MEMORANDUM

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

Project:	**Whale Cove Fuel Storage Facility Increase Capacity/ Code Compliance**	Date:	**June 23, 2006**
FSC Project #:	**2002-1350-18**	To:	**Carolanne Inglis, Technical Advisor**
Re:	NIRB - SCREENING PART 2 FORM PROJECT SPECIFIC INFORMATION REQUIREMENTS (PSIR)	Cc:	

1. SUBMISSIONS

All required documentation is included in this package with the exception of the 1:250,000 mapping which is to follow ASAP.

2. PROJECT DESCRIPTION

General

1. Name and location of proposed project. – Whale Cove Fuel Storage Facility Increase Capacity/ Code Compliance, Whale Cove Nunavut
2. Contact information for proponent(s) and other project contacts.

Brian Duguay, Project Officer
Government of Nunavut, Community & Government Services, Projects Division, Kivalliq Region
Rankin Inlet, Nunavut
X0C 0G0

Fax: 867-645-8196
Phone: 867-645-8185
Email: bduguay@gov.nu.ca

Kevin Hodgins, P. Eng
PO Box 1777
4910 53rd Street
Yellowknife, NT
X1A 2P4

Fax: (867) 920-4319
Phone: (867) 920-2882
Email: kevinh@fsc.ca

3. List of acts, regulations and guidelines that apply to project activities
   See attached Specification section 01060 (Appendix A)

4. List of approvals, permits and licenses required including the authorizing agency, activity to which the authorization applies, and dates.
   NWB License for Hamlet of Whale Cove

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

Project Information

5. History of the site if it has been used in the past.
   Proposed Fuel Facility is to be in same location as existing fuel storage facility site. Therefore the site's history of use has been for Bulk Fuel Storage.

   Pitting Site is an existing pit that has been opened and use by the hamlet. Land Farm will be located at the pitting area.

6. Map of the project site within a regional context indicating the distance to the closest communities.
   See attached drawings of Whale Cove for proposed locations (Appendix B)

7. Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.
   See attached project drawings (Appendix B)

8. Discuss the project need and purpose.
   The need for the proposed project is to meet the 20 year demand for Fuel in Whale Cove, Nunavut.

9. Discuss alternatives to the project and alternatives to project components.
   There are no alternatives

10. Describe **all** activities included in this project.
    - Pitting – Material will be hauled from existing gravel pit (see mapping in appendix B for location)
    - Stockpiling – Material will be stockpiled at Fuel Storage Facility as construction is in progress to use in the construction of the new bermed area. Material will also be stockpiled in the land farm for remediation.

11. Indicate whether any of the following Department of Fisheries and Oceans (DFO) Operational Statement (OS) activities apply to the project proposal:
    None

12. If any of the DFO 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, please provide a signed statement of confirmation.
    Not Applicable

13. Provide a schedule for the above activities.
    Not Applicable

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

Pits/ Quarries

14. Describe any field investigations and the results of field investigations used in determining new extraction sites.
    Not Applicable. No new extraction sites

15. Conceptual design including footprint.
    See drawings provided in Appendix B

16. Describe the type and volume of material to be extracted.
    Granular Material Volumes Estimate:
    Coarse Gravel – 1500 m^3
    Fine Gravel – 1055 m^3
    Sand – 360 m^3

17. The depth of overburden.
    Not Applicable

18. Describe any existing and potential for thermokarst development and any thermokarst prevention measures.
    None/ Not Applicable

19. Describe any existing or potential for flooding and any flood control measures.
    None/ Not Applicable

20. Describe any existing or potential for erosion and any erosion control measures.
    None/ Not Applicable

21. Describe any existing or potential for slumping and any slump control measures.
    None/ Not Applicable

22. Describe the moisture content of the ground.
    Located in Vadose Zone – Moisture content varies and is less than saturation

23. Describe any evidence of ice lenses.
    None Observed

24. If blasting, describe methods employed.
    None/ Not Applicable

25. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.
    None/ Not Applicable

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

26. Discuss safety measures for the workforce and the public
    Workforce - Follow all construction activity requirements as per WCB requirements
    Public – Public will be restricted from site during construction

Stockpiles

27. The location and conceptual design of stockpile(s). (show on map)
    See drawings attached (Appendix B)

28. Describe the types of material to be stockpiled. (ie. granular material, overburden)
    Coarse Gravel, Fine Gravel, Sand, Contaminated Soil

29. Anticipated volumes of types of material to be stockpiled.
    Coarse Gravel – 1500 m^3
    Fine Gravel – 1055 m^3
    Sand – 360 m^3
    Contaminated Soil – 1400 m^3

30. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.
    None/ Not Applicable

Transport

31. Describe how the site will be accessed and how supplies will be brought to site. (show route on map)
    Both sites will be accessed by existing roads. See drawings attached in Appendix B

Camp Site

32. A list of existing and proposed camp structures and infrastructure.
    None/ Not Applicable

33. Describe the type of camp: None/ Not Applicable
    a. Mobile
    b. Temporary
    c. Seasonal
    d. Permanent
    e. Other

34. Maximum number of people expected on site.
    None/ Not Applicable

35. Describe the source of power for the camp.
    None/ Not Applicable

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

Equipment

36. A list of equipment indicating uses and approximate dimensions.

Equipment type and number	Size – dimensions	Proposed use
Dozer	Case 560	Earth Works
Dump Truck	Kenworth 20 tonne	Hauling granular material
Front End Loader	Case W14H	Earth Works
Boom Truck	Chevy Kodiak 5 Tonne	Earth Works, Moving tanks and equipment
Excavator	Komatsu PC200LC	Earth Works, Excavation
Backhoe	Case 580 Super L	Earth Works
Roller/Compactor	Bomag BW172D	Earth Works, Compaction

37. If possible, provide digital photos of equipment.
    See Appendix C for Photos

Water

38. Location of water source(s) (show on map).
    See Appendix B for drawings

39. The estimated rate of water consumption (L/d).
    Estimated rate of water consumption during hydrostatic testing = 1380 L/day
    Tanks to be hydrostatically testing each for a period of 24hours.

40. Describe water intakes. Describe methods for the prevention of fish entrapment.
    DFO requirements will be followed for fish screens to prevent fish entrapment

41. If applicable, discuss how surface water and underground water will be managed.
    Not Applicable

Waste (Grey water, Sewage, Other)

42. Describe the characteristics, quantities, treatment, storage, transport, and disposal methods for the following:
    - Contaminated Soil – This waste material will be excavated and removed from site and then relocated to the land farm location for storage and remediation. There is an estimated quantity of approximately 1400 m^3 of contaminated soil located at the Fuel Storage Facility that will be removed and remediated.

Fuel

43. The types, quantities (number of containers, type of containers and capacity of containers), method of storage, method of containment, location of storage (show on map) and uses.
    Not Applicable

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

44. Describe secondary containment measures including the type of material or system used (for storage of fuel over 4000L).
    Not Applicable

45. Describe the method of fuel transfer and the method of refueling.
    Not Applicable

Chemicals and Hazardous Materials (i.e. oils, greases, drill mud, antifreeze, calcium or sodium chloride salt, lead acid batteries, cleaners)

46. The types, quantities (number of containers, the type of container and capacity of containers), method of storage, method of containment, location of storage (show on map), and uses.
    Not Applicable

47. Describe any secondary containment measures including the type of material or system used.
    Not Applicable

48. Describe the method of chemical transfer.
    Not Applicable

Explosives

49. Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), method of storage.
    Not Applicable

Public Involvement/ Traditional Knowledge

50. Describe the level of public involvement, a summary of public involvement measures, a summary of concerns expressed, and methods of addressing the concerns.
    This project has been approved by the Whale Cove Hamlet Council as part of their capital planning process

3. DESCRIPTION OF THE EXISTING ENVIRONMENT

1. Describe the existing environment, including physical, biological and socioeconomic aspects.

Physical Environment

- Proximity to designated environmental areas, including parks, heritage sites, sensitive areas and other protected areas.
  None
- Eskers and other unique landscapes (e.g. sandhills, marshes, wetlands, floodplains).
  None
- Evidence of ground, slope or rock instability, seismicity.
  None
- Evidence of thermokarsts
  None

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

- Evidence of ice lenses
  None
- Surface and bedrock geology.
  Surface and bedrock at Tank Farm – Site consists of imported granular material over bedrock
  Surface and bedrock at Land Farm – Site consists of granular material over bedrock. Site is existing gravel pit.
- Topography.
  Topography of the area consists of gentle rises and falls toward the ocean with rocky outcrops.
- Permafrost (e.g. stability, depth, thickness, continuity, taliks).
  Permafrost is continuous at a depth of approximately 1.0m
- Sediment and soil quality.
  Not Applicable
- Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones).
  Not Applicable
- Tidal processes and bathymetry in the project area.
  Not Applicable
- Water quality and quantity.
  Not Applicable
- Air quality.
  Not Applicable
- Climate conditions and predicted future climate trends.
  Not Applicable
- Noise levels.
  Construction Zone Noise – limited to WCB requirements for worker exposure
- Other physical Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review
  Not Applicable

Biological Environment

- Vegetation.
  Not Applicable
- Wildlife, including habitat and migration patterns.
  Not Applicable
- Birds, including habitat and migration patterns.
  Not Applicable
- Species of concern as identified by federal or territorial agencies.
  Not Applicable

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

- Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns.
  There is a concern of fish in water intake area. This is being satisfied by following DFO standards
- Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review.
  None

Socioeconomic Environment

- Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project and adjacent areas.
  None
- Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations.
  None
- Local and regional traffic patterns.
  Not affected
- Other Valued Socioeconomic Components (VSEC) as determined through community consultation and/or literature review.
  None

4. IDENTIFICATION OF IMPACTS

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).
   None
1. Discuss the impacts identified in the above table.
   None
2. Discuss potential socioeconomic impacts
   None
3. Discuss potential for transboundary effects related to the project.
   None

5. MITIGATION OF IMPACTS

1. Describe measures to mitigate impacts to the physical, biological and socioeconomic environment as identified in Section
   Not Applicable

6. CUMULATIVE EFFECTS

1. Discuss how the effects of this project interact with the effects of relevant past, present and reasonably foreseeable projects in a regional context.
   None

Noble House 1088C
P.O. Box 1779
Iqaluit, Nunavut
Canada X0A 0H0
Tel: (867) 979-0555
Fax: (867) 979-5711
www.fsc.ca

FSC
ARCHITECTS
& ENGINEERS

7. SUPPORTING DOCUMENTS

1. Please provide the following supporting documents:
    - Abandonment and Decommissioning Plan
        None
    - Existing site photos with descriptions
        See Appendix D for Photos
    - Emergency Response and Spill Contingency Plan
        See Appendix E for Spill Contingency Plan
    - Monitoring Plan
        None

PER: Ron Kent, P.Eng

Signature: