

Summary addendum

NUNAVUT WATER BOARD - WATER LICENCE SUPPLEMENTAL INFORMATION CAM-F DEW LINE SITE CLEAN-UP PROJECT, SARCPA LAKE, NUNAVUT

Additional Information on Construction and Construction Camp Work

A water use application was forwarded to the Nunavut Water Board by Indian and Northern Affairs Canada on April 1, 2005 for the clean-up work of the CAM-F DEW Line site and associated construction camp. Both contracts have now been awarded to Biogenie S.R.D.C. (Clean-up) and Mikim Contracting Ltd. (Camp). Supplemental information to the original licence application is now available.

The following summary table cross-references the previous licence application with the supplemental information.

Summary Table: Supplemental Information and Modifications to the Water Use Application

| Application Section | Mod. | Add. | Details of Modification or Addition | Document | Associated Section in the document |
|---|-------------|-------------|---|---------------------------|--|
| 4. Description of Undertaking | | x | Removal of barrels from the lakeshore and shallow water | WP cleanup Appendix iv | 3.5 Borrow Site area location plan |
| 7. Quantity of Water involved (Application) | x | | Approximately 45 persons will use the camp during work season, plus occasional visitors using 225l/person/day. Plus up to 500,000 litres will be used for operational purposes. | WP camp WP cleanup | 2.4.2.2 and 2.4.3 3.6 |
| | | | Work season is estimated to last approximately 75 days per year. Season duration may vary depending on weather | WP cleanup WP camp | Appendix A 2.4 |
| 13 Studies Undertaken | | x | Archaeological assessment found one tent ring well away from the project area. No further study was recommended | AIA | Appendix iii |
| | | x | Historical Geotechnical report used as a reference in the design | GEO | Appendix iv |
| 14 Propose Time Schedule | x | | Completion date May 2008 | WP cleanup | Appendix A |
| Questionnaire | | | | | |
| 7. Camp Population | x | | Approximately 45 persons will use the camp during work season, plus occasional visitors. | WP camp | 2.4.3 |
| | | | Work season is estimated to last approximately 75 days per year. Season duration dependant on the weather | WP cleanup WP camp | Appendix A 2.4 |
| 9 & 10 Camp Location | | x | Based on site observations the camp is located away from water bodies & drainage path, on firm ground | WP camp | 2.3 |
| 13 Community consultation | | x | Hamlet council meeting and 2 site visits | WP cleanup | 1.1 and 1.2.1 |
| 23, 24, 25 Spill contingency | | x | Updated Spill Contingency Plan produced | WP cleanup | Section 4 |
| 24 Spill Kits | | x | Table and Map provided | WP cleanup | Table II (p.28) and Figure 7 in Appendix H |

| Application Section | Mod. | Add. | Details of Modification or Addition | | Document | Associated Section in the document |
|-----------------------|--|------|--|---------------------------------|-----------------------|---|
| 25 Fuel Storage | | x | Details of storage provided, MSDS provided | | WP cleanup | Section 2 and 5.5.1, & Fig. 4,5,6 Appendix G |
| 26 Water source | | x | Sarcpa Lake will be used | | WP cleanup WP camp | 3.6 2.4.2.2 |
| 27 Water Demand | x | | See water usage table below | | WP camp | 2.4.2 |
| | | | | | | |
| Water Usage Breakdown | | | | | | |
| Usage | Description & calculation | | Water intake | Water discharge | | |
| | | | | Treated through Biogreen system | | Treated through Biogenie waste water treatment system |
| | | | | Grey water | Black water | |
| | | | Waste water | | | |
| Camp | 225L x 45 persons x 75 days | | 759,375 | 455,638 | 227,800 | |
| Site | Asbestos abatment & equipment cleaning | | 100,000 | | | 100,000 |
| | Barrel & heavy equipment cleaning | | 150,000 | | | 150,000 |
| | Dust abatment on roads | | 150,000 | | | |
| | Soil compaction | | 100,000 | | | |
| Total | | | 1,259,375 | 455,638 | 227,800 | 250,000 |

| Application Section | Mod. | Add. | Details of Modification or Addition | Document | Associated Section in the document |
|------------------------------|-------------|-------------|--|---------------------------------------|--|
| 28 Pumping operation | | x | Description of Water pumping/transport | WP camp WP cleanup | 2.4.2 3.6 |
| 29 Water Monitoring | | x | Water quality monitoring | WP camp | 2.4.2.1 |
| 30 Water Treatment | | x | Water Treatment See water usage table | WP camp | 2.4.2 |
| 31 Water Storage | | x | Water Treatment See water usage table | WP camp | 2.4.2 |
| 32 a Sewage | x | | Wastewater treatment See water usage table | WP camp | 2.4.6.1 and 2.4.6.2 and Figure 3 pg. 12 and Appendix C |
| 32 b Grey Water | x | | Wastewater treatment See water usage table | WP camp | 2.4.6.1 and 2.4.6.2 |
| 32 c, d Solid Waste & metals | | x | Solid waste management Landfill design rational | WP camp WP cleanup Supplemental | 2.4.7 1.2.4.4 to 1.2.4.8 Appendix iv |
| 32 e Waste Oil/HazWaste | | x | Waste management | WP cleanup | 1.2.4.8 and 3.2 |
| 32 f Empty Barrels | | x | Management of barrels and content | WP cleanup | 1.2.4.7 and 1.2.4.8 |
| 33 Incinerator | | x | Incinerator description | WP camp | 2.4.7 and Appendix D |
| 34 Non combustible Waste | | x | Disposal of non combustible waste | WP camp WP cleanup | 2.4.7 1.2.4.8 |
| 35 Dimensions of sumps | | x | NA. No sump will be used. | WP camp | 2.4.6.1 and 2.4.6.4 |
| 36 Monitoring Wells | | x | Information on installation | WP cleanup | 1.2.4.15 |
| 37 Water and cold climate | | x | Water & wastewater treatment units used in Saglek Labrador successfully | WP camp | 2.4.6.2 and |
| 38 Abandonment | | x | Final Cat-Train is scheduled for March 2008 | WP cleanup | 1.2.4.17 and Appendix A |

Mod.: Modification to Information provided in the Application. Add.: Addition to information provided in the Application.

| Summary Table Abbreviation for Report Names | Document Title | Document Location in the Supplemental information package |
|---|--|--|
| WP Clean-up | Site Restoration of Sarcpa Lake -Workplan | Appendix i |
| WP: Camp | Provision and Operation of a Construction Camp | Appendix ii |
| AIA Note: A translation of the summary is included in the appendix | Archaeological Impact Assessment, CAM-F DEW line Site Remediation Program (Permit 05-028A), | Appendix iii |
| Geo | Geotechnical Evaluation and Preliminary Design Clean-up of CAM-F Dew Line Site , Sarcpa Lake, N.W.T, EBA Engineering Consultants Ltd., Edmonton Alberta, December 1996. | Appendix iv |

List of Tables and Figures

| Location | Number | Title |
|--|----------|---|
| Summary Addendum | | Summary Table: Supplemental information and modifications to the 2005 Water Use Application |
| WP; Clean-up | I | Disposal Scenarios for Contaminated Soil |
| " | II | Spill Kit Description and Locations |
| " | III | Possible Emergency Situations Identified for the project |
| " Appendix A | | Work Schedule |
| " Appendix B | | Equipment List |
| " Appendix C | Fig. 1 | Cat Train Route |
| | Fig 2 | Ice Road Section |
| " Appendix D | Fig 3 | Site Plan |
| " Appendix D | Fig 4 | Location of Water Processing and Temporary Storage Area |
| " Appendix D | Fig. 5 | Details, Waste Processing Area |
| " Appendix G | Figure 6 | Camp and Fuel Storage Location |
| " Appendix G | Figure 7 | Construction Layout- Fuel Storage Capacity |
| " Appendix G | Figure 8 | Construction Layout –Camp Sewage System and Fuel Storage Location |
| " Appendix H | Figure 7 | Health and Safety Plan- Evacuation and Equipment Location Plan |
| " Appendix I | | Spill Reporting and Response Procedures |
| " Appendix J | | Spill Report Form |
| " Appendix K | | Spill Emergency Contact List |
| " Appendix K | | Medical Emergency Response Procedures |
| WP: Camp | Table I | Summary Schedule for major Activities |
| " | Figure 1 | Camp and Fuel Storage Location |
| " | Figure 2 | Construction Layout –Camp Sewage System and Fuel Storage Location |
| " | Figure 3 | Detailed Drawing of Water Supply Intake Design and Installation |
| " | Figure 4 | Sarcpa Lake Sewage Discharge tile field |
| " | Figure 5 | Flow Chart of the BioGreen Wastewater Treatment System |
| " | Table II | Wastewater Treatment Targets |
| " | Figure 6 | Sarcpa Lake Sewage Discharge Sump |
| " | Figure 7 | Sarcpa Lake Sewage Lagoons |
| " Appendix A | | Equipment Inventory |
| " Appendix B | Table 1 | Sarcpa Lake Water Chemical Analysis Results (with back-up) |
| " Appendix C | | Aeration Tank Section View |
| " Appendix D | | Incinerator overview and details |
| Archaeological Impact Assessment | Figure 1 | Location of CAM-F |
| " | Figure 2 | Project area |
| " | Figure 3 | Aerial view of Cam-F |
| " | Figure 4 | Field Reconnaissance Cam-F |
| " | Figure 5 | Location of Archaeological site relative to CAM-F facilities |
| Appendix iv : Landfill design rational and project civil drawings | CO1 | Location plan |

| Location | Number | Title |
|----------|--------|---|
| | | |
| “ | CO2 | Overall site plan/project layout |
| “ | CO3 | Station Area Site Plan |
| “ | CO4 | East Station Area Site Plan |
| “ | CO5 | Former Construction Camp Site Plan |
| « | CO6 | Non-Hazardous Wastes Landfill Section and Detail |
| “ | CO7 | Secure Storage facility key trench Excavation plan and Grading/Instrumentation Plan |
| “ | CO9 | Contaminated Areas Sheet 1 |
| “ | CO10 | Contaminated Areas Sheet 2 |
| “ | CO11 | Contaminated Areas Sheet 3 |
| “ | CO12 | Miscellaneous Details |
| “ | | Borrow Area Site Location Plan |
| | | |
| | | |