

October 31, 2014

Bonnie Bergsma
Regulatory Specialist
Sahtu Land and Water Board
Box 1, Fort Good Hope
Northwest Territories
X0E 0H0

Dear Ms. Bergsma,

**Re: Suncor Energy Inc.
Land Use Permit – S14A-006
Water Licence – S14L1-004
Tweed Lake M-47 Well Re-suspension
Request for Review and Comments**

The Department of Environment and Natural Resources (ENR), Government of the Northwest Territories (GNWT) has reviewed the applications at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, *Waters Act* and the *Wildlife Act* and has the following comments and recommendations for the Board's consideration.

Topic 1: List of Fuel Type, Size and Amount

Comment(s):

Re-fueling of equipment will be completed within a designated re-fueling area. Fuel transfer vehicles will be equipped with transfer pumps and lines installed with c/w shut off valves. Drip trays will be used during re-fueling activities to minimize potential for spills. Re-fueling will be continuously monitored and drip trays will be inspected regularly for fluid levels and will be replaced or emptied as necessary.

A minimal amount of water/methanol mix (approximately 30 meters cubed) and oil (approximately 25 meters cubed) will be stored in tanks on the lease area for less than two weeks. It is anticipated that two 20 pound propane tanks will be used on the program for heating. Suncor resubmits the below table with the fuel volumes to be stored on site throughout the program.

Recommendation(s):

- 1) The area located within the well pad area does not specifically describe the location of the transfer fuel site. A detailed drawing of the transfer site needs to be provided detailing the layout of the secondary containment of the well pad.
- 2) The water/methanol mix exceeds maximum amount listed in Schedule "A" of the *Spill Contingency Planning and Reporting Regulations* R-069-93. It states the maximum amount allowed to be stored above ground is 20,000 L. It is recommended due to the secluded area, and the need for assistance in case of a spill, that the tanks are double walled and meets the requirement for secondary containment that can capture and contain 110% of the stored amount on the well site.

Topic 2: Closure and Reclamation Plan, 1.1 Final Reclamation

Comment(s):

Water trucks will be used to water down the access and well site to help compact and freeze the snow.

Recommendation(s):

- 1) The proponent shall maintain a water log for the withdrawal of water during entire project. The log should note the water source utilized, the time and date of the withdrawal and the amount of the water withdrawal. The water log shall be provided to the Board and the inspector upon request and submitted to the Board for their records at the conclusion of the each year.
- 2) That the Board makes this a condition of the Water Licence.

Topic 3: Removal of Equipment, Waste and Debris

Recommendation(s):

- 1) A description of the methods that will be used to segregate domestic and hazardous waste is required. A list should be provided that will detail what is being removed from the well site, including the locations of where the wastes/hazardous wastes are being disposed. The local land fill site does not have the capacity to handle any industrial waste or contaminated waste from the proponent.
- 2) If the proponent wishes to utilize community Solid Waste Disposal Facilities to deposit domestic or camp related wastes a letter from the community approving such deposits must be submitted to the Board.

- 3) Community municipal waste disposal sites are not designed, engineered or permitted or licenced to accept industrial or hazardous wastes generated outside of their municipal boundaries. If industrial wastes generated outside of a municipal boundary were to be deposited to a municipal landfill, it would have to be shown that the site has been designed, engineered and licenced or permitted to accept industrial wastes generated outside of a communities municipal boundaries and the Board would have to approve such deposits.

Topic 4: Environmental Protection Plan, Appendix 5 Waste Management Plan

Comment(s):

EPP; 3.5 Waste Management - It is anticipated that domestic waste will be generated during project activities. An enclosed garbage bin will be used on-site to contain any domestic waste accumulated during daily program activities. Waste will be disposed of by local contractors at an approved landfill location.

WMP; 3.1.5 Release to the receiving Environment - Suncor is proposing to haul the - down-hole material off-site for disposal at an approved Class II industrial landfill and/or an approved down-hole disposal facility. As Suncor undertakes the well maintenance activities, additional waste streams requiring disposal may be generated. Suncor will obtain all required agreements with waste disposal facilities prior to waste disposal.

Recommendation(s):

- 1) A letter of permission is required from the community prior to depositing any domestic or camp wastes into the local Solid Waste Disposal Facilities.
- 2) Landfills within the Sahtu communities are not designed, engineered or licenced or permitted to allow the deposit of industrial or hazardous wastes generated outside of community boundaries, nor do any of the communities have a down-hole disposal facilities.
- 3) Suncor is to provide the means/methods of transporting the wastes that are to be slated for down-hole injection. The proponent should also provide the locations of the down hole injection sites.

Topic 5: Waste Management Plan - Table 4: Storage and Disposal Options for Management of Waste Streams

Comment(s):

Waste Streams – Used oil, lubricants, absorbent pads and hydraulic fluids; Treatment option is to take all used oil and lubricants to be disposed of at an approved waste storage facility.

Recommendation(s):

- 1) Landfills within the Sahtu communities are not designed, engineered, licenced or permitted to allow the deposit of industrial or hazardous wastes generated outside of community boundaries, nor do any of the communities have a down-hole disposal facilities.

Topic 6: Waste Management Plan - 5.3 Handling and Storage

Comment(s):

Hazardous and non-hazardous waste will be stored in a safe and secure manner and in accordance with the following:

Waste materials will not be stored on the surface ice of water bodies or within 100 meters (m) of the normal high water mark to minimize the potential for contamination of water bodies. Drainage into and from the storage area will be controlled to prevent spills or leaks from leaving the site and to prevent run off from entering the site. Waste will be stored in a controlled area and regular inspections of the storage and handling procedures will be performed and recorded

Recommendation(s):

- 1) A detailed description and sketch of the storage layout and drainage should be provided.
- 2) Storage and handling procedures and the water log sheet needs to be included in the Waste Management Plan.

Topic 7: Waste Management Plan – Generation of Hazardous Waste

Recommendation(s):

- 1) Registration with ENR GNWT as a hazardous waste generator must be complete prior to the commencement of project activities.

Topic 8: Waste Management Plan – 5.6 Reporting

Comment(s):

Analytical information on waste material collected in relation to discharge or acceptance criteria.

Recommendation(s):

- 1) Suncor needs to clarify which analytical information on waste material is being collected and the acceptance criteria that are being referenced.

Topic 9: Waste Management Plan – Attachment A

Comment(s):

There is a map of the lease area and surrounding community of Colville Lake, winter road, access from the airport road to the well site.

Recommendation(s):

- 1) A detailed drawing of the well pad site itself needs to be included in Attachment A.

Topic 10: Environmental Protection Plan – Appendix 6

Comment(s):

Tweed M-4 site specific supplemental section, First Responders, Lead agencies and priority contacts, page 8

Recommendation(s):

- 1) ENR will to be added to the first responders list.
- 2) Lead agencies and contacts will be updated to reflect staff and departmental changes in the GNWT due to devolution.
- 3) The wildlife emergencies contact is Jeff Walker, Superintendent of ENR, GNWT for the Sahtu Region.
- 4) All Appendixes in the application need to be updated.

Topic 11: Spill Contingency Plan- 1.4 Scope of Work

Comment(s):

A 15 km long and 8 meter wide winter access road will be constructed to access the site.

Recommendation(s):

- 1) Due to the increased access for hunting and trapping along the road, it is recommended that Suncor utilize a check point along that road to control and ensure safe access to the areas being utilized. Environment and wildlife monitors monitoring the road and logging and not any information regarding wildlife, hunting and trapping in the area.
- 2) The access road to should be blocked after yearly winter project activities are completed to minimize access when project activities are not taking place.

Topic 12: Spill Contingency Plan – 1.5 Hazardous Materials on Site

Comment(s):

Well bore fluids – Well bore fluids (Rimbey Platinum frac oil) on ground, water, snow or ice from a tank that ruptures.

Recommendation(s):

- 1) Spill Contingency Planning and Reporting Regulations, section 2. (3), state, In Schedule “A”, the amounts set out in column 3 under the heading "STORAGE CAPACITY" refer to liquids, where the amount is expressed in liters, and to solids, where the amount is expressed in kilograms. The well bore fluids being stored above ground are over the allowable amount of 20, 000 L. Suncor to provide more detail on the type of tanks used for storing the well bore fluids.
- 2) The main objective of this regulation is to prevent any contamination of the surrounding area from storage tank systems located within the well site. The Board should ensure proponents utilize secondary containment, such as double walled tanks or bermed areas with impermeable liners for above ground storage facilities to protect the environment from spills. A detailed sketch of primary and secondary containment is required prior to activities.

Topic 13: Spill Contingency Plan

Comment(s):

The winter road system throughout the Sahtu can be very treacherous. During the 2013/2014 winter season, there had been accidents and spills. All spills, or potential spills shall be reported to the Spill Report Line as soon as possible.

Recommendation(s):

- 1) All spills and potential spills should also be reported to ENR and DOT GNWT as well as the Spill Report Line.

Topic 14: Spill Contingency Plan – 8.0 Containment, Recovery & Clean-up Procedures

Comment(s):

8.1 to 8.4 – Disposal

:

The following are a number of methods available in the Norman Wells area for disposal of oil spill products. All methods will be in accordance to Land Use Permit conditions.

- In-Situ Burning at Spill site
- Open Pit Burning
- Burial

Recommendation(s):

- 1) In the case of a major oil spill, some of the fuel released at the site may be disposed of through in-situ burning. Precautions must be taken to ensure fire cannot burn back to fuel storage tanks. This type of method is prohibited. Refer to the *“Used Waste Oil and Waste Management Regulations”*.
- 2) Incineration of oil contaminated debris in open pits or open top barrels is another alternative. Surface burning, using berms and built-up areas where possible, is preferred to disturbing the permafrost substructure. This method is prohibited. Refer to the *“Guideline for General Management of Hazardous Waste in the NWT.”*
- 3) Another method of disposal of large quantities of oil and oil-contaminated debris could be by burial. Permission must be granted through a Land Use Permit obtained from GWNT. If there is a possibility of oil spill debris disposal in Fort

Norman, Norman Wells or any other community, permission may also be required from the Government of Northwest Territories. The community of Fort Norman is called Tulita. Disposal of oil and oil-contaminated debris is required to be transported to a licensed hazardous waste facility outside of the Sahtu Region. Landfills within the Sahtu communities are not designed, engineered, licenced or permitted to allow the deposit of industrial or hazardous wastes generated outside of community boundaries. Refer to the *“Used Waste Oil and Waste Management Regulations”* and *“Guideline for General Management of Hazardous Waste in the NWT”*.

- 4) Disposal methods within Suncor’s Spill Contingency Plan has to be removed and replaced using the preferable methods outline the GNWT regulations and guidelines for management of waste. The generator is required to determine and follow the proper management method for their waste.
- 5) Suncor needs to include in their Waste Management Plan the appropriate regulations or guidelines from which their practices derive.

Topic 15: Spill Contingency Plan – 8.4 Winter Spill – On Ice

Comment(s):

Recovery and cleanup – If a spill is moving toward cracks in the ice or open water, an immediate burning may be desirable. The Field supervisor or Party Manager will make the decision.

Recommendation(s):

- 1) Suncor needs to include in their Waste Management Plan the appropriate regulations or guidelines from which their practices derive. This is not a preferable method of disposal in the Northwest Territories. Refer to the *“Used Oil and Waste Fuel Management Regulations.”*

Topic 16: Spill Contingency Plan – Appendix 2 – Spill Report Form

Comment(s):

The GNWT has currently revised the NT-NU spill report form.

Recommendation(s):

- 1) Suncor is to confirm that the most recent form is added into their Spill Contingency and Emergency Response Plan. This form can be found on the GNWT ENR website.

Topic 17: Spill Contingency Plan - Appendix 5 – Reporting Requirements

Comment(s):

The second column – Quantity or levels, has Class 3 listed as 200 L.

Recommendation(s):

- 1) Suncor needs to adhere to the Spill Contingency Planning and Reporting Regulations 2. (4) In Schedule B, the amounts set out in column 4 under the heading "AMOUNT SPILLED" refer to liquids, where the amount is expressed in liters, and to solids, where the amount is expressed in kilograms. Quantity or levels needs to be changed to 100 L for Class 3.

Topic 18: Spill Contingency Plan – Appendix 7- MSDS

Recommendation(s):

- 1) Appendix 7 only has the Material Safety Data Sheet for the SF-780. For every other chemical and hazardous material used during the operations at the well site, an MSDS needs to be provided. An update in Appendix 7 needs to be completed.

Topic 19: Well-site Re-suspension

Comment(s):

While the application states that Suncor “has identified a need to complete maintenance and re-suspension activities on the Tweed Lake M-47 (M-47) well” specific information related to this remains unclear.

Recommendation(s):

- 1) ENR requests additional information on the results and reasons that re-suspension of the well was required (e.g. visible leaking, testing, etc.).

Topic 20: Access Road Crossings

Comment(s):

Figure E of Appendix 1-B indicates that there may be watercourse crossings required along the 15-km access route, however, Section 1.1 of the Closure and Reclamation Plan indicates that Suncor does not indicate that any areas will require snow fills.

Recommendation(s):

- 1) ENR requests clarification from Suncor regarding the requirement of any snow fills or other watercourse crossings along proposed access routes. Should crossings be required, ENR requests specific information on crossing methodology and any mitigation measures that will be employed.

Topic 21: Re-suspension

Comment(s):

Section 3.3 states that tubing volume in the reservoir will be replaced with water/methanol. It is understood from the water use information provided that only 30 m³ will be required for re-suspension activities. While the Waste Management Plan outlines that methanol will be removed by registered hazardous waste carrier it is unclear as to the ratio of water and methanol that will be injected into the well and if/how it will be recovered.

Recommendation:

- 1) ENR requests additional information on the fate, composition and quantities of material to be injected down hole during re-suspension activities as well as any mitigation measures that will be used to prevent the escape of fluids at the surface or within the wellbore.

Comments and recommendations were provided by ENR technical experts in Water Resources Division and the Sahtu Region and were coordinated and collated by the Environmental Impact Assessment Section, Conservation, Assessment and Monitoring (CAM).

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at 920-6118 or patrick_clancy@gov.nt.ca.

Sincerely,



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Environmental Impact Assessment Section
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Environment and Natural Resources
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