

## Review Comment Table

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| <b>Board:</b>                          | SLWB   |
| <b>Review Item:</b>                    | Norman Wells Soil Treatment Facility (S18L1-002)   |
| <b>File(s):</b>                        | <a href="#">S18L1-002</a>  |
| <b>Proponent:</b>                      | KBL Environmental Ltd.   |
| <b>Document(s):</b>                    | <a href="#">Application and associated drawings</a> (6.8 MB)<br><a href="#">Engagement Record and Plan</a> (321 kB)<br><a href="#">Operation and Maintenance Plan</a> (254 kB)<br><a href="#">Spill Contingency Plan</a> (1.3 MB)<br><a href="#">Waste Management Plan</a> (2.4 MB)<br><a href="#">Location Map</a> (928 kB)<br><a href="#">Draft Water Licence Conditions S18L1-002</a> (534 kB)  |
| <b>Item For Review Distributed On:</b> | Aug 13 at 13:31 <a href="#">Distribution List</a><br>Sep 27 at 11:00 <a href="#">Distribution List</a>   |
| <b>Reviewer Comments Due By:</b>       | Oct 11, 2018   |
| <b>Proponent Responses Due By:</b>     | Oct 18, 2018   |
| <b>Item Description:</b>               | <p><b>September 27, 2018 Update: Draft Water Licence S18L1-002 has been added to this review, and the review has been reopened. Reviewers are now invited to comment on the Draft Licence. The new review comment deadline is October 11, 2018, and the new proponent response deadline is October 18, 2018.</b></p> <p>KBL Environmental Ltd. (KBL) submitted an application for a Type B Water Licence (licence) to the SLWB. The purpose of this Application is to construct a Soil Treatment Facility (STF) in the Town of Norman Wells Upper Industrial Area. The proposed STF is designed to receive, store, and treat petroleum hydrocarbon contaminated soil and snow generated primarily from residential, commercial, and industrial properties where a hydrocarbon release has occurred. The STF will include operation and maintenance of a biotreatment pad and water retention pond during the summer months. Following bioremediation, treated soil meeting licence criteria will be transferred for use as daily cover at the Norman wells landfill. Soil unsuitable for re-use will be transported off-site to an approved facility. The requested term of licence is five years.</p> |

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|   | <p>Reviewers are invited to submit questions, comments, and recommendations using the Online Review System (ORS) by the review comment deadline specified below. Please provide comments and recommendations on the:</p> <ul style="list-style-type: none"> <li>• Application and associated drawings</li> <li>• Engagement Record and Plan</li> <li>• Operation and Maintenance Plan</li> <li>• Spill Contingency Plan</li> <li>• Waste Management Plan</li> <li>• Draft Closure Cost Estimate (to be prepared by GNWT-ENR)</li> <li>• Preliminary Screening (please see below for additional information)</li> </ul> <p>Under the <i>Preliminary Screening Requirement Regulations of the Mackenzie Valley Resource Management Act (MVRMA)</i>, the Board must conduct a preliminary screening for an application for a proposed development that requires a licence, unless it exempt from Part 5 of the MVRMA. Reviewers are encouraged to provide comments and recommendations (e.g. on impacts and mitigation measures) to assist with the completion of the preliminary screening.</p> <p>Under the Sahtu Land Use Plan (SLUP), the Board must confirm the Application conforms with the SLUP. Since the project falls within the boundaries of the Town of Norman Wells, it is exempt from the SLUP.</p> <p>The purpose of the draft licence is to allow parties to comment on Board staff's suggested conditions. These draft materials are not intended to limit in any way the scope of parties' comments. The Board is not bound by the contents of the draft licence and will make its decision at the close of the proceeding on the basis of all the evidence and arguments filed by all parties.</p> |
| <p><b>General Reviewer Information:</b></p> | <p>All documents that have been uploaded to this review are also available on our public registry. If you have any questions or comments about the ORS or this review, please contact Bonnie Bergsma at (867) 496-2778 or by email at <a href="mailto:bonnie.bergsma@slwb.com">bonnie.bergsma@slwb.com</a>.</p>  |
| <p><b>Contact Information:</b></p>          | <p>Bonnie Bergsma</p>  |

## Comment Summary

| <b>ID</b> | <b>Topic</b> | <b>Reviewer Comment/Recommendation</b>  | <b>Proponent Response</b> | <b>Board Staff Response</b> |
|-----------|--------------|---|---------------------------|-----------------------------|
| 1         | General File | <b>Comment</b> ( <a href="#">doc</a> ) KBL Environmental Ltd., Norman Wells, S18L1-002 Type B Water Licence Applications Proponents Response<br><b>Recommendation</b> | See responses below       |                             |
| 2         | General File | <b>Comment</b> ( <a href="#">doc</a> ) Proponents Response to Draft S18L1-002 Type B Water Licence<br><b>Recommendation</b>   | See responses below       |                             |

**Environment and Climate Change Canada: Eva Walker**

| <b>ID</b> | <b>Topic</b> | <b>Reviewer Comment/Recommendation</b>   | <b>Proponent Response</b>  | <b>Board Staff Response</b> |
|-----------|--------------|--|--|-----------------------------|
| 1         | General File | <b>Comment</b> ( <a href="#">doc</a> ) ECCC Cover Letter<br><b>Recommendation</b>  |  |                             |
| 3         | General File | <b>Comment</b> ( <a href="#">doc</a> ) ECCC Cover Letter<br><b>Recommendation</b>  |  |                             |
| 2         | Leachate     | <b>Comment</b> There is no clear indication in the documents provided that a surface and/or groundwater sampling and monitoring program will be conducted to identify if leachate from the facility is entering the surrounding environment. A monitoring program will help to identify contaminants which may be migrating from the soil treatment facility. It is important to consider these studies before waste management activities occur in order to collect baseline values. Monitoring may also be required on a long-term basis. It would be appropriate to set up the study design at this stage, to get the most useful information, and plan | <b>Sep 14:</b> KBL recognizes the importance in collecting baseline values and having a monitoring program for the facility. The KBL committed to the following was in Section 10.3 Environmental Effects. Section 10.3.2 Terrestrial Environment - baseline soil sampling will be conducted prior to construction of the facility to characterize and delineate any pre-existing impacts resulting from historical activities. Section 10.3 Environmental Effects, 10.3.3 Aquatic Environment - prior to construction geotechnical drilling will be completed | Response acceptable         |

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|   |  | <p>for how monitoring results will be used.</p> <p><b>Recommendation</b> ECCC recommends that KBL Environmental Ltd. (the Proponent) clarify whether there will be a soil, surface water and groundwater sampling program at the soil treatment facility to monitor for potential contamination. ECCC recommends that the Proponent consider a monitoring program that would identify leachate quality and quantity.</p>                       | <p>to confirm depth to permafrost beneath the proposed site, the type and any active layer considerations will be confirmed. KBL will install a network of groundwater monitoring wells prior to construction and have a monitoring program that meets the requirements of the Surveillance Network Plan in the water licence. The proposed facility is designed to collect surface water (leachate) run-off from the active parts of the operation in the retention pond. The site will be contoured to prevent surface water run-on. KBL will monitor the retention pond to meet the requirements of the Surveillance Network Plan in the water licence.</p> |                                      |
| 4 | <p>DRAFT Type B Water Licence S18L1-002 Part G Item 21</p> | <p><b>Comment</b> Part B lists several SNP stations are described as having sampling parameters as in Part G, item 22. This is incorrect as item 22 is the requirement to notify the inspector of effluent quality exceedances. These references should be corrected to item 21 (i.e., the Effluent Quality Criteria).</p> <p><b>Recommendation</b> ECCC recommends that the references to Part G item 21 and 22 be updated appropriately.</p> | <p><b>Oct 18:</b> KBL has no issue with the recommendation.</p>  | <p>The Licence has been updated.</p> |
| 5 | <p>DRAFT Type B Water</p>                                  | <p><b>Comment</b> Typically CCME Water Quality Guidelines are provided in weight per</p>   | <p><b>Oct 18:</b> KBL has no issue with updating the effluent quality criteria to mg/L.</p>  | <p>The Licence has been updated.</p> |

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|   | Licence S18L1-002 - EQC units  | volume. ECCC notes that Effluent Quality Criteria are listed in mg/kg.<br><b>Recommendation</b> ECCC recommends that the units for effluent quality criteria be updated to ppm or mg/L.  |   |                              |
| 6 | DRAFT Type B Water Licence S18L1-002 - Annual Report                 | <b>Comment</b> ECCC notes that Part B Item 1.n requests tabular summaries of all data generated under the SNP. It would be helpful for reviewers if the summary includes comparisons to the water licence criteria.<br><b>Recommendation</b> ECCC recommends including the water licence criteria in the tabular summaries for comparison. | <b>Oct 18:</b> KBL has no issues with this recommendation.  | The Licence has been updated |
| 7 | DRAFT Type B Water Licence S18L1-002 - SNP Stations 18-002-04 and 05 | <b>Comment</b> ECCC notes that dissolved metals are not listed as a parameter to be sampled for these SNP stations. Dissolved metals should be included to indicate bioavailability.<br><b>Recommendation</b> ECCC recommends that dissolved metals be added to the sampling parameters at these stations.                                 | <b>Oct 18:</b> KBL has reviewed other soil treatment facility licences with regards to groundwater sampling requirements and notes that dissolved metals are not required. As total metals sampling is a required sampling parameter with established CCME criteria to provide a comparison of results and would capture an increase in dissolved metals, KBL requests that Total Metals remain the sampling parameter. | Response acceptable.         |

**GNWT - ENR: Central Email GNWT**

| <b>ID</b> | <b>Topic</b> | <b>Reviewer Comment/Recommendation</b>   | <b>Proponent Response</b> | <b>Board Staff Response</b> |
|-----------|--------------|--|---------------------------|-----------------------------|
| 4         | General File | <b>Comment</b> ( <a href="#">doc</a> ) RECLAIM 7.0 Estimate<br><b>Recommendation</b> |                           |                             |
| 5         | General File | <b>Comment</b> ( <a href="#">doc</a> ) RECLAIM Estimate Description and              |                           |                             |

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|   |   | Assumptions<br><b>Recommendation</b>  |  |                      |
| 6 | General File                              | <b>Comment</b> ( <a href="#">doc</a> ) ENR Letter - No Comments or Recommendations at this time.<br><b>Recommendation</b>   |  |                      |
| 1 | Topic 1: Groundwater Monitoring Locations | <b>Comment</b> The plans submitted with the application state that KBL will install a network of groundwater monitoring wells to monitor groundwater for potential contaminants of concern during the life of the STF. However, the plans provide no details on how many monitoring wells will be installed, where they would be located or the frequency of monitoring (e.g. monthly or seasonal samples). ENR is of the opinion that the groundwater monitoring network should be similar to other KBL sites, such as the Yellowknife operation, where at least four (4) wells are established on the perimeter of the site, including at least one up-gradient background well.<br><b>Recommendation</b> 1) ENR recommends KBL provide the proposed groundwater monitoring locations and monitoring details expected for the monitoring program, such as frequency and groundwater criteria. | <b>Sep 14:</b> KBL will be providing an environmental monitoring plan which will outline the full groundwater monitoring program including well locations, frequency (twice annually, once in the spring and once before freeze up). Baseline groundwater results will be used to develop the groundwater criteria and action levels. This will be done in conjunction with the Surveillance Network Program in the water licence. | Response acceptable. |
| 2 | None                                      | <b>Comment</b> None<br><b>Recommendation</b> 2) ENR recommends that at least four (4) ground waters wells are established on the perimeter  | <b>Sep 14:</b> KBL has no issues with the recommendation.  | Response acceptable. |

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|   |                            | of the site, including at least one up-gradient background well.  |   |  |
| 3 | Topic 2: Security Estimate | <p><b>Comment</b> The Board and KBL have requested input on conditions applying to Security Requirements for the Water Licence. ENR has prepared a RECLAIM estimate for the project as proposed in the Water Licence application documents and based on similarly licensed projects, namely KBL's soil treatment facility in Inuvik (Water Licence G17L1-002) using the most recent Oil and Gas RECLAIM Model (v.7.0). In this estimate ENR has assumed that the maximum capacity of the STF is 6,000 m3 of contaminated soil at the point of abandonment of the structure due to insolvency.</p> <p><b>Recommendation</b> 1) ENR recommends that the amount of \$452,302.00 be held as a security requirement. Please see attached RECLAIM estimate, including a description of assumptions.</p> | <b>Sep 14:</b> KBL has no issues with this recommendation at this time. | The recommended security estimate has been added to the Licence. |

**Sahtu Renewable Resource Board: Colin Macdonald**

| <b>ID</b> | <b>Topic</b>                        | <b>Reviewer Comment/Recommendation</b>  | <b>Proponent Response</b> | <b>Board Staff Response</b> |
|-----------|-------------------------------------|---|---------------------------|-----------------------------|
| 1         | Application and Supporting Material | <p><b>Comment</b> The SRRB has reviewed KBL's application and supporting material and have no comments or recommendations. The facility will be built on cleared industrial land and follow standard protocols for the construction and</p> |                           | N/A                         |

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|  | <p>operation of the facility. Only soils that fall within specific guidelines will be accepted to the facility. Surface water and leachate will be collected in a retention pond and tested before release or shipped off-site. It is critical that regular inspections by GNWT personnel take place to ensure that best practices are followed. The facility will help clean up hydrocarbon contaminated soils in the Norman Wells area.</p> <p><b>Recommendation</b> None.</p> |  |  |
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Environment and  
Climate Change Canada

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Environmental Protection Operations Directorate  
Prairie & Northern Region  
5019 52<sup>nd</sup> Street, 4<sup>th</sup> Floor  
P.O. Box 2310  
Yellowknife, NT X1A 2P7

ECCC File: 5200 000 011/002  
SLWB File: S18L1-002

September 6, 2018

Via online submission

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

Dear Ms. Bergsma:

**RE: S18L1-002 – KBL Environmental Ltd. - Norman Wells Soil Treatment Facility –  
Type B Water Licence Application**

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Sahtu Land and Water Board (SLWB) regarding the above-mentioned Type B water licence application and is submitting comments via the online review system. ECCC's specialist advice is provided based on our mandate, in the context of the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*.

Should you require further information, please do not hesitate to contact me at (867) 669-4744 or at [eva.walker@canada.ca](mailto:eva.walker@canada.ca).

Sincerely,

[Original signed by]

Eva Walker  
Environmental Assessment Coordinator

Attachment(s): ECCC Comments Excel Sheet

cc:

Melissa Pinto, Senior Environmental Assessment Coordinator  
Georgina Williston, Head, Environmental Assessment North (NT and NU)

**Canada**

[www.ec.gc.ca](http://www.ec.gc.ca)



October 11, 2018

Sabrina Sturman  
Regulatory Specialist  
Sahtu Land and Water Board  
Box 1  
Fort Good Hope, NT  
X0E 0H0

Dear Ms. Sturman,

**Re: KBL Environmental Ltd. (KBL)  
Water Licence – S18L1-002  
Construction of Norman Wells Soil Treatment Facility (STF)  
Draft Water Licence Review  
Request for Comment**

The Department of Environment and Natural Resources (ENR), Government of the Northwest Territories (GNWT) has reviewed the draft Water Licence at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, the *Species at Risk (NWT) Act*, the *Waters Act* and the *Wildlife Act* and has no comments or recommendations for the consideration of the Board.

GNWT-ENR has previously submitted a closure cost estimate for this application, for which ENR has no updates or changes to this amount at this time.

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at (867) 767-9233 Ext: 53096 or email [patrick.clancy@gov.nt.ca](mailto:patrick.clancy@gov.nt.ca).

Sincerely,

Patrick Clancy  
Environmental Regulatory Analyst  
Environmental Assessment and Monitoring Section  
Conservation, Assessment and Monitoring Division  
Department of Environment and Natural Resources  
Government of the Northwest Territories



Environmental Protection Operations Directorate  
Prairie & Northern Region  
5019 52<sup>nd</sup> Street, 4<sup>th</sup> Floor  
P.O. Box 2310  
Yellowknife, NT X1A 2P7

ECCC File: 5200 000 011/002  
SLWB File: S18L1-002

October 11, 2018

Via online submission

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

Dear Ms. Bergsma:

**RE: S18L1-002 – KBL Environmental Ltd. - Norman Wells Soil Treatment Facility –  
Draft Water Licence**

Environment and Climate Change Canada (ECCC) has reviewed the information regarding the above-mentioned draft Type B water licence and is submitting comments via the online review system. ECCC's specialist advice is provided based on our mandate, in the context of the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*.

Should you require further information, please do not hesitate to contact me at (867) 669-4744 or at [eva.walker@canada.ca](mailto:eva.walker@canada.ca).

Sincerely,

[*Original signed by*]

Eva Walker  
Environmental Assessment Coordinator

Attachment(s): ECCC Comments Excel Sheet

cc:

Melissa Pinto, Senior Environmental Assessment Coordinator  
Georgina Williston, Head, Environmental Assessment North (NT and NU)