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SLWB File: S03L1-001

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

**Re: Closing Arguments for Application to Renew Water Licence S03L1-001
Response to Additional Comments from ENR on Draft Water Licence (Version 2) S13L1-007**

Dear Ms. Bergsma,

Please find attached Imperial's closing arguments regarding water licence renewal application S13L-007.

Also attached are additional comments on the draft water licence further to those filed on November 13, 2014. We have organized our additional comments in response to the topics listed in Attachment 1 of the November 21, 2014, letter filed by the Department of Environment and Natural Resources, Government of the Northwest Territories.

Imperial has appreciated yours and all the Board staff's careful attention and advice over the course of the application process. It has helped to facilitate a strengthening in our relationship with community members and all stakeholders which we highly value and will work to continue growing. Thank you.

If you have any questions regarding these comments, please contact Helga Shield at (403)237-2618.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Watson".

Jennifer Watson

Attachments: Closing Arguments for Application to Renew Water Licence S03L1-001
Response to Attachment 1 of Environment and Natural Resources letter of November 21, 2014.

SAHTU LAND AND WATER BOARD

LICENCEE: IMPERIAL OIL RESOURCES N.W.T. LIMITED

LICENCE NUMBER: WATER LICENCE S03L1 -001

**EFFECTIVE DATE OF
LICENCE ISSUANCE:** August 30, 2004

APPLICATION FOR RENEWAL

IMPERIAL OIL RESOURCES N.W.T. LIMITED

CLOSING SUBMISSION

1. The Board has requested written submissions on closing arguments that respond to the key issues and evidence presented at the Board's hearing, held in the Town of Norman Wells on June 12 and 13, 2014.
2. Imperial appreciates the close scrutiny and advice that the Board, its staff, and the intervenors have provided over the course of the past year in meetings held preparing for this hearing. Imperial has benefited from the extensive consultation with community members and stakeholders that took place in the Traditional Knowledge Workshop, River Workshop, Emergency Response Workshop and many other meetings, which has resulted in the creation of a scheduled consultation process that will continue to build on the strong community relations that now exist.
3. The Board heard from members of the community who expressed their appreciation for the contribution Imperial has made to the people of the Sahtu Region. We especially want to acknowledge the kind words of Elder Cece McCauley, when speaking of growing up in this region 80 years ago (at pages 43 and 44 in Day 2 of the transcript):

"That's how we survived. And we have a lot to thank Esso for."

" ... but we want you to know that the old timers really appreciate you, your company. And we thank you very much, because you've done well for us."

“And ... but what I wanted to say is we are very thankful.”

4. The Board also heard concerns from the community of Ft. Good Hope about water quality. Imperial acknowledged those concerns and assured the residents of Ft. Good Hope that it takes every necessary step to ensure that the water that it releases back into the Mackenzie River is clean and safe. There have been independent studies, and Imperial has worked with the communities on studies that have indicated good water quality in the Mackenzie River and that Imperial’s operation does not impact that quality or aquatic life.

IMPERIAL’S APPLICATION FOR RENEWAL OF ITS WATER LICENCE

5. Imperial has made application for the renewal of its 2004 Water Licence for a further term of 10 years.
6. The application requests very few changes; these are documented in section 3 of the application. No change is requested to the withdrawal level, nor the discharge level. The changes requested reflect changes in current operations such as: drilling sumps are no longer in use, so continual monitoring, at the historic level, is not required. The remaining minor changes allow for greater efficiencies in operations and reporting, but none affect the integrity of Imperial’s operation, environmental protection, or the quality of reporting to the Board.
7. Imperial’s Norman Wells facility has been in operation for over 90 years. Over the past 10 years it has had an excellent compliance record. The Board did not hear any evidence of any event which jeopardized the environment, aquatic life or public health. In the event of a release, Imperial has a robust response plan and team with global support, enhanced by regular training.

Aquatic Effects

8. The surface water run-off is comprised of snow melt and rain water. All water is tested to make sure it is safe to release back to the land. If no impacts are suspected, this is done with a series of field tests; if impacts may be present based on past use and history of the

site, samples are taken and sent to an independent laboratory for analysis. All results are compared to release criteria and provided to the Board. Water from the Mackenzie River is used for once-through cooling. Both the inlet water and the outlet water are tested. Results are compared to release criteria, and provided to the Board.

9. Imperial notes that it participated in an aquatic effects monitoring program directed by the Board over the period 2002 – 2006. In the final report, prepared by Golder Associates in 2007 and submitted to the Board at that time, it was concluded that: “Consistent with earlier studies, there was no indication that the condition of fish downstream of Norman Wells operations was different than that of fish upstream of Norman Wells.” and “The laboratory toxicity tests showed no evidence that effluent discharged to the Mackenzie River would cause effects in fish.” (page xii). The Board closed this program in 2008. The Board heard no evidence of any effects to aquatic life or water quality that are attributed to Imperial’s operations. On the basis of this evidence, or more accurately, lack of evidence, Imperial submits that any increase in the level of monitoring or testing of Imperial’s discharge is not warranted and would only add an unnecessary, costly burden to its operations.

Sampling and Testing

10. The Board heard submissions from the community members cautioning it against imposing onerous and unnecessary regulatory requirements which adversely impact development in the North. In particular, Elder Cece McCauley stated this concern succinctly after listening to Intervenor submissions that the testing methodology should be increased, even after Imperial demonstrated that such additional requirements would not provide any better level of environmental protection than the current testing protocols already provide:

“They (speaking of Imperial) – they’ve done good for us. And I know with the government coming in, they’ve got to justify their jobs, so they sometimes make it hard for companies. That’s why the Territories is not developed. **There’s too much regulations** and we know that. It’s a bunch of BS, a lot of it, but they’ve got to justify themselves.” (Hearing Transcript, Day 2, page 44; emphasis added)

11. The Board has been asked to consider imposing new, and stricter, testing protocols for the discharge effluent from Imperial's operations. As described in Imperial's undertakings, various information responses, and responses to the draft licence, the proposed changes would add very little value to environmental protection of the Mackenzie River. Imperial submits that the Board did not hear any evidence, and the case has not been made, that this amendment to the licence, for additional testing, would serve the public interest, as is required by section 72.12 (1)(b)(iii) of the *Mackenzie Valley Resource Management Act*. Imperial further submits that such additional testing would add an administrative and financial burden to the operation.

12. Imperial has established a new Aquatic Effects Monitoring Program working group to develop a new monitoring program. This program is being developed in accordance with the process laid out by INAC in 2009. Imperial submits that no new conditions or changes to the existing conditions relating to testing and release of water outlet or runoff should be added to the licence until the working group has completed its deliberations and the Aquatic Effects Monitoring Program has been submitted to the Board for review, with appropriate public comment.

13. Examples of additional, unnecessary, measuring requirements include:

The addition of sediment criteria: Sediment occurs naturally in the River. It comes into the facility with water from the river, and goes back to the river when the water is returned. Imperial does not use any sediment in its process. Sediment is not found in production fluids. Sediment is not a useful parameter to measure to determine the facility's impact on the river.

The change of test from oil & grease to TPH and change to criteria: The Department of Fisheries and Oceans (Schedule II of the *Petroleum Refinery Liquid Effluent Regulations* (2014)) and many other jurisdictions have determined 10mg/L oil & grease to be an appropriate test method and release criteria for the return of water to the environment. Imperial does not agree with the proposed changes to the testing method and limits. The changes are not based on any scientific rationale or traditional knowledge. Further, the change of method will result in unnecessary delays due to the additional time needed by the analytical laboratory to complete the TPH test.

The change to phenols limits: The matter of appropriate phenol limits for Norman Wells was referred to the Technical Advisory Committee during the last licence period. The recommended limits were reviewed and approved by the Board, and the licence terms and conditions amended accordingly, on June 12, 2006. Imperial is not aware of any

new scientific information or traditional knowledge that would suggest these limits should be changed or reviewed again at this time.

The addition of Specific Conductivity criteria: Specific conductivity is a measurement of a fluid's ability to conduct electricity. It is not clear what value adding contaminated site-related criteria to the water outlet requirements would provide.

The Board did not hear any evidence justifying the need for any of these changes.

14. In response to concerns expressed about water quality, assurance was given to the community by Nikole Andres, Imperial's Environmental Advisor, that the water which is discharged from Imperial's operation is tested, clean and safe:

“And I just want to assure you that we do have testing requirements in the licence, and we do test the water, and we report that water and the results in to the Sahtu Land and Water Board. So that water is clean, and any of that information and data can be found with the Sahtu Land and Water Board.

So I just want to assure you that – that that water is safe when we release it.”

(Hearing Transcript, Day 2, page 48)

Posting of Security

15. Imperial appreciates, and has benefited from, the participation of all government agencies in the process that delivered an estimate of end-of-life reclamation liabilities based on sound science. And it looks forward to continuing to meet with the Working Group, which the Board has commissioned, to develop a new, and evolving, C&R plan.
16. Imperial recognizes that the Board may require the posting of security for end-of-life reclamation liabilities in accordance with the regulations under both the *Mackenzie Valley Land use Regulations* and the *Waters Regulation*, under the *Waters Act*; and we look forward to the fair and responsible way in which the Board will exercise its discretion, in the setting of that security amount, by considering the factors specified in those Regulations as stated:

Mackenzie Valley Land Use Regulation

32. (2) *In setting the amount of security pursuant to subsection (1), the Board may consider*

*(a) the **ability** of the applicant or prospective assignee **to pay** the costs referred to in that subsection;*

*(b) the **past performance** of the applicant or prospective assignee in respect of any other permit;*

*(c) the **prior posting of security** by the applicant pursuant to **other federal legislation** in relation to the land-use operation; and*

*(d) the **probability of environmental damage** or the significance of any environmental damage*

Waters Regulation

11(2) *In fixing an amount of security pursuant to subsection (1), the Board may have regard to*

*(a) The **ability** of the applicant ... **to pay** the costs ...*

*(b) The **past performance** by the applicant ... in respect of any other licence*

(emphasis added)

17. Imperial requests that the Board give due consideration to the evidence which has been filed, showing that Imperial is, financially, one of the strongest corporate institutions in the country. Further, Imperial has a sterling reputation for addressing all of its historic reclamation liabilities, both in the Northwest Territories and throughout Canada. It has both the ability to pay and a past performance record which shows that posting of full security is neither necessary nor desirable.

JURISDICTONAL ISSUES

18. During the course of the hearing, and in the written submissions, a number of issues were raised which, Imperial submits, fall outside the jurisdiction of the Board. The Board, in its

ruling on its jurisdiction, acknowledged that conflict may arise in respect of over-lapping jurisdictions of regulatory bodies and it ruled that:

“ ... if such conflict is alleged that the Board should look for an interpretation of the conflicting provisions which avoids the conflict and allows both tribunals (the NEB and SLWB) to work together and fulfill their mandates.” (page 11)

19. Imperial submits that the Board must respect Parliament’s will when it states, in both the *Canada Oil and Gas Operations Act* (s. 5.31) and the *National Energy Board Act* (s. 12(1)) that:

“The Board has full and exclusive jurisdiction to inquire into, hear and determine any matter (in respect of) ... any act, matter or thing required to be done by this Act or by any regulation”

20. Imperial’s response to the GNWT comments on the draft licence are attached separately.

Topic 1: Exclusion of Maximum Grabs

As described in our response to interventions by AANDC in letter filed with the SLWB on March 26, 2014, Imperial takes no exception to changing from a weekly composite to a weekly grab sample on the CPF outlet. Should the Board choose to require grab samples, we suggest they also change the inlet samples to grabs so as to better facilitate comparisons between the two.

Imperial respectfully suggests that both a weekly composite sample be collected and tested for oil & grease and phenols, and that a weekly grab sample be collected and tested for pH. This change is suggested in consideration of the 7 day laboratory hold time for pH. If the weekly composite is found to be elevated, then the excess grab sample will be available at the laboratory for immediate additional testing. This way, unnecessary testing is avoided when not needed, but can be undertaken as quickly as possible if required.

Topic 2: Total Suspended Solids

Sediment naturally occurs in the Mackenzie River. Monitoring data collected and filed with the Board under the current licence show that river water taken in to the facility and used for cooling naturally contains sediment, the water returned to the River contains sediment, and levels fluctuate in a predictable pattern with the seasons.

As discussed in comments provided on November 14, Imperial does not use any sediment in our process. Sediment is not carried from the reservoir to the surface in production fluids. Sediment is not a constituent of any chemicals used in the process. As such, sediment is neither a parameter of concern nor a suitable indicator parameter to identify potential contact with production fluids or impacts from routine oil and gas activity. Monitoring sediment simply tracks natural cycles in the river and does not effectively inform Imperial, the SLWB or the community as to potential impacts of the operation requiring further investigation.

We recommend the requirements to sample sediment be removed from the licence.

Topic 3: Sampling Frequency

Imperial agrees that it would be useful to take representative grab samples at both the inlet (SNP S13L1-007-1) and outlet (SNP S13L1-007-2) as described in Annex A, Part C, Items 2 and 6, on a quarterly basis at the same time that samples are collected for acute lethality as described in Part C, item 7.

Topic 4: Groundwater Criteria

The text just before the table in Part E, item 10, "shall not exceed the following criteria" should be replaced by "using test methods with the Detection Limits noted".

Chloride and BTEX were selected as primary indicators. Primary indicators were selected based on applicable CCME FWAL guidelines, the types of potential sources, and the natural occurrence of constituents in concentrations greater than the applicable guidelines. Annual reporting will be conducted on these parameters as they are the first indicators of change in groundwater quality from Norman Wells Operations. As described in the *Groundwater Management Plan*, a change in these parameters will trigger further investigation.

Several dissolved metals naturally exceed CCME FWAL guidelines. As such, they are not good primary indicators

for initial screening of changes in groundwater quality, but will be useful to consider during an investigation.

As part of Norman Wells Operation's groundwater monitoring network (both operational and C&R), many background wells have been installed over recent years. These wells are not included as listed wells in the Groundwater Surveillance Monitoring Network (GW-SNP), but have, and will continue to provide, useful information in understanding the natural conditions. Background conditions will be considered in the event an investigation is initiated by a change observed at the GW-SNP locations as described in the *Groundwater Management Plan*.

Topic 5: Visual Sheen

Per Part D, Item 1, of the draft licence, any water to be released from surface run-off facilities in areas of known or potential impact, or as listed for 'category B' in Schedule 3, will require laboratory testing for oil and grease, phenols, pH, chlorides and other parameters prior to release. Visual sheen and field testing of chlorides and pH will be used for 'category A' sites that are not expected to have potential impacts.

As discussed in hearing undertakings filed with the SLWB on June 25, 2014, visual sheen is a modern, effective and practical screening tool - particularly when used in conjunction with field testing for chlorides. It is used in a number of other progressive jurisdictions including the United States, Alberta and BC. Imperial has had two recent events (in 2011 and 2013), described in the undertakings and in monthly water reports to the Board, where operators observed sheen that was not detectable by laboratory analysis. And, as shared at the hearing, the US EPA have studied and confirmed the effectiveness of sheen as a field technique.

Imperial has developed a number of internal training aids to ensure releases and samples are collected, managed, controlled and documented appropriately. Each spring, the Environment and Regulatory Advisor reviews the requirements with all employees and contractors who will be involved with this work to make sure they understand what testing is required where.

All observations of sheen and field test results are recorded by location and signed-off by the operator or contractor who completes the tests. Documents are forwarded to the Environment and Regulatory Advisor at Norman Wells who reviews the information, and summarizes it for inclusion in monthly water reports filed with the SLWB.

Topic 6: Surface Water Run-off Facilities

Water volumes are estimated by operators and contractors. Methods used include volume calculations (length x width x depth), pump rates, truck volumes and estimates from drawings. Most of the facilities from which run-off is released (e.g., impound basins), far exceed 10m³, so require multiple samples as described in Part D, Item 1.d) of the draft licence. Volumes are reported to the SLWB in monthly water reports filed with the SLWB. Imperial does not agree that metering or additional equipment is required to measure release volumes more accurately. Doing so will create an unnecessary burden, and will result in delays while equipment is moved into place. These sorts of delays, especially in spring when everything is melting all at once, could result in berms and ditches overflowing, the land and water and/or our facilities being damaged, and safety being compromised.