



**Environment Environnement
Canada Canada**

Environmental Protection Branch
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2 July 2010

EC File: 4105 006 260
NWB File: 1BR-PEL0510

Richard Dwyer
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Via email: licensingadmin@nunavutwaterboard.org

RE: 1BR-PEL0510 CAM-4 Renewal Application

Environment Canada (EC) has reviewed the information submitted with the above-mentioned application to the Nunavut Water Board (NWB). The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

AECOM, on behalf of Defense Construction Canada and the Department of National Defense, is applying to renew the water license at the CAM-4 DEW Line site. CAM-4 is located near the community of Kugaaruk, which lies approximately 14 km southeast of the site. The purpose of the project is to collect sufficient information to assess the performance of the landfills from a geotechnical and environmental perspective. The landfill monitoring plan specifies the requirements for visual inspection and chemical and thermal monitoring of landfills therefore project activities include the collection of surface soil and groundwater samples and the monitoring of ground temperatures.

EC provides the following comments and recommendations for the NWB's consideration:

Spill Contingency Plan

- A section should be included in the Plan that provides direction regarding response action for spills on various types of terrain (e.g. spills on land, water, snow/ice, muskeg, etc.)
- The proponent should provide a general list of substances that could potentially be spilled at the CAM-4 site. Personnel should be made aware of the properties of the products that they handle and have access to material safety data sheets (MSDS) and other sources of information. This information should be included in the Plan. A copy of the Plan should be posted at any location where these products are stored and at each fuel cache and refuel station.
- EC recommends that drip pans be used when refueling equipment on site in order to help prevent spills from occurring.
- Refuelling shall not take place below the high water mark of any water body and shall be done in such a manner as to prevent any hydrocarbons from entering any water body frequented by fish.

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- A spill kit, including shovels, barrels, absorbents, etc. should be readily available at all locations where fuel is being stored or transferred and with the ATVs in order to provide immediate response in the event of a spill.
- EC recommends the use of secondary containment, such as self-supporting insta-berms, for storage of all barrelled fuel rather than relying on natural depressions to contain spills.
- EC recommends that a 24 Hour NWT/NU Spill Response Form be attached to the Plan.

Comments previously submitted on behalf of EC by C. Spagnuolo on 22 December 2005 and by D. Abernathy on 14 March 2006 would still apply to this project (see attached). If there are any changes in the project EC should be notified as further review may be necessary. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4631 or by email at paula.c.smith@ec.gc.ca

Yours truly,



Paula C. Smith
Environmental Assessment Coordinator

cc: Carey Ogilvie (Head, Environmental Assessment-North, EPO, EC, Yellowknife, NT)
Ron Bujold (Environmental Assessment Technician, EPO, EC, Yellowknife, NT)



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Our file: 4517 000 005

December 22, 2005

Phyllis Beaulieu
Manager of Licensing
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Via Email

Re: NWB5PEL/TR/J1 – Defence Construction Canada – Submission of CAM-4, Pelly Bay DEW Line Site Monitoring Plan

On behalf of Environment Canada (EC), I have reviewed the above mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Defence Construction Canada (DCC) has submitted a monitoring program for the CAM-4 DEW Line reclamation project to fulfill the Part J, Item 1 requirement of its water license. The proponent's monitoring program describes how soil and groundwater data will be collected to allow for the assessment of environmental impacts due to project reclamation activities. The CAM-4 DEW Line site is situated nearby the community of Kugaaruk, having a coordinate of 68°27'N, 89°45'W. Project reclamation efforts are ongoing, and the CAM-4 DEW Line project is scheduled to be complete by 2007.

The Monitoring Plan describes construction and post-construction programs, and detailed landfill requirements. The post-construction landfill monitoring plan summarizes the four evaluation components, namely visual, soil, groundwater, and thermal monitoring, and the frequency of monitoring landfills. The monitoring of landfills will be implemented in accordance with the DEW Line Clean-up Environmental Provisions established in the DND/NTI Cooperation Agreement. The detailed landfill monitoring requirements section summarizes the functions of each landfill, the types of landfill monitoring stations and their locations (e.g., soil and ground water monitoring wells and thermistors), and the frequency and parameters that will be used for monitoring the evaluation components.

The Monitoring Plan does not include any information regarding monitoring of the landfarm located on site. Environment Canada requests clarification regarding whether the landfarm is still operational, or if remediation objectives have already been met. Environment Canada recommends that if the landfarm is still operational, the Monitoring Plan be modified to include monitoring of hydrocarbons in the groundwater (total petroleum hydrocarbons (TPH)) and the soil (TPH fractions F1 – F3). The location of monitoring locations should be indicated on a map. Once remediation objectives are met and the landfarm is closed, further monitoring will not be required.



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The Plan does not currently include any provisions for monitoring groundwater at the east lobe of the lower site landfill. While soil monitoring is proposed for this lobe, no groundwater wells are indicated on Figure CAM 4.6. Environment Canada requests clarification regarding whether groundwater will be monitored at this location. If no groundwater monitoring is proposed, the proponent should provide justification regarding why it is not required for this lobe, but is included for the south lobe (monitoring location MW-19), which has also regraded and left in place.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me if you have any questions or comments with regards to the foregoing at (867) 975-4639 or by email via colette.spagnuolo@ec.gc.ca.

Regards,

Original signed by

Colette Spagnuolo
Environmental Assessment / Contaminated Sites Specialist

cc. David Abernethy, Environmental Assessment Technician, Environment Canada, Iqaluit, NU



Environment Canada **Environnement Canada**

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Our file: 4517 000

14 March 2006

Richard Dwyer
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Via Email

RE: NWB5PEL0510 – Defence Construction Canada – CAM-4 DEW Line, Pelly Bay - Abandonment and Restoration Plan

On behalf of Environment Canada (EC), I have reviewed the above mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

UMA Engineering Ltd. has submitted an Abandonment and Restoration (A&R) Plan for the CAM-4 DEW Line reclamation project on behalf of Defence Construction Canada (DCC) to fulfill its Part I licence requirement. This Plan provides a brief summary of final reclamation activities that will be conducted at the DEW Line site. In particular, closure activities are planned for demolition work sites, areas of contaminated soil excavation, the land-farm facility, the two non-hazardous waste landfills, the tier II soil disposal facility, and the demobilization of project equipment, supplies, and wastes. The CAM-4 DEW Line site is situated nearby the community of Kugaaruk, having a coordinate of 68°27'N, 89°45'W. Project reclamation efforts are ongoing and scheduled to be complete by 2007.

The Monitoring Plan submitted to the Nunavut Water Board in November 2005 will be used to observe the efficiency of the non-hazardous waste landfills and the tier II soil disposal facility. Landfill monitoring will be implemented in accordance with the DEW Line Clean-up Environmental Provisions established in the DND/NTI Cooperation Agreement. The Monitoring Plan provides standards for monitoring soil, groundwater, and thermal data in the construction and post-construction phases of the CAM-4 site clean-up. Its detailed monitoring requirements section outlines the functions of each landfill, the types of landfill monitoring stations and their locations (e.g., soil and ground water monitoring wells and thermistors), and the frequency and parameters that will be used to monitor evaluation components.

Environment Canada recommends that the Upper Site Landfill and Lower Site Landfill be included in the CAM-4 A&R Plan. The Monitoring Plan indicates that these sites will receive visual monitoring, collection of soil and ground water samples, and thermal monitoring. The proponent is expected to carry out its monitoring commitments and indicate how it will reclaim these landfills in its A&R Plan. If the proponent intends to categorize these landfills as areas of contaminated soil excavation, it is suggested that they be clearly identified as such in the Plan.



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The Monitoring Plan does not include provisions for monitoring groundwater at the Lower Site Landfill's east lobe. This area is scheduled to receive soil monitoring but there is no indication that ground water wells will be established according to Figure 4.6 of the Monitoring Plan. Environment Canada requested clarification on whether ground water monitoring will occur at this location in its December 2005 Monitoring Plan review letter. It is recommended that the proponent explain why ground water monitoring has not been proposed for this lobe when it is included for the land fill's south lobe (monitoring location MW-19).

The Monitoring Plan does not discuss the monitoring of the landfarm located on site. Environment Canada requests clarification regarding whether the landfarm is still in operation, or if remediation efforts have already been met. Environment Canada recommends that if the landfarm is still operational, the Monitoring Plan be modified to include monitoring of hydrocarbons in the groundwater (total petroleum hydrocarbons (TPH)) and the soil (TPH fractions F1 – F3). Monitoring locations should be indicated on a map. Once remediation objectives are met and the landfarm is closed, further monitoring will not be required.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me if you have any questions or comments with regards to the foregoing at (867) 975-4631 or by email via david.abernethy@ec.gc.ca.

Sincerely,

David W. Abernethy
Environmental Assessment Technician

CC. Colette Spagnuolo – Environmental Assessment / Contaminated Sites Specialist, Environment Canada, Iqaluit