxcan/index_e.asp

11. If any of the DFO's OS apply to the project proposal, does the Proponent agree to meet the conditions and incorporate the measures to protect fish and fish habitat as outlined in the applicable OS? If yes, provide a signed statement of confirmation.

None of the above DFO's apply to this project

Transportation

12. Describe how the project site will be accessed and how supplies will be brought to site. Provide a map showing access route(s).

Biogenie will undertake the FOX-3 DEW Line cleanup in the spring of 2009 and needs to mobilize its camp, equipment and supplies to do so. Supplies were sealifted to FOX-2 in the fall of 2008 and will be transported to FOX-3 via an overland route (approximately 185 km) from March to May 2009. The material will be placed on sleighs and transported using track tractors and bulldozers over frozen waterways and areas with ample snow cover. Map provided to INAC. Please see GPS waypoint coordinates attached.

13. If a previous airstrip is being used, provide a description of the type of airstrip (ice-strip/all-weather), including its location. Describe dust management procedures and provide a map showing location of airstrip.

Existing airstrips will be used at FOX-2 and FOX-3. These are gravel VFR airstrips which will be maintained using heavy equipment.

14. If an airstrip is being constructed, provide the following information:

- a. Discuss design considerations for permafrost
- b. Discuss construction techniques
- c. Describe the construction materials, type and sources, and the acid rock drainage (ARD) and metal leaching (ML) characteristics (if rock material is required for airstrip bed).
- d. Describe dust management procedures.
- e. Provide a map showing location of proposed airstrip.

No airstrip construction will be carried out

15. Describe expected flight altitudes, frequency of flights and anticipated flight routes.

Flights will be done once a week with a Fixed wing airplane for resupply and crew rotation. The anticipated flight route will be Iqaluit, Qikitarjuaq, Clyde River, FOX-3, FOX-2, Hall Beach, Igloolik, FOX-3, FOX-2, Iqaluit

Camp Site

16. Describe all existing and proposed camp structures and infrastructure
Camps are already present at FOX-2 (Quantum Murray LP) FOX-B (INAC) and FOX-3 (Nasittuq NWS). No permanent structures will be erected. Biogenie's crew will be housed at the camp located at FOX-2 and it will be used as our base of operations. We anticipate using the contractor's camp located at FOX-B as an emergency shelter as well as 2 temporary self-sufficient survival trailers made from 20' and 40' shipping containers located approximately halfway between FOX-2 and FOX-B and between FOX-B and FOX-3 on a high point of the route. These shelters will also serve as relay points for radio communications. They will be equipped with a generator, a radio repeater, a windmill to keep the batteries charged, bunks, a heating system, First Aid material, frozen food, a microwave oven and cooking devices. The precise location of the emergency shelters will be determined on-site with the communications technician. At the other end of the trail (FOX-3), Biogenie's crew will be housed by the Nasittuq camp.

17. Describe the type of camp:
- Mobile - **emergency shelters**
 - Temporary -**Fox-2**
 - Seasonal - **Fox-B**
 - Permanent - **Fox-3**
 - Other

18. Describe the maximum number of personnel expected on site, including the timing for those personnel.

A 25-man crew (1400 person-days) will be necessary for the Cat-train, and it will include superintendent, foreman, operators, mechanics, scout/bear monitors, labourers, and cooks. A back-up crew will replace the original team after 3 weeks. They will be flown to FOX-2 or Fox-3 via a fixed wing aircraft equipped or not with skis depending on prevailing weather conditions at that time.

Equipment

19. Provide a list of equipment required for the project and discuss the uses for the equipment.

**Challenger track tractors to haul equipment on sleighs
Farm tractor with Quadtracks to haul equipment on sleighs
Bulldozers to haul equipment on sleighs
Excavators and loaders to load/unload equipment on sleighs
Bombardier man carriers for scouting and communication links
Snowmobiles for scouting and communication links**

20. If possible, provide digital photos of equipment.
See photos attached

Water

21. Describe the location of water source(s), the water intake methods, and all methods employed to prevent fish entrapment. Provide a map showing the water intake locations.

Drinking water will be brought to temporary camps and shelters from FOX-2 and FOX-3 camps already equipped and permitted to take water from identified water bodies where no fish are present.

22. Describe the estimated rate of water consumption (m³/day).

N/A

23. Describe how waste water will be managed. If relevant, provide detail regarding location of sumps, including capacity of sumps and monitoring.

Temporary survival trailers will be equipped with dry toilets. Sewage water from these temporary facilities will be containerized in 205-liter drums. The drums will be brought to FOX-3 where their contents will be disposed of in the sewage lagoon management system during the 2009 site work season or incinerated. It is expected that 10 drums of sewage water will be generated during CAT-Train activities.

24. If applicable, discuss how surface water and underground water will be managed and monitored.

N/A

Waste Water (Grey water, Sewage, Other)

25. Describe the quantities, treatment, storage, transportation, and disposal methods for the following (where relevant):

- Sewage

Temporary shelters will be equipped with dry toilets. Grey water from these temporary facilities will be containerized in 205-liter drums. The drums will be brought to FOX-3 where their contents will be disposed of in the sewage lagoon management system. It is expected that 10 drums of sewage water will be generated during CAT-Train activities.

- Camp grey water **N/A**
- Combustible solid waste

Waste generated during the CAT-Train will be containerized in Sea Can Containers and transported to FOX-3 where it will be stored until disposal by incineration.

- **Non-combustible solid waste** Containerized for proper disposal south
- **Bulky items/scrap metal** Containerized for proper disposal south
- **Waste oil/hazardous waste** Containerized for proper disposal south
- **Contaminated soils/snow** Containerized for proper disposal south
- **Empty barrels/ fuel drums** To be used to containerize waste and disposed south
- **Any other waste produced** Containerized for proper disposal south

26. If the project proposal includes a landfill or landfarm, indicate the locations on a map, provide the conceptual design parameters, and discuss waste management and contact-water management procedures.

N/A

Fuel

27. Describe the types of fuel, quantities (number of containers, type of containers and capacity of containers), method of storage and containment. Indicate the location on a map where fuel is to be stored, and method of transportation of fuel to project site.

Biogenie intends to use 21,000-litre capacity ISO tanks for the transportation of fuel. These tanks are insulated and designed for transportation purposes. They have successfully been used by Biogenie for the CAM-F mobilization. It is expected that 250,000 litres of jet fuel will be necessary to complete the CAT-Train. The fuel was transported via sealift in September 2008 and stored at FOX-2. In addition, approximately 4,000 litres of gasoline stored in 205-litre sealed drums will be used. We anticipate to transport only 10,000 L contained in one ISO tank to the FOX-B camp for emergency refuelling along the route .

28. Describe any secondary containment measures to be employed, including the type of material or system used. If no secondary containment is to be employed, please provide justification.

Framed insta-Berms are used as secondary containment for Iso Tankers. 40 000 L double wall steel tanks with integrated containment are also used for fuel storage at Fox-2

29. Describe the method of fuel transfer and the method of refuelling.

- **A refueling pump with counter and automatic shut off when full device will be installed on the tanks.**
- **All refuelling of equipment will be recorded and the register kept in each unit. The refuelling of the equipment will be done by one trained designated worker**
- **During refuelling, drip pans under the equipment fill nozzle will be used and absorbent pads will be available at all times during fuelling of equipment.**
- **Operators will be in attendance for the duration of refuelling operations.**
- **Smoking will be prohibited within 10 m of a fuel storage area.**
- **Refuelling devices will have fully stocked and maintained spill kits for immediate response to spills. Personnel will be trained on action to take in the event of a spill and will be familiar with the contents of the kits. Spill kits and spill response procedures will be posted inside every vehicle, inside emergency shelters and in the camps at either end of the trail.**

Chemicals and Hazardous Materials*

**included but not limited to oils, greases, drill mud, antifreeze, calcium or sodium chloride salt, lead acid batteries and cleaners*

30. Describe the types, quantities (number of containers, the type of container and capacity of containers), method of storage and containment. Indicate the location on a map where material is to be stored, and method of transportation of materials to project site.

40 sealed 205-litre drums of oil , 10 cases of grease tubes and minimal quantities of battery acid, antifreeze and cleaner are stored and will be transported in 2 steel barge containers equipped with drip trays and absorbent.

31. Describe any secondary containment measures to be employed, including the type of material or system used.

These will be transported and stored inside locked steel barge containers equipped with drip trays and absorbent

32. Describe the method of chemical transfer.

This will be carried out inside the Steel Barge container with the drip tray with proper PPE and equipment.

Workforce and Human Resources/Socio-Economic Impacts

33. Discuss opportunities for training and employment of local Inuit beneficiaries.

Most of the Inuit workers have been working for Biogenie for the past three years on two other DEW line cleanup projects and have completed two CAT-train mobilization/demobilizations with us as well as three summer seasons. Training such as health and safety, first aid, heavy equipment operator, PCB-amended paint removal, among others, are offered during the work seasons.

34. Discuss workforce mobilization and schedule, including the duration of work and rotation length, and the transportation of workers to site.

A 25-man crew (1400 person-days) will be necessary for the Cat-train, and it will include a superintendent, a foreman, operators, mechanics, scout/bear monitors, labourers, and cooks. A back-up crew will replace the original team after 3 weeks. Work days will be 12 hours with one hour for lunch and one hour for supper. Workers will be flown to FOX-2 or FOX-3 via a fixed wing aircraft. Local workers will be flown in from Clyde River, Qikiqtarjuaq, Hall Beach and Igloolik.

35. Discuss, where relevant, any specific hiring policies for Inuit beneficiaries.

As per the NTI Economic Agreement with DND, Biogenie is committed to a 67.6% Minimum Inuit employment content for the FOX-3 DEW Line Cleanup. Biogenie as already started recruiting individuals in the surrounding communities via Arruja Corporation and Sila Remediation Inc.

Public Involvement/ Traditional Knowledge

36. Indicate which communities, groups, or organizations would be affected by this project proposal.

The main beneficiaries of the economic input from the cleanup will primarily affect Clyde River, Qikiqtarjuaq, Hall Beach, Igloolik

37. Describe any consultation with interested Parties which has occurred regarding the development of the project proposal.

Interviews with Inuit elders and experienced members of the Canadian Rangers who have extensive knowledge of the area were done to establish the best route. 4 men out of 5 were Inuits from Clyde River on the scouting trip to validate the Cat-Train route last May.

Public radio announcements are being broadcast to hire Inuit employees in the above-mentioned hamlets and a community consultation meeting in Clyde River and Qikiqtarjuaq are planned for February 23 and 24, 2009. Representatives from Biogenie, Defense Construction Canada and Aarruja Development Corp. will be present.

38. Provide a summary of public involvement measures, a summary of concerns expressed, and strategies employed to address any concerns.

Public consultation meetings are scheduled to take place on February 23 and 24, 2009 in Clyde River and Qikiqtarjuaq. The meeting will include an information session and a question and answer period.

39. Describe how traditional knowledge was obtained, and how it has been integrated into the project.

Interviews with Inuit elders from Hall Beach and Clyde River who have extensive knowledge of the area were done to establish the best route. These people will act as advisors/wildlife monitors/scouts during the mobilization work.

40. Discuss future consultation plans.

Public radio announcements will be held monthly during the entire DEW line project announcing job and training opportunities, and community consultation meetings will be held twice yearly – once in the spring before the beginning of the season and once in the fall.

3. PROJECT SPECIFIC INFORMATION

The following table identifies the project types identified in Section 3 of the NIRB, Part 1 Form. Please complete all relevant sections.

It is the proponent's responsibility to review all sections in addition to the required sections to ensure a complete application form.

Project Type	Type of Project Proposal	Information Request
1	All-Weather Road/Access Trail	Section A-1 and Section A-2

2	Winter Road/Winter Trail	Section A-1 and Section A-3
3	Mineral Exploration	Section B-1 through Section B-4
4	Advanced Mineral Exploration	Section B-1 through Section B-8
5	Mine Development/Bulk Sampling	Section B-1 through Section B-12
6	Pits and Quarries	Section C
7	Offshore Infrastructure(port, break water, dock)	Section D
8	Seismic Survey	Section E
9	Site Cleanup/Remediation	Section F
10	Oil and Natural Gas Exploration/Activities	Section B-3 and Section G
11	Marine Based Activities	Section H
12	Municipal and Industrial Development	Section I

SECTION A: Roads/Trails

A-1 Project Information

1. Describe any field investigations and the results of field investigations used in selecting the proposed route (e.g. geotechnical, snow pack)

Since Biogenie has already successfully completed two Cat-train mobilizations, a series of logical steps led us to confirm that mobilization could be performed via the overland Cat-train method. From the delineation of potential overland routes with topographic maps, to field confirmation and expert validation, Biogenie is convinced that this site is accessible by land based on our review of the following information:

- **Plans and photographs provided by UMA Engineering in July 2007**
- **Topographic Maps 1:250,000 - From Natural Resources Canada (NRC)**
- **Flyover to FOX-3 by Biogenie in September 2007**
- **Aerial Photographs from NRC**
- **Satellite imagery using Google Earth (<http://earth.google.com>)**
- **Detailed knowledge of the area from Hall Beach and Clyde River Inuit elders**
- **Scouting in the spring 2008 by Clyde River Inuit and a Biogenie representative using a GPS**

The selection of the route was based on the following criteria:

- **Rivers and lakes are preferable to open land: these water bodies are lower in elevation than their surroundings. Snow therefore accumulates in larger quantity and provides good ground for sleighs.**
- **Travel directly on land is to be limited to flat areas and lower lands where snow will also accumulate and boulders and large rocks will be covered. Uncovered rocks may seriously damage sleighs and the equipment being transported.**
- **Travel on flat tundra is to be minimized in order to ensure the integrity of this environment.**

2. Provide a conceptual plan of the road, including example road cross-sections and water crossings.

Please see attached Figure and topographic map provided to INAC

3. Discuss the type and volume of traffic using the road/trail (i.e. type of vehicles and cargo and number of trips annually).

We anticipate transport of more than 85 sleigh loads over approximately 185 km to reach FOX-3 from FOX-2 from the beginning of March to the beginning of May 2009. Cargo includes all project supplies including, but not limited to, camp (including beds, TV's, fitness equipment, washers & dryers, fridges, tables, chairs, stoves, etc.) heavy machinery, trucks, generators, water treatment unit, scaffolding, various tools, health and safety equipment, etc.

4. Discuss public access to the road.

The road is not located near any community and can only be accessed by chartered aircraft or snowmobile in winter

5. Describe maintenance procedures.

The trail will be self-maintained as we travel over it on a daily basis. Only in case of a very rough area, dozers will be available to smooth over the snow already on the trail.

A-2 All-Weather Road/Access Trail

6. Discuss road design considerations for permafrost.
7. Describe the construction materials (type and sources for materials), and the acid rock drainage (ARD) and metal leaching (ML) characteristics of the construction materials.
8. Discuss construction techniques, including timing for construction activities.
9. Indicate on a map the locations of designated refuelling areas, water crossings, culverts, and quarries/borrow sources.
10. Identify the proposed traffic speed and measures employed to ensure public safety.
11. Describe dust management procedures.

A-3 Winter Road/Trail

12. Describe the surface preparation, including the use of snow berms or compaction, and any flooding. If flooding is to be used, provide the location of the water source on a map.

The trail was very carefully selected during initial scouting activities to avoid the need for any type of construction or improvements. Only in case of a very rough area, dozers will be available to smooth over the snow already on the trail. No flooding will be used.

13. Describe the operating time period.

The transport will take place between March and May 2009 and 2011

14. Identify the proposed traffic speed and measures employed to ensure public safety.

Due to the nature of the work, speed cannot exceed 10 km/hr. No communities are within 200 km of the proposed route.

15. Discuss whether the selected route traverses any fish-bearing water bodies.

As the route will travel as much as possible over frozen water bodies to limit impact on tundra, the selected route does in fact traverse fish-bearing water bodies such as Nadluardjuq Lake.

SECTION B: Mineral Exploration /Advanced Exploration /Development

B-1 Project Information

1. Describe the type of mineral resource under exploration.

B-2 Exploration Activity

2. Indicate the type of exploration activity:
- Bulk Sampling (underground or other)
 - Stripping (mining shallow bedded mineral deposits in which the overlying material is stripped off, the mineral removed and the overburden replaced)
 - Trenching
 - Pitting
 - Delineation drilling
 - Preliminary Delineation drilling
 - Exploration drilling
 - Geophysical work (indicate ground and/or air)
 - Other
3. Describe the exploration activities associated with this project:
- Satellite remote sensing
 - Aircraft remote sensing
 - Soil sampling
 - Sediment sampling
 - On land drilling (indicate drill type)
 - On ice drilling (indicate drill type)
 - Water based drilling (indicate drill type)
 - Overburden removal
 - Explosives transportation and storage
 - Work within navigable waters
 - On site sample processing
 - Off site sample processing
 - Waste rock storage
 - Ore storage
 - Tailings disposal
 - Portal and underground ramp construction
 - Landfilling
 - Landfarming
 - Other

B-3 Geosciences

4. Indicate the geophysical operation type:
 - a. Seismic (please complete Section E)
 - b. Magnetic
 - c. Gravimetric
 - d. Electromagnetic
 - e. Other (specify)
5. Indicate the geological operation type:
 - a. Geological Mapping
 - b. Aerial Photography
 - c. Geotechnical Survey
 - d. Ground Penetrating Survey
 - e. Other (specify)
6. Indicate on a map the boundary subject to air and/or ground geophysical work.
7. Provide flight altitudes and locations where flight altitudes will be below 610m.

B-4 Drilling

8. Provide the number of drill holes and depths (provide estimates and maximums where possible).
9. Discuss any drill additives to be used.
10. Describe method for dealing with drill cuttings.
11. Describe method for dealing with drill water.
12. Describe how drill equipment will be mobilized.
13. Describe how drill holes will be abandoned.
14. If project proposal involves uranium exploration drilling, discuss the potential for radiation exposure and radiation protection measures. Please refer to the *Canadian Guidelines for Naturally Occurring Radioactive Materials* for more information.

B-5 Stripping/ Trenching/ Pit Excavation

15. Discuss methods employed. (i.e. mechanical, manual, hydraulic, blasting, other)
16. Describe expected dimensions of excavation(s) including depth(s).
17. Indicate the locations on a map.
18. Discuss the expected volume material to be removed.
19. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

B-6 Underground Activities

20. Describe underground access.
21. Describe underground workings and provide a conceptual plan.
22. Show location of underground workings on a map.
23. Describe ventilation system.
24. Describe the method for dealing with ground ice, groundwater and mine water when encountered.
25. Provide a Mine Rescue Plan.

B-7 Waste Rock Storage and Tailings Disposal

26. Indicate on a map the location and conceptual design of waste rock storage piles and tailings disposal facility.

27. Discuss the anticipated volumes of waste rock and tailings.
28. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

B-8 Stockpiles

29. Indicate on a map the location and conceptual design of all stockpiles.
30. Describe the types of material to be stockpiled. (i.e. ore, overburden)
31. Describe the anticipated volumes of each type of material to be stockpiled.
32. Describe any containment measures for stockpiled materials as well as treatment measures for runoff from the stockpile.
33. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.

B-9 Mine Development Activities

34. Indicate the type(s) of mine development activity(s):
 - Underground
 - Open Pit
 - Strip Mining
 - Other
35. Describe mine activities.
 - Mining development plan and methods
 - Site access
 - Site infrastructure (e.g. airstrip, accommodations, offshore infrastructures, mill facilities, fuel storage facilities, site service roads)
 - Milling process
 - Water source(s) for domestic and industrial uses, required volumes, distribution and management.
 - Solid waste, wastewater and sewage management
 - Water treatment systems
 - Hazardous waste management
 - Ore stockpile management
 - Tailings containment and management
 - Waste rock management
 - Site surface water management
 - Mine water management
 - Pitting and quarrying activities (please complete Section C)
 - Explosive use, supply and storage (including on site manufacturing if required)
 - Power generation, fuel requirements and storage
 - Continuing exploration
 - Other
36. Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.

B-10 Geology and Mineralogy

37. Describe the physical nature of the ore body, including known dimensions and approximate shape.
38. Describe the geology/ mineralogy of the ore deposit
39. Describe the host rock in the general vicinity of the ore body.
40. Discuss the predicted rate of production.

41. Describe mine rock geochemical test programs which have been or will be performed on the ore, host rock, waste rock and tailings to determine acid generation and contaminant leaching potential. Outline methods and provide results if possible.

B-11 Mine

42. Discuss the expected life of the mine.
43. Describe mine equipment to be used.
44. Does the project proposal involve lake and/or pit dewatering? If so, describe the activity as well as the construction of water retention facilities if necessary.
45. Discuss the possibility of operational changes occurring during the mine life with consideration for timing. (e.g. open pit to underground)
46. If project proposal involves uranium mining, consider the potential for radiation exposure and radiation protection measures. Particular attention should be paid to *The Nuclear Safety and Control Act*.

B-12 Mill

47. If a mill will be operating on the property in conjunction with mining, indicate whether mine-water may be directed to the mill for reuse.
48. Describe the proposed capacity of the mill.
49. Describe the physical and chemical characteristics of mill waste as best as possible.
50. Will or does the mill handle custom lots of ore from other properties or mine sites?

SECTION C: Pits and Quarries

1. Describe all activities included in this project.
 - Pitting
 - Quarrying
 - Overburden removal
 - Road use and/or construction (please complete Section A)
 - Explosives transportation and storage
 - Work within navigable waters
 - Blasting
 - Stockpiling
 - Crushing
 - Washing
 - Other
2. Describe any field investigations and the results of field investigations used in determining new extraction sites.
3. Identify any carving stone deposits.
4. Provide a conceptual design including footprint.
5. Describe the type and volume of material to be extracted.
6. Describe the depth of overburden.
7. Describe any existing and potential for thermokarst development and any thermokarst prevention measures.
8. Describe any existing or potential for flooding and any flood control measures.
9. Describe any existing or potential for erosion and any erosion control measures.
10. Describe any existing or potential for sedimentation and any sedimentation control measures.
11. Describe any existing or potential for slumping and any slump control measures.
12. Describe the moisture content of the ground.

13. Describe any evidence of ice lenses.
14. If blasting, describe methods employed.
15. Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.
16. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.
17. Discuss safety measures for the workforce and the public.

SECTION D: Offshore Infrastructure

D-1 Facility

1. Describe any field investigations and the results of field investigations used in selecting the site (i.e. aerial surveys, bathymetric surveys, tidal processes, shoreline erosion processes, geotechnical foundation conditions)
2. Provide a conceptual plan, profile description and drawing(s) indicating shoreline, facility footprint, tidal variations, required vessel draft, keel offset, deck height freeboard
3. Discuss how anticipated loads on the seabed foundation and on the offloading platform will be incorporated into the design.
4. Describe how vessels will manoeuvre around the facility. (e.g. pull alongside or in front)
5. Discuss the anticipated life of the facility.

D-2 Facility Construction

6. Describe the types of material used for construction (i.e. granular or rock, steel piling or sheet piling, concrete). If material is granular, consider acid rock drainage potential, metal leaching potential, percentage of fines, size.
7. Describe dredging activities.
8. Indicate source of granular or rock material used in construction.
9. List quantities of the various types of material used in construction.
10. Describe construction method(s).
11. Indicate whether a site engineer will be on-site to inspect construction.
12. If proposed construction method involves dumping of fill into water, discuss measures for mitigating the release of suspended solids.

D-3 Facility Operation

13. Describe maintenance activities associated with the facility (e.g. dredging, maintenance to account for potential settlement of facility,)
14. Discuss whether the public will have access to the facility(s) and describe public safety measures.
15. Describe cargo and container handling, transfer and storage facilities.
16. Indicate whether fuel will be transferred from barges at this site and describe the method of that fuel transfer.
17. Discuss frequency of use.

D-4 Vessel Use in Offshore Infrastructure

18. Please complete Section H

SECTION E: Seismic Survey

E-1 Offshore Seismic Survey

1. Indicate whether the survey is 2D or 3D at each site
2. Describe the type of equipment used, including:
 - Type and number of vessels including length, beam, draft, motors, accommodation capacity, operational speeds when towing and when not towing
 - Sound source (type and number of airguns)
 - Type and number of hydrophones
 - Number, length, and spacing of cables/ streamers
3. On a map, indicate the grid, number of lines and total distance covered at each site.
4. Indicate the discharge volume of the airguns, the depth of airgun discharge, and the frequency and duration of airgun operation at each site.
5. Discuss the potential for dielectric oil to be released from the streamer array, and describe proposed mitigation measures.
6. Indicate whether additional seismic operations are required for start-up of operations, equipment testing, repeat coverage of areas.
7. Indicate whether air gun procedures will include a “ramping up” period and, if so, the proposed rate of ramping up.
8. Indicate whether the measures described in the *Statement of Canadian Practice for Mitigation of Noise in the Marine Environment* will be adhered to for this project.

E-2 Nearshore/ Onshore Seismic Survey

9. For each site, indicate whether nearshore and onshore surveys will be conducted during the ice season or once the ice has melted
10. Describe how nearshore and onshore areas will be accessed.
11. Describe the survey methods to be used (e.g. explosive charge, vibration, air or water gun, other)
12. Describe equipment to be used
13. If applicable, indicate number, depth and spacing of shot holes
14. Describe explosive wastes including characteristics, quantities, treatment, storage, handling, transportation and disposal methods.

E-3 Vessel Use in Seismic Survey

15. Please complete Section H

SECTION F: Site Cleanup/Remediation

1. Describe the location, content, and condition of any existing landfills and dumps (indicate locations on a map).
2. Identify salvageable equipment, infrastructure and/or supplies.
3. Provide a list of all contaminants to be cleaned up, anticipated volumes and a map delineating contaminated areas. This includes buildings, equipment, scrap metal and debris, and barrels as well as soil, water (surface and groundwater) and sediment.
4. Describe the degree of pollution/contamination, and list the contaminants and toxicity.
5. Describe technologies used for clean-up and/or disposal of contaminated materials. Include a list of all the physical, chemical and biological cleanup/ remediation methods, operational procedures, and the dosage/frequency of reagents and bacterial medium.
6. Identify and describe all materials to be disposed of off site, including the proposed off site facilities, method of transport and containment measures.

7. Discuss the viability of landfarming, given site specific climate and geographic conditions.
8. Describe the explosive types, hazard classes, volumes, uses, location of storage (indicate on a map), and method of storage (if applicable).
9. If blasting, describe the methods employed.
10. Describe all methods of erosion control, dust suppression, and contouring and re-vegetation of lands.
11. Describe **all** activities included in this project.
 - Excavation (please complete Section B-5)
 - Road use and/or construction (please complete Section A)
 - Airstrip use and/or construction
 - Camp use and/or construction
 - Stockpiling of contaminated material
 - Pit and/or quarry (please complete Section C)
 - Work within navigable waters (please complete Section H)
 - Barrel crushing
 - Building Demolition
 - Other

SECTION G: Oil and Natural Gas Exploration/Activities

G-1 Well Authorization

1. Identify the location(s) of the well centre(s) by latitude and longitude. Attach a map drawn to scale showing locations of existing and proposed wells.
2. Indicate if the site contains any known former well sites.
3. Include the following information for each well:
 - a. Well name
 - b. Surface location
 - c. Proposed bottomhole location
 - d. Ground elevation (in metres)
 - e. Spacing area (in units)
 - f. Identify the well type:
 - i. Production
 - ii. Injection
 - iii. Disposal
 - iv. Observation
 - v. Storage
 - vi. Experimental
 - vii. Other (specify)
 - g. Identify the well classification:
 - i. Exploratory wildcat
 - ii. Exploratory outpost
 - iii. Development
 - h. Drilling operation (deviation):
 - i. Vertical
 - ii. Directional
 - iii. Horizontal
 - iv. Slant
 - i. Objective Zones (copy chart style below)

Objective Formation	Fluid (oil/gas/water)	Depth (mTVD)	Core (Y/N)

- j. Proposed Total Depth in mTDV and mMD.
- k. Formation of Total Depth
- l. Sour well? (yes or no)
 - i. If Yes: Maximum H₂S concentration in mol/kmol
Emergency planning zone radius in km
- m. Blowout Prevention (Well Class I – VI)
- n. Deviation Surveys
 - i. Will be run at intervals less than 150m? (yes or no)
- o. Wireline logs
 - i. Will run logs in hole for surface casing? (yes or no)
 - ii. Will run a minimum of 2 porosity measuring logs? (yes or no)

G-2 On-Land Exploration

- 4. Indicate if the site contains any known:
 - a. Waste Dumps
 - b. Fuel and Chemical Storage Areas
 - c. Sump Areas
 - d. Waste Water Discharge Locations
- 5. Attach maps drawn to scale showing locations of existing and proposed items identified in (2) above, as well as all proposed:
 - a. Sumps
 - b. Water sources
 - c. Fuel and chemical storage facilities
 - d. Drilling mud storage areas
 - e. Transportation routes
- 6. If utilizing *fresh water*, estimate maximum drawdown and recharge capability of the river or lake from which water will be drawn.
- 7. Indicate if permafrost is expected to be encountered under:
 - a. Camp Facilities
 - b. Well Site
 - c. Access Routes
 - d. Sumps
 - e. Other: _____
- 8. Indicate any potential for encountering artesian aquifers or lost circulation within the surface hole (to casing depth).
- 9. Will drilling wastes contain detrimental substances (including, but not limited to, oil-based or invert mud and high salinity fluids)? If yes, indicate the substances and estimated volumes.
- 10. Indicate methods for disposal of drilling wastes:
 - a. Sump
 - b. Down Hole (requires NEB approval)
 - c. On-Site Treatment (provide plan)
 - d. Off-Site (give location and method of disposal)
- 11. If a sump is being used, attach the following information:
 - a. scale drawings and design of sumps

- b. capacity in cubic metres
 - c. berm erosion protection
 - d. soil permeability and type
 - e. recycling/reclaiming waters
 - f. surface drainage controls
 - g. abandonment procedures
12. Attach the proposed or existing contingency plan which describes the course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.
 13. Attach an outline of planned abandonment and restoration procedures.

G-3 Off-Shore Exploration

14. Will drilling wastes contain detrimental substances (including, but not limited to, oil-based or invert mud and high salinity fluids)? If yes, indicate the substances and estimated volumes.
15. Attach the proposed or existing contingency plan which describes the course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.
16. Attach an outline of planned abandonment and restoration procedures.
17. Please complete Section H

G-4 Rig

18. Type of Rig. Draw works, make and model
19. Derrick/Mast make and model
20. H.P. available to draw-works

SECTION H: Marine Based Activities

H-1 Vessel Use

1. Describe the purpose of vessel operations.
2. List classes and sizes of vessels to be used.
3. Indicate crew size.
4. Indicate operating schedule.
5. Provide a description of route to be traveled (include map).
6. Indicate whether the vessel will call at any ports. If so, where and why?
7. Describe wastes produced or carried onboard including the quantities, storage, treatment, handling and disposal methods for the following:
 - a. Ballast water
 - b. Bilge water
 - c. Deck drainage
 - d. Grey and black water
 - e. Solid waste
 - f. Waste oil
 - g. Hazardous or toxic waste
8. List all applicable regulations concerning management of wastes and discharges of materials into the marine environment
9. Provide detailed Waste Management, Emergency Response and Spill Contingency Plans

10. Does the vessel(s) possess an Arctic Pollution Prevention Certificate? If yes, indicate the date of issue and the name of the classification society.
11. Describe the source of fresh water and potable water
12. Indicate whether ice-breaking will be required, and if so, approximately where and when? Discuss any possible impacts to caribou migration, Inuit harvesting or travel routes, and outline proposed mitigation measures.
13. Indicate whether the operation will be conducted within the Outer Land Fast Ice Zone of the East Baffin Coast. For more information on the Outer Land Fast Ice Zone, please see the Nunavut Land Claims Agreement (NLCA), Articles 1 and 16.
14. Indicate whether Fisheries or Environmental Observers will be onboard during the proposed project activities. If yes, describe their function and responsibilities.
15. Describe all proposed measures for reducing impacts to marine habitat and marine wildlife (including mammals, birds, reptiles, fish, and invertebrates).

H-2 Disposal at Sea

1. Provide confirmation you have applied for a *Disposal at Sea* permit with Environment Canada
2. Provide a justification for the disposal at sea
3. Describe the substance to be disposed of, including chemical and physical properties
4. Indicate the location where the disposal is to take place
5. Describe the frequency of disposals (disposals per day/week or month)
6. Describe the route to be followed during disposal and indicate on a map.
7. Indicate any previous disposal methods and locations
8. Provide an assessment of the potential effects of the disposal substance on living marine resources
9. Provide an assessment of the potential of the disposal substance, once disposed of at sea, to cause long-term physical effects.
10. Describe all mitigation measures to be employed to minimize the environmental, health, navigational and aesthetic impacts during loading, transport and disposal.

SECTION I: Municipal and Industrial Development

1. Describe the business type, including public, private, limited, unlimited or other.
2. Describe the activity (e.g. development of quarry, development of hydroelectric facility, bulk fuel storage, power generation with nuclear fuels or hydro, tannery operations, meat processing and packing, etc.).
3. Describe the production process or service provision procedures.
4. Describe the raw materials used in this activity, the storage and transportation methods. If hazardous materials are included in raw materials, products or by-products; include safety regulations methodology.
5. Provide detailed information about the structure and/or building in which the activity will be conducted.
6. List the PPE (personal protective equipment) and tools to be used to protect personal health and safety.
7. Describe the firefighting equipment that are or will be installed.
8. Describe the noise sources, noise level in work area, technical measurements that will be adopted to abate the noise levels and regulatory requirements for noise abatement and noise levels.
9. Describe the type of gaseous emission that will be produced during this activity. Include the allowable thresholds and mitigation measures.

10. Describe odours that the activity might release and include corresponding allowable threshold. Describe mitigation measures if thresholds are exceeded.
11. Describe radiation sources that might be emitted during the activity. Include type and source and include mitigation measures. Also describe preventative measures for human exposure (i.e. PPE).
12. Discuss the employee safety and environment protection training program.
13. If the activity involves a bulk fuel storage facility, include drawings showing the bulk fuel storage facility location in proximity to natural water courses, high water marks, etc.
14. If the activity involves the development of a new quarry or expansion of an existing quarry, complete Section C.

4. DESCRIPTION OF THE EXISTING ENVIRONMENT

Describe the existing environment, including physical, biological and socioeconomic aspects. Where it is appropriate, identify local and regional study areas.

Please note that the detail provided in the description of the existing environment should be appropriate for the type of project proposal and its scope.

The following lists are intended as a guide only.

Physical Environment

Please note that a description of the physical environment is intended to cover all components of a project, including roads/trails, marine routes, etc

- Proximity to designated environmental areas, including parks; heritage sites; sensitive areas, including sensitive marine habitat areas (recreational areas; sport and commercial fishing areas; breeding, spawning and nursery areas; known migration routes of living ;marine resources; and areas of natural beauty, cultural or historical history and; other) and protected wildlife areas; and other protected areas.

No known areas

- Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains).

Unknown

- Evidence of ground, slope or rock instability, seismicity.

Unknown

- Evidence of thermokarsts

Unknown

- Evidence of ice lenses

Unknown

- Surface and bedrock geology.

Unknown

- Topography.

FOX-3 is situated on 4060 acres of glacially scoured terrain which consists of rolling hills separated by broad intervening depressions. The station occupies the crest of one of these rolling hills at an altitude of about 1800 feet above sea level. The site lies near the west bank of a stream that runs through a deep valley. The stream is part of a long chain of lakes and rivers that drain into Foxe Basin. It is south flowing and connects to lakes located at an elevation of 650 feet. As previously mentioned, the CAT-train route itself will generally travel over frozen waterways and the topography needs to be as flat as possible in order for the equipment to travel over it.

- Permafrost (e.g. stability, depth, thickness, continuity, taliks).

Unknown

- Sediment and soil quality.

Unknown – travel will take place over surface during winter

- Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones).

Unknown – travel will take place over surface during winter

- Tidal processes and bathymetry in the project area.

Unknown – travel will take place over surface during winter and will not travel over sea ice

- Water quality and quantity.

Unknown – travel will take place over surface during winter – no water will be used

- Air quality.

Unknown

- Climate conditions and predicted future climate trends.

The climate at FOX-3 includes long cold winters and short mild summers. Average monthly an annual weather data has been measured at the station (Dewar Lakes, Nunavut, 68° 39'N, 71° 10' W, elevation 526.70 m, data from 1971 to 2000, Canadian Climate Normals, Environment Canada) and summarized in Table I. Data used to produce Table I was extracted from Environment Canada's web site. Data from surrounding areas such as Longstaff Bluff was also consulted on this website.

Table I clearly indicates that snow cover was sufficient to support Cat-trains, especially considering that the route to be used is located in lowlands, where most of the snow accumulates. An excessive quantity of snow is not anticipated as we have calculated snow depth to be in the range of 15 to 100 cm, sufficient quantities to cover large rocks but still easily traversable.

From our Cat-train experience, we have assumed that the winter months will have been cold enough to provide a thickness of 40 inches of good quality ice in order to bear the weight of the loads being transported.

Table I : Precipitation and Temperature Profiles at FOX-3

Month	Daily Maximum (°C) *	Daily Minimum (°C)	Daily Average (°C)	Extreme Maximum (°C)	Extreme Minimum (°C)	Rainfall (mm)	Snowfall (cm)	Snow at Month end (cm)
January	-23.4	-30.3	-26.8	22.2*	-49.4	0	5.5	50
February	-25.3	-32	-28.6	0	-50.7	0	4.1	50
March	-23.2	-29.9	-26.6	-2.3	-48.3	0	7.2	52
April	-16.2	-22.9	-19.5	-1.1	-39.8	0	12.4	51
May	-6.7	-12.6	-9.7	9.5	-29.4	0.5	23.9	39
June	2.6	-2.8	-0.1	17.2	-17.2	8.2	12.8	5
July	8.7	2.4	5.6	23.2	-6.3	45.2	3.1	0
August	6.2	0.7	3.4	20.6	-7.5	54.4	9.9	2
September	-0.8	-5	-2.9	11.1	-18	7.4	27.3	15
October	-8.3	-13.8	-11.1	3.3	-33	0	35.6	40
November	-15.6	-21.9	-18.8	-0.6	-40.6	0	17	44
December	-21.7	-28.2	-24.9	0	-45	0	7.3	46

* : This is the data provided on the website- it may however be erroneous

Source: Environment Canada's web site

(http://www.climate.weatheroffice.ec.gc.ca/climate_normals/index_e.html)

- Noise levels.

Heavy equipment will not stay in one area for any length of time. Noise levels due to machinery travelling along the trail are not expected to have a negative impact on local wildlife.

- Other physical Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.

Biological Environment

- Vegetation.

N/A – travel will take place over snow cover during winter

- Wildlife, including habitat and migration patterns.

The work period for the CAT-Train will be between March and May 2009 and 2011. This period is outside of any calving, post-calving, spawning, nesting and breeding periods. It is possible that polar bears may be encountered in areas closer to the sea shore (areas around FOX-2, Piling Bay, Straits Bay) while caribou, arctic foxes, and hares are expected to be seen inland. Biogenie will make every effort to ensure that disturbance to wildlife is minimized. Local Inuit Wildlife monitors will travel ahead of every load and in case of wildlife encounters, bear bangers and rubber bullets will be used to deter polar bears.

- Birds, including habitat and migration patterns.

The work period for the CAT-Train will be between March and May 2009 and 2011. This period is outside of any nesting and migratory periods.

- Species of concern as identified by federal or territorial agencies, including any wildlife species listed under the *Species at Risk Act (SARA)*, its critical habitat or the residences of individuals of the species.

Polar Bear

- Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns.

Unknown

- Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.

Unknown

Socioeconomic Environment

- Proximity to communities.

No Inuit communities are located along the trail and the closest communities are Qikiqtarjuak and Clyde River located approximately 230 kilometers east and north of Dewar Lakes, Hall Beach located approximately 245 kilometers west of Longstaff Bluff, and Igloodik located approx. 265 kilometers west of Longstaff Bluff.

- Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project and adjacent areas.

Unknown

- Palaeontological component of surface and bedrock geology.

N/A

- Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations.

Unknown

- Local and regional traffic patterns.

N/A

- Human Health, broadly defined as a complete state of wellbeing (including physical, social, psychological, and spiritual aspects).

We are an environmental remediation company specialized in the cleanup of contaminated sites. We plan to carry out a temporary project (CAT-train) used as a means to mobilize equipment with the ultimate goal of performing the environmental cleanup of an abandoned and contaminated DEW line site. This can only have a positive impact on surrounding Inuit communities for all of the above-mentioned categories.

- Other Valued Socioeconomic Components (VSEC) as determined through community consultation and/or literature review.

5. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES

1. Please complete the attached Table 1 – Identification of Environmental Impacts, taking into consideration the components in Appendix A. Identify impacts in Table 1 as either positive (P), negative and mitigable (M), negative and non-mitigable (N), or unknown (U).
2. Discuss the impacts identified in the above table.

- **Odours/domestic waste could potentially attract bears, wolves and foxes, ravens at the temporary camps.**
- **Bears could be attracted to activity in the area**
- **A fuel spill could have a negative impact on water and vegetation**
- **The cat-train as well as the overall cleanup project can offer positive socio-economic benefits to surrounding communities - see Point 3 below**

3. Discuss potential socioeconomic impacts, including human health.

For the overall FOX-3 cleanup project, Biogenie is committed to a 67.6% Inuit Employment Content as well as a 68.9% Inuit Contracting Content, there will be a major positive socioeconomic impact in the communities surrounding FOX-3, more specifically Clyde River and Qikiqtarjuaq. The impact of the project as a whole on human health will be positive as the site will be decontaminated.

4. Discuss potential for transboundary effects related to the project.

N/A

5. Identify any potentially adverse effects of the project proposal on species listed under the *Species at Risk Act (SARA)* and their critical habitats or residences, what measures will be taken to avoid or lessen those effects and how the effects will be monitored.

Polar bears in the area could be attracted to the activity in the area, especially to odours around the camps. Inuit Wildlife monitors will be on duty 24 hours a day and deterrent measures will be used for bears in camp such as bear bangers and rubber bullets. Camp waste will be contained inside sealed barrels and transported to FOX-3 frequently so that it is made inaccessible to wildlife. On the trail, any wildlife encountered will be avoided as much as possible. Local Inuit Wildlife monitors will travel ahead of every load.

6. Discuss proposed measures to mitigate all identified negative impacts.

The mitigation plan for wildlife encounters is detailed in Point 5 above.

For spills:

Containers transporting fuel are designed and tested to accommodate falls from short heights.

All containers used for the transport of materials at the site respect the applicable transportation requirements and specifications.

Spill kits and cleanup equipment will be available at all times in each work area and the use of the equipment will be part of the initial training.

The spill response plan attached will be presented to site workers prior to commencing work and will be posted in each camp

7. CUMULATIVE EFFECTS

Discuss how the effects of this project interact with the effects of relevant past, present and reasonably foreseeable projects in a regional context.

During the construction season, a significant number of person-years of employment will be generated due to this cleanup project. Besides the North Warning System located at FOX-3, to our knowledge, there are no future land uses intended along the route. Exploration mining has taken place recently near the FOX-3 site. Landfill monitoring programs will be undertaken at FOX-3 and FOX-2 by the project owner after the clean-up.

8. SUPPORTING DOCUMENTS

Where relevant, provide the following supporting documents:

- Abandonment and Decommissioning Plan
- Existing site photos with descriptions
- Emergency Response Plan
- Comprehensive Spill Prevention/Plan (must consider hazardous waste and fuel handling, storage, disposal, spill prevention measures, staff training and emergency contacts) **Document attached**
- Waste Management Plan/Program
- Monitoring and Management Plans (e.g. water quality, air pollution, noise control and wildlife protection etc.)
- If project activities are located within Caribou Protection Areas or Schedule 1 Species at Risk known locations, please provide a Wildlife Mitigation and Monitoring Plan

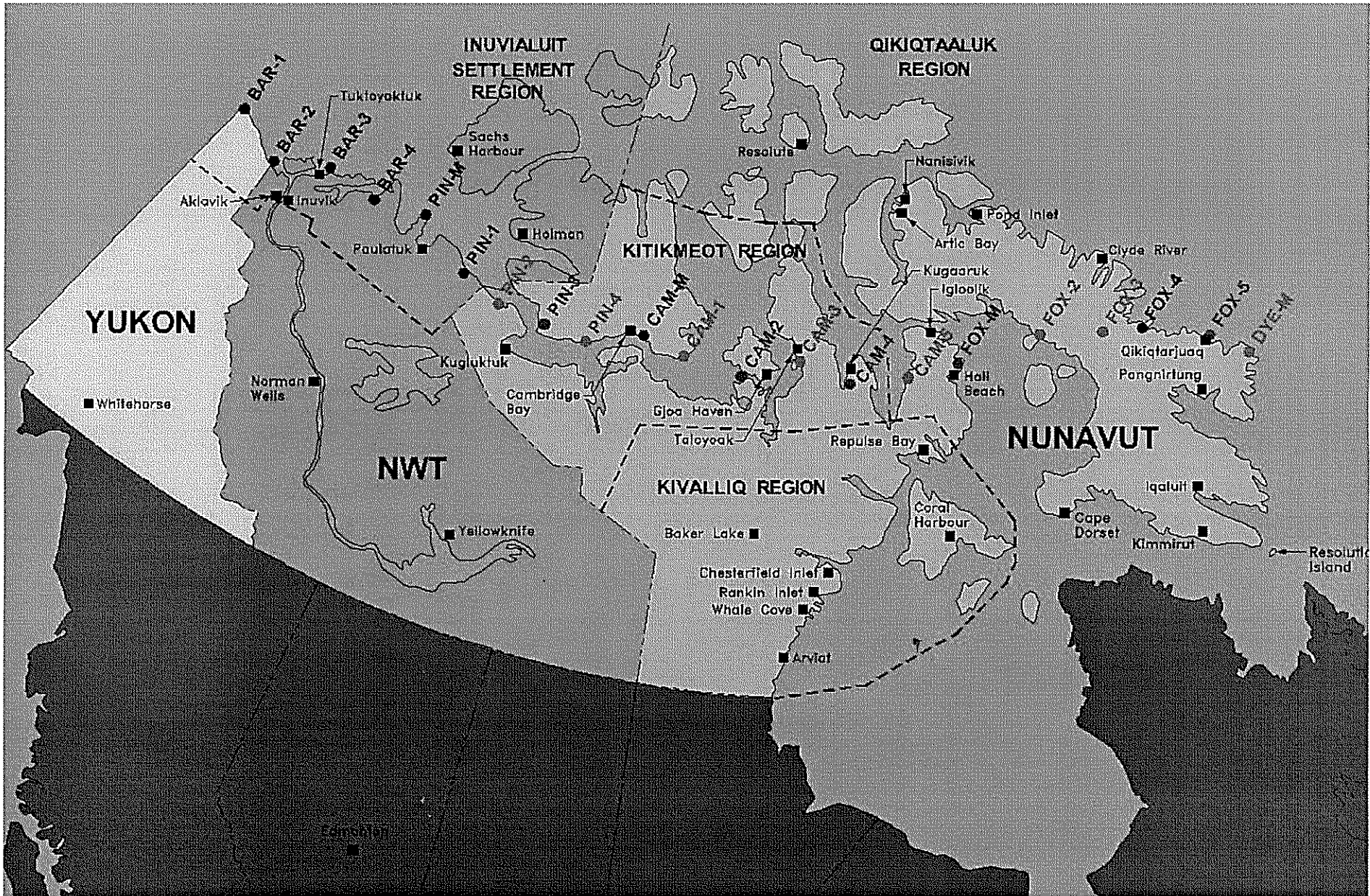
In addition, for Project Type 9 (Site Cleanup/Remediation), please provide the following additional supporting documents:

- Remediation Plan including cleanup criteria and how the criteria were derived.
- Human Health Risk Assessment of the contaminants at the site.



COORDINATES OF TRAIL AND CAMPS

FOX-2	N68 55.618	W75 15.380
	N68 56.555	W74 45.941
Temporary camp	N68 45.669	W74 06.975
	N68 39.756	W73 39.838
FOX-B	N68 38.411	W73 12.654
	N68 36.004	W72 42.400
	N68 39.815	W72 16.102
Temporary camp	N68 36.210	W72 02.078
	N68 40.984	W71 44.118
	N68 37.953	W71 23.313
	N68 37.913	W71 16.984
FOX-3	N68 38.991	W71 13.766



Photos of equipment to be used for CAT-train

CAT-train Mobilization to FOX-3 Dewar Lakes
Cleanup of the former FOX-3 DEW Line Site at Dewar Lakes



Photo 1: Track tractor (Challenger) pulling sleigh



Photo 2: Farm tractor equipped with Quatracks



Photo 3: Bulldozer pulling dump truck on sleigh



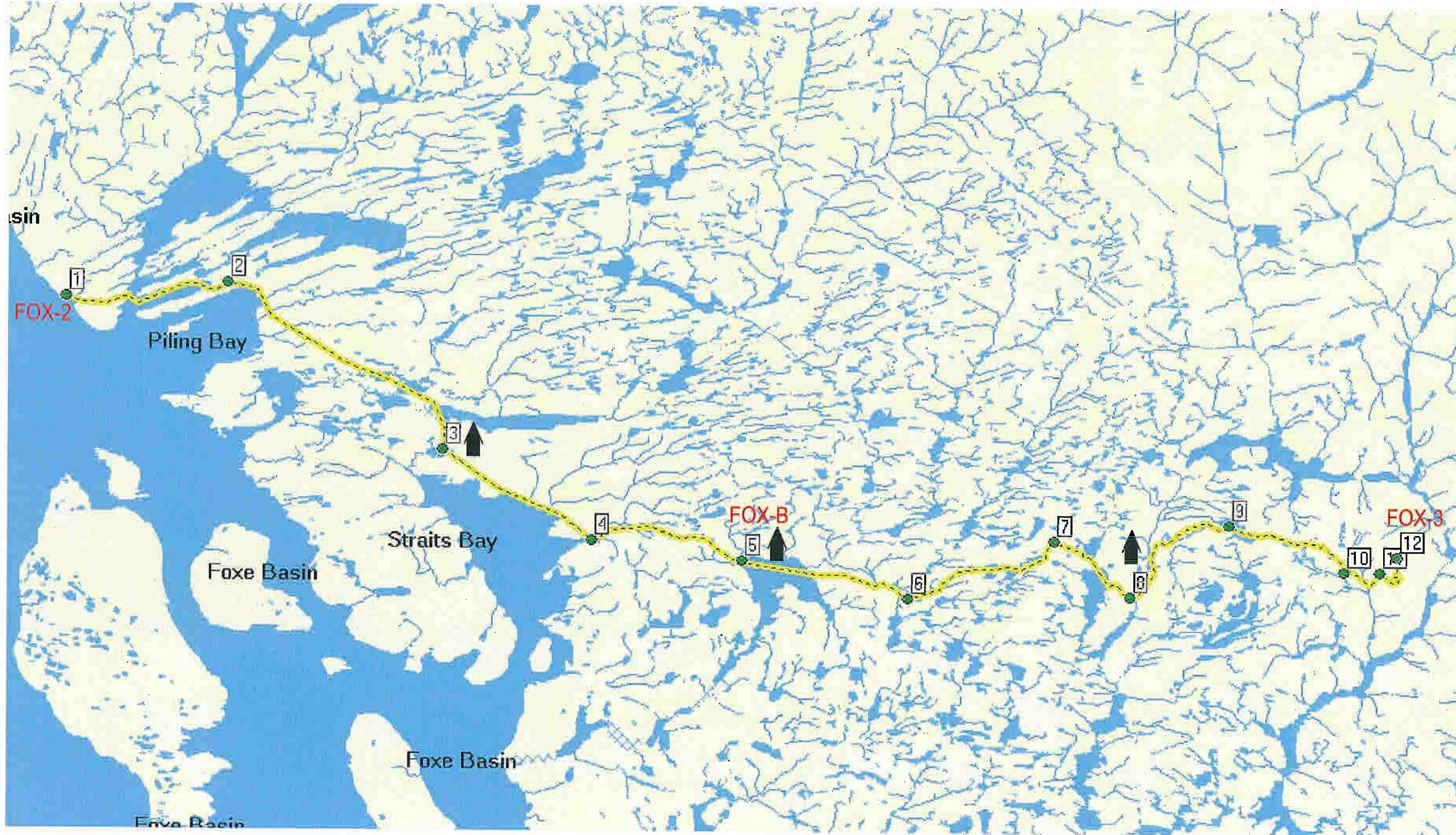
Photo 4: Snowmobile



Photo 5: Bombardier for scouting a communication link



Photo 6: Bulldozer D6 pulling ISO tank



LEGEND

Emergency Shelter (approximate location)

Waypoint coordinates:

- 1. N 68°55'61" W 75°15'38"
- 2. N 68°56'55" W 74°45'94"
- 3. N 68°45'66" W 74°06'97"
- 4. N 68°39'75" W 73°39'83"
- 5. N 68°38'41" W 73°12'65"
- 6. N 68°36'00" W 72°42'40"
- 7. N 68°39'81" W 72°16'10"
- 8. N 68°36'21" W 72°02'07"
- 9. N 68°40'98" W 71°44'11"
- 10. N 68°37'95" W 71°23'31"
- 11. N 68°37'91" W 71°13'98"
- 12. N 68°38'99" W 71°13'76"

Source : Mapsource

1	FINAL	2008-12-08	D.D.	N.D.	N.D.
NO.	VERSION	DATE	BY	VERIF.	APPR.

**FOX-3 DEW LINE
 CLEANUP PROJECT**
 APPLICATION FOR LAND USE PERMIT
**PLAN OF OVERLAND CAT-TRAIN
 ROUTE TO FOX-3**

SITE REMEDIATION SOLUTIONS 
 Biogenie S.R.D.C. Inc.
 1140 Levis Street, Lachenaie, Quebec, CANADA, J6W 5S6
 Tel.: (450) 961-3535 Fax: (450) 961-0220

MEASUREMENT UNIT METRE	SCALE:	DATE (month-year): DECEMBER 2008
DRAWN BY: D. DAoust	VERIFIED BY: N. DAVIS	APPROVED BY: N. DAVIS
PROJECT NO: BN8178-001	DRAWING NO: BN8178-001-E1-115-1	PAGE PS

FIGURE 1



Spill Response Contingency Plan

CAT-train Mobilization to FOX-3 Dewar Lakes Cleanup of the former FOX-3 DEW Line Site at Dewar Lakes

1 SPILL RESPONSE CONTINGENCY PLAN

Since environmental issues are of great importance to Biogénie and to the community, strong emphasis is put on the protocols for manipulation of hydrocarbons and other materials over the course of the activities undertaken. As such, we have developed specific measures to be taken in the event of a contingency situation such as a fuel or chemical spill to ensure that efficient and environmentally-safe measures will be taken in a contingency situation and that the actions prescribed hereafter meet all regulatory requirements in terms of reporting.

The purpose of the fuel spill contingency plan is to minimize impact on the environment and human health in case of a spill by implementing an efficient response plan adapted to various potential situations encountered during mobilization/demobilization activities.

1.1 METHODOLOGY

The greatest risk, in terms of likelihood of occurrence, and volume of potential spilled material, is that associated with POL transport during mobilization. Biogénie has taken every possible precaution to minimize the likelihood and limit the potential impact of fuel spills. The diesel and gasoline will be protected by lined containment during storage at FOX-2 and FOX-3.

During fuel transportation, spill kits, pumps and a spare tank will be available to transfer products in the event of a spill or leak. For the refueling of heavy equipment, generators, pumps, and tools, drip pans will be used to prevent spills, when required. An automatic stop-fill valve will be used. Absorbent pads will be available at all times.

Visual inspection will be performed daily and all leaks will be repaired and reported immediately. Winter roads will be maintained in good condition to ensure safe transportation.

In the event of a spill, emphasis will first be placed on human health. Any person detecting a spill shall take every safety precaution and wear adapted protective gear prior to approaching the spill area.

In the event of a spill, the person in charge shall:

- Isolate or eliminate all sources of ignition and identify the spilled material, if possible.
- Warn people and evacuate the area, if necessary.
- Report the following to the Site Superintendent:
 - the location of the spill;
 - the known or suspected time of the spill;
 - the substance spilled;
 - the estimated volume spilled;
 - the cause of the spill, if possible;
 - the flow direction of the spill.
- Ensure adequate use of spill response equipment.
- Document all events and measures taken.

Depending on the physical location of the spill, specific supplemental precautions must be taken with regards to the spill response procedures.

➤ ***On Land***

- Prevent dispersion in drainage system and ditch.
- Contain material with sorbent booms, dyke of snow or earth.
- Remove small spills with sorbent pads.

➤ ***Muskeg***

- Ensure integrity of marsh or vegetation.
- Remove free-phase product with pumps and skimmer and low pressure point equipment.
- Minimize damage caused by equipment.

➤ ***Snow and Ice***

- Prevent dispersion into waterways by containment with snow or other material.

- If necessary, pump water surface to recover diesel under ice.
- Remove minor spills with sorbent pads.



On Water

- Contain spill as close to release point as possible.
- Use floating sorbent booms to contain free-phase product.
- Use skimmer or sorbent pads to recover free-phase product.

1.2 FINAL SPILL REPORT

Spills or accidents will immediately be reported to Biogenie's Site Superintendent. A written spill report will be submitted to the Client within 24 hours of the incident. Any spills causing damage to the environment will immediately be reported. If more than 70 L of liquids or solids are spilled into the environment, the appropriate authority will automatically be notified by Biogenie's Site Superintendent.

Following a spill intervention, a final report describing actions taken, confirming the volume of the spill, and addressing future monitoring requirements will be submitted to DCC, including a sketched layout and photographs of the spill area.

1.3 EMPLOYEE TRAINING AND EXPERIENCE

Among the employees working on the Cat-train, several will be qualified to handle fuel and other hazardous material using available site-specific equipment with training in WHMIS, the OSHA 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) course and Transportation of Dangerous Goods (TDG). Supervision personnel will have an extra OSHA 8-hr training.

Other employees will be informed of the available spill response material and safety equipment and its adequate use for maximum efficiency.

Spill Kit Description and Location

Spill Kit	Location of spill kit	Contents
Liquid spill (4) (petroleum products, sludge, contaminated water)	Refuelling equipment Cat-train fuel hauling equipment	<ul style="list-style-type: none"> • Four bags (10 kg each) of loose absorbent material (3M Powersorb™, vermiculite, or equivalent) • Four booms containing absorbent material (3M Powersorb™ or equivalent) • Twelve pads of absorbent material (3M Powersorb™ or equivalent) • Five heavy-duty disposable bags • Two sets of protective clothing and equipment including chemical resistant gloves, a half-face respirator and cartridges, goggles, disposable coveralls (Tyvek™ or equivalent) • A container for storing the above

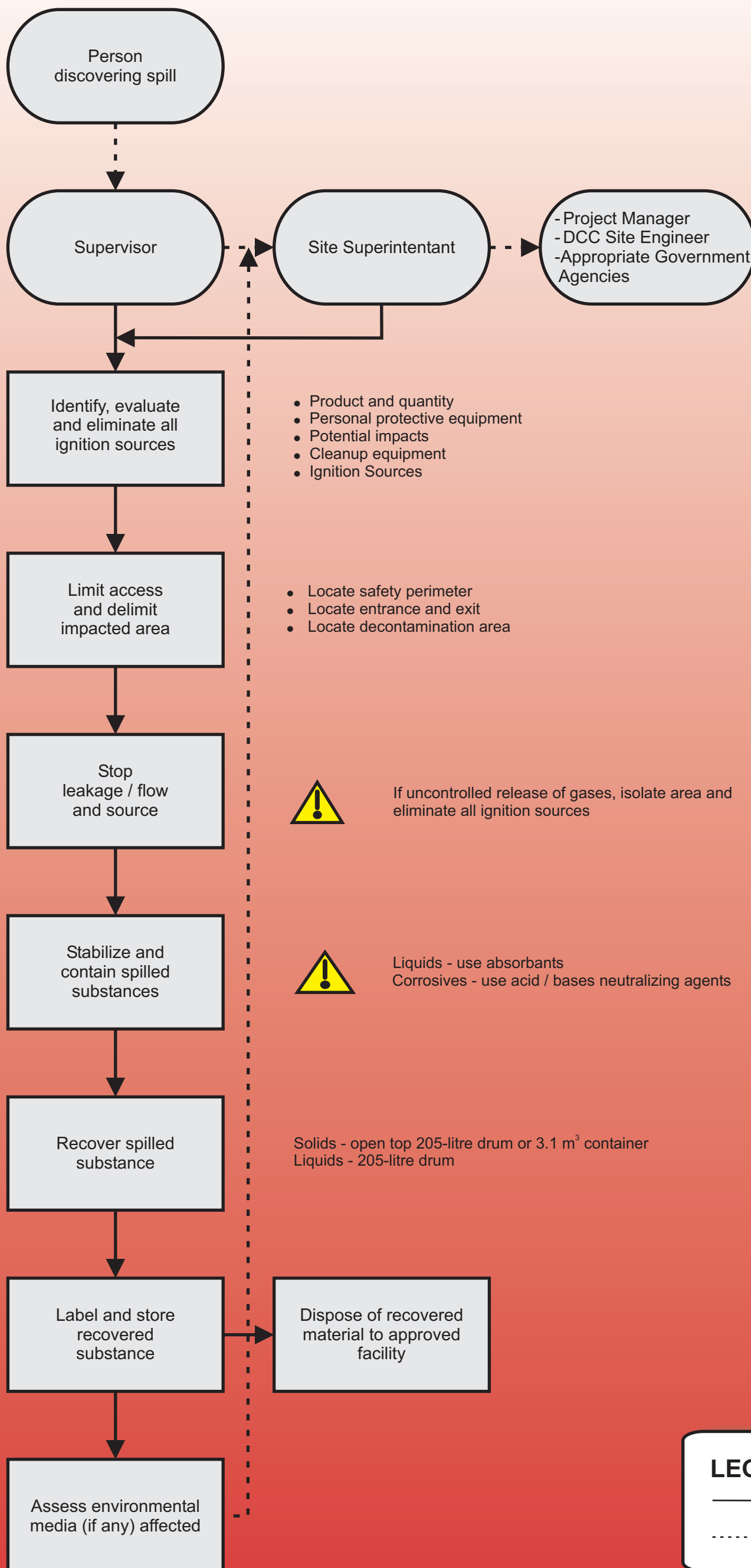
1.4 KEY CONTACT LIST

In the event of a spill, the Site Superintendent will contact the 24-hour Spill Report Line (867) 920-8130 and provide them with all relevant information. All spills shall be documented.

SPILL RESPONSE PROCEDURE

RESPONSE

REFERENCE



- Emergency Contact List
- Spill Report Form
- Industrial Accident or Potential Risk Report

- Material safety data sheets
- Site plans
- Emergency response guidebook
- Hazardous material inventory

- Material safety data sheet table

- Acid / bases neutralizing guidelines

LEGEND

- Activity
- - - - -→ Report



NUNAVUT SPILL REPORT (Oil, Gas, Hazardous Chemicals or other Materials)

ᑲᓄᐸᓚᓗᑦ ᓂᓄᑦᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓂᐸᓂᑦᓂᓗᑦ, ᑭᓚᓂᓗᑦ, ᓄᑦᓂᓂᓗᑦ, ᓂᓄᓂᓗᑦ ᓄᑦᓂᓗᑦ)

24-Hour Report Line 24-ᓄᑦ ᓂᓄᑦᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ

Phone/ ᓄᐸᓂᓗᑦ (867) 920-8130

Fax/ ᓂᓄᐸᓚᓗᑦ (867) 873-6924

A Report Date and Time ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ	B Date and Time of Spill(if known) ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓄᐸᓂᓗᑦ)	C <input type="checkbox"/> Original Report ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ <input type="checkbox"/> Update No. _____ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ	Spill Number ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ
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D Location and Map Coordinates (if known) and Direction (if moving) ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓄᐸᓂᓗᑦ) ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓄᐸᓂᓗᑦ)

E Party Responsible for Spill (Full Name and Address) ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ)

F Product(s) Spilled and Estimated Quantities(provide metric volumes/weights if possible) ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ)

G Cause of Spill ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ

H Is Spill Terminated? ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ? <input type="checkbox"/> Yes/ᓄᐸ <input type="checkbox"/> No/ᓄᐸᓂ	I If Spill is Continuing, Give Estimated Rate ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ	J Is Further Spillage Possible? ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ? <input type="checkbox"/> Yes/ᓄᐸ <input type="checkbox"/> No/ᓄᐸᓂ	K Extent of Contaminated Area (in square metres if possible) ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ)
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L Factors Affecting Spill or Recovery(weather conditions, terrain, snow cover, etc.) ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ)	M Containment (natural depression, dykes, etc.) ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ (ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ)
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N Action, if any, taken or Proposed to Contain, Recover, Clean Up or Dispose of Product(s) and Contaminated Materials
ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ

O Do You Require Assistance? ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ? <input type="checkbox"/> No ᓄᐸᓂ <input type="checkbox"/> Yes, describe: ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ	P Possible Hazards to Persons, Property or Environment e.g. fire, drinking water, fish or wildlife ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ
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Q Comments and/or Recommendations ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ	FOR SPILL LINE USE ONLY ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ Lead Agency ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ Spill Significance ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ Lead Agency Contact and Time ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ Is this file now closed? ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ?
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Reported By ᓄᐸᓂᓗᑦ	Position, Employer, Location ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ, ᓄᐸᓂᓗᑦ	Telephone ᓄᐸᓂᓗᑦ
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Reported To ᓄᐸᓂᓗᑦ	Position, Employer, Location ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ ᓄᐸᓂᓗᑦ, ᓄᐸᓂᓗᑦ	Telephone ᓄᐸᓂᓗᑦ
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EMERGENCY CONTACT LIST



RESOURCE	CONTACT/LOCATION	PHONE NUMBER
Sat-Phones		
	FOX-2	
	FOX-B	
	FOX-3	
Advanced Explorations	Hall Beach office	867-928-8030
	Roche Bay site	
Helicopter Roche Bay		604-759-3432
Office/Garage Hall Beach		867-928-8022
Air Transportation		
Air Nunavut	Air Ambulance Iqaluit	867-979-4018
Canadian Helicopter	Hall Beach	705-494-6011 ext. 4832
	Iqaluit	709-686-2095
Kenn Borek Air	Air Ambulance Iqaluit	867-979-0040
North Warning System Operations	Major A.D. Cameron	613-998-8602
Fire		
Local Fire Department	Iqaluit – Fire or medical emergencies	867-979-4422
	Hall Beach	867-928-8888
	Clyde River	867-924-6223
Police		
Police Department	Hall Beach	867-928-1111
	Clyde River	867-924-1111
Hospitals		
Hall Beach Health Center	Hall Beach	867-928-8827
Baffin Regional Hospital	Iqaluit	867-979-7300
Clyde River Health Center	Clyde River	867-924-6377
Environmental Emergency		
24-hour Spill Line	NWT/Nunavut	867-920-8130
Canadian Transport Emergency Centre (CANUTEC)	24 hour service	613-996-6666
Environment Canada, Enforcement Branch	Jimmy Noble Environment/Emergencies Enforcement Officer	867-975-4644

RESOURCE	CONTACT/LOCATION	PHONE NUMBER
Department of sustainable development, Government of Nunavut	Robert Eno Manager Pollution Control and Air Quality Environmental Protection Service	867-975-5907
Qikiqtani Inuit Association	Officers available 24 hours	867-975-8419
INAC Water Resources	Iqaluit	Tel.: 867-975-4298 Fax: 867-979-6445
Health and Safety		
Poison Control Centre	Baffin Regional Hospital	
	Clyde River Health Centre	867-924-6377
	Qikiqtarjuaq Health Centre	867-937-8916
Workers' Compensation Board 24-hour Accident Reporting Line	Barron Building/1091 Box 669 Iqaluit, NU X0A 0H0	1-877-404-4407
Department of Human Resources	Qikiqtaaluk Region	1-800-682-9033
Wildlife Management		
Nunavut Wildlife Management Board	P.O. Box 1379, Lot 924 Parnaivik Building Iqaluit, NU X0A 0H0	867-975-7300
Heritage Resources		
Inuit Heritage Trust Incorporated	P.O. Box 2080 Iqaluit, NU X0A 0H0	867-979-0731
Suppliers		
Aquaguard Spill Response	Spill response and oil recovery equipment	1-604-980-4899
Quatrex Environment		1-800-967-3002
Management		
DCC Project Management Office	Ottawa	613-998-9548
	Patricia O'Donnell, Site Engineer	613-990-2857
Biogenie S.R.D.C. Inc. Project Management	Sylvain Laberge, Project Director	514-895-4517
	Quebec City Office	418-653-4422
	Montreal Office	450-961-3535