

Review Comment Table

Board:	WLWB
Review Item:	Community Government of Wekweètì - Water Licence Amendment - Waste Discharge from Water Supply Facilities (W2017L3-0001)
File(s):	W2017L3-0001
Proponent:	Community Government of Wekweeti
Document(s):	Draft Amended Water Licence (421 KB)
Item For Review Distributed On:	May 14 at 11:08 Distribution List
Reviewer Comments Due By:	June 4, 2020
Proponent Responses Due By:	June 10, 2020
Item Description:	<p>The Community Government of Wekweètì is constructing a new Water Supply Facility (WSF). As per paragraph 72.12(1)(b) of the <i>Mackenzie Valley Resource Management Act</i> (MVRMA) and paragraph 36(b) of the <i>Waters Act</i>, the Board may amend the conditions of a Water Licence on its own motion if it appears to the Board to be in the public interest. The Board understands that the new WSF is necessary to come into compliance with the new Canadian Drinking Water Quality Guidelines, and recognizes that a functioning WSF is essential for the community in order to have access to drinking water. To address the proposed discharge of waste from the WSF, the Board is commencing a Water Licence Amendment process.</p> <p>Board staff are suggesting amending Part D and H to reflect the Board's July 2, 2019, Reasons for Decision, as well as the August 19, 2019 Reasons for Decision for the Water Licence Amendment for the Community Government of Gameti.</p> <p>Reviewers are invited to submit comments and recommendations using the Online Review System (ORS) by the review comment deadline specified below. Notices of application for water compensation must also be submitted by the review comment deadline. If reviewers seek clarification on the submission, they are encouraged to correspond directly with the Licensee prior to submitting comments and recommendations.</p> <p>Please provide comments and recommendations on the documents linked below. Reviewers may also wish to consider providing an overarching recommendation regarding whether the Board should approve the submission,</p>

that will also provide context for the comments and recommendations and ultimately assist the Board with its decision.

The purpose of this draft Licence is to allow reviewers to comment on possible amended 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.

Under the *Preliminary Screening Requirement Regulations of the Mackenzie Valley Resource Management Act (MVRMA)*, the Board must conduct a preliminary screening for an amendment request, unless it is exempt from preliminary screening in accordance with the *Exemption List Regulations*. Reviewers are encouraged to provide comments and recommendations (e.g., on impacts and mitigation measures) to assist with the completion of the preliminary screening. The most recent preliminary screening for the Community Government of Wekweeti is located under Document(s) below.

Please be advised that comments made by reviewers regarding impacts of this proposed amendment to wildlife and wildlife habitat in this preliminary screening may inform the GNWT Minister of Environment and Natural Resources' determination regarding whether a Wildlife Management and Monitoring Plan will be required for this project as per Section 95 of the *Wildlife Act*.

All documents that have been uploaded to this review are also available on the WLWB's public Registry. If you have any questions or comments about the ORS or this review, please contact the Board staff identified below.

Contact Information:

Anneli Jokela 867-765-4588
 Jessica Pacunayen 867-765-4591

Comment Summary

Environment and Climate Change Canada: Eva Walker

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	General File	Comment (doc) ECCC cover letter Recommendation		
2	Tlich? o? Community Government of Wekwee'tãñ- Amended Water	Comment The proposed Condition 11 states: "The Licensee shall submit a Water Supply Facilities Characterization and Testing Plan to the Board for approval."	June 10: Current sampling programs at the Wekweeti WTP include: • continuous online measurements of turbidity in the raw	

Licence - Condition 11	ECCC notes that this Condition could benefit from additional clarity on the requirement for characterization of wastes. Recommendation ECCC recommends Condition 11 be amended to read as follows: The Licensee shall submit a Water Supply Facilities Waste Characterization and Testing Plan to the Board for approval. Characterization of waste streams should include both sludge and backwash water.		water, filtered water, and treated water storage; • continuous online measurements of free chlorine in CT tank and treated water tank; • thrice daily in-plant grab testing of the treated water for chlorine and turbidity • weekly bacteriological sampling for total coliforms and e.coli; • annual chemical analysis of both the raw and treated water of the 29 parameters identified in the Water Supply Regulations; Operators also perform in-plant testing of the post clean in place water for chlorine and pH to ensure water has been fully de-chlorinated and are of a neutral pH before sending it to the wastewater holding tank, which ultimate gets pumped out to the sewage lagoon for further treatment. No chemical addition, other than post-filter chlorination, is completed in this water treatment plant process for the discharge on land. Filtered water used in the backwash is not chlorinated. Additional long term sampling of the backwash water and the wastewater tank would not provide any different information from that of the Gameti WTP. Therefore, an onerous long-term sampling program on backwash water and wastewater tank would not provide information of practical value to the operations and is not recommended. We would request that the required information submitted for the Gameti WTP be used for decision making and	
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			requirements of a Waste Characterization and Testing Plan for Wekweeti.	
GNWT - ENR - EAM (Environmental Assessment and Monitoring): Central Email GNWT				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
12	General File	Comment (doc) ENR Letter with Comments and Recommendations Recommendation		
1	Topic: Characterization and Testing Plan	Comment A 'Characterization and Testing Plan' (CTP), requested last year following Gameti's Water Licence amendment process, was submitted to the Wek'eezhii Land and Water Board (WLWB), and is currently in the process of being reviewed. The current Water Licence amendment process for Wekweeti is very similar to the one conducted last year with Gameti, regarding insertion of additional Water Licence conditions relating to their new Water Treatment Plants (WTP). Section 2 (p. 7) of Gameti's CTP specifies that a "Research team at Dalhousie University has been engaged by MACA, ENR and MVLWB to study impacts of WTP residuals and waste to the environment across NWT. The initial report is expected by end of the summer, 2020. The study will be outlining recommendations on best practices and whether there would be value in additional long-term sampling." While outcomes from this collaborative work will be informative, it was also identified as part of this effort that only a small data set of quality results was available for WTP wastes in the NWT. As such, the submission of a CTP under specifications provided further below (not	June 10: As per the previous comment and responses, we propose that an onerous long-term sampling program on backwash water and wastewater tank would not provide information of practical value to the operations and is not recommended. We would request that the required information submitted for the Gameti WTP be used for decision making and requirements of a Waste Characterization and Testing Plan for Wekweeti	

		<p>on-going, as requirements planned to be completed within a year), would be beneficial in the current case for Wekweeti WTP, and to make further contribution to WTP wastes quality data set for WTP in the NWT. Information provided by MACA also clarified that some water treatment differences may exist between Wekweeti WTP (Class II - Membrane Ultrafiltration) and Gameti WTP (Class I - Membrane Ultrafiltration).</p> <p>Recommendation 1) Even though recommendations from the WTP residual research collaborative work may be available in the summer of 2020 and inform regarding WTP monitoring and management practices all throughout the NWT, ENR supports the requirement that a "Characterization and Testing Plan" be required for Wekweeti (further details provided in comments below).</p>		
2	Topic: Components of a Characterization and Testing Plan	<p>Comment A brief overview of Gameti's CTP currently for review, reveals that monitoring locations were specified to facilitate sample collection. Results for backwash, wastewater, raw water and treated water were provided in the CTP, with specifications that the Clean-in-Place (CIP) residuals would be monitored when possible, once travel restrictions relating to COVID-19 are lifted. However, results provided were not presented as tabulated summary, which may not facilitate prompt comparison and interpretation. While a requirement for a CTP was added to</p>	<p>June 10: Current sampling programs at the Wekweeti WTP include: • continuous online measurements of turbidity in the raw water, filtered water, and treated water storage; • continuous online measurements of free chlorine in CT tank and treated water tank; • thrice daily in-plant grab testing of the treated water for chlorine and turbidity • weekly bacteriological sampling for total coliforms and e.coli; • annual chemical analysis of both the raw and treated water of the 29 parameters identified in the Water Supply Regulations; Operators also</p>	

		<p>Gameti's Water Licence last year, no associated details or schedules were specified to clarify the expected components of a CTP, which prompted subsequent exchanges between ENR, MACA and the community. A minimum of two samples was recommended by ENR at the time for characterization of backwash, wastewater and CIP. The 2 sampling events should be conducted several months apart, so that the quality of these wastes is captured, not only early in the life of the WTP during the commissioning of the facility, but also after several months of operation and up to year after commissioning.</p> <p>Recommendation 1) To provide further clarity and directives to the community of Wekweeti, ENR recommends that the CTP required components be outlined in the Water Licence as a Schedule, or as deemed most appropriate by the Board.</p>	<p>perform in-plant testing of the post clean in place water for chlorine and pH to ensure water has been fully de-chlorinated and are of a neutral pH before sending it to the wastewater holding tank, which ultimate gets pumped out to the sewage lagoon for further treatment. No chemical addition, other than post-filter chlorination, is completed in this water treatment plant process for the discharge on land. Filtered water used in the backwash is not chlorinated. We do not recommend additional sampling is required by the community.</p>	
3	None	<p>Comment None</p> <p>Recommendation 2) ENR recommends that required components of a CTP include specifications on accessible monitoring locations for each backwash, wastewater, and spent CIP.</p>	<p>June 10: Current sampling programs at the Wekweeti WTP include: • continuous online measurements of turbidity in the raw water, filtered water, and treated water storage; • continuous online measurements of free chlorine in CT tank and treated water tank; • thrice daily in-plant grab testing of the treated water for chlorine and turbidity • weekly bacteriological sampling for total coliforms and e.coli; • annual chemical analysis of both the raw and treated water of the 29 parameters identified in the Water Supply Regulations; Operators also</p>	

			<p>perform in-plant testing of the post clean in place water for chlorine and pH to ensure water has been fully de-chlorinated and are of a neutral pH before sending it to the wastewater holding tank, which ultimate gets pumped out to the sewage lagoon for further treatment. No chemical addition, other than post-filter chlorination, is completed in this water treatment plant process for the discharge on land. Filtered water used in the backwash is not chlorinated. We do not recommend additional sampling is required by the community.</p>	
4	None	<p>Comment None Recommendation 3) ENR recommends that the minimum number of samples required to characterize each type of WTP wastes also be specified as components required in a CTP.</p>	<p>June 10: Current sampling programs at the Wekweeti WTP include: &bull; continuous online measurements of turbidity in the raw water, filtered water, and treated water storage; &bull; continuous online measurements of free chlorine in CT tank and treated water tank; &bull; thrice daily in-plant grab testing of the treated water for chlorine and turbidity &bull; weekly bacteriological sampling for total coliforms and e.coli; &bull; annual chemical analysis of both the raw and treated water of the 29 parameters identified in the Water Supply Regulations; Operators also perform in-plant testing of the post clean in place water for chlorine and pH to ensure water has been fully de-chlorinated and are of a neutral pH before sending it to the wastewater holding tank, which ultimate gets pumped out to the sewage lagoon for further treatment. No chemical addition, other than post-filter</p>	

			<p>chlorination, is completed in this water treatment plant process for the discharge on land. Filtered water used in the backwash is not chlorinated. We do not recommend additional sampling is required by the community.</p>	
5	None	<p>Comment None Recommendation 4) Finally, ENR recommends that a provision be provided to clarify that data be presented in a format that facilitates data interpretation, and in a tabular summary with results for various types of wastes.</p>	<p>June 10: Current sampling programs at the Wekweeti WTP include: • continuous online measurements of turbidity in the raw water, filtered water, and treated water storage; • continuous online measurements of free chlorine in CT tank and treated water tank; • thrice daily in-plant grab testing of the treated water for chlorine and turbidity • weekly bacteriological sampling for total coliforms and e.coli; • annual chemical analysis of both the raw and treated water of the 29 parameters identified in the Water Supply Regulations; Operators also perform in-plant testing of the post clean in place water for chlorine and pH to ensure water has been fully de-chlorinated and are of a neutral pH before sending it to the wastewater holding tank, which ultimate gets pumped out to the sewage lagoon for further treatment. No chemical addition, other than post-filter chlorination, is completed in this water treatment plant process for the discharge on land. Filtered water used in the backwash is not chlorinated. We do not recommend additional sampling is required by the community.</p>	

6	Topic: Part A "Scope and Definitions"	<p>Comment A definition on 'Receiving Environment' was added to Part A of the Water Licence in Scope and Definitions.</p> <p>Recommendation 1) ENR supports this addition to Wekweeti's current Water Licence.</p>	June 10: Acknowledged	
7	Topic: Part D, Items 10	<p>Comment Part D item 10 specifies that: "The Licensee shall not discharge Waste from the Water Supply Facilities to the Receiving Environment, unless authorized in writing by an Inspector." As specified in Gameti's CTP, several wastes are generated at a WTP, such as backwash, wastewater, CIP spent water. As more than one type of WTP residual is generated, the wording of the above condition may not be practical because of the frequency of discharge of some of these wastes (eg. backwash discharges several times a day). This condition may also create unreasonable expectations for the ENR Inspector, who would be tasked to make a decision on the acceptability of various WTP wastes while characterization and/or expected quality is still currently being investigated.</p> <p>Recommendation 1) As explained above, ENR recommends the removal of Part D item 10, from Wekweeti's amended Water Licence.</p>	June 10: Acknowledged	
8	None	<p>Comment None</p> <p>Recommendation 2) Following completion of the research conducted by GNWT in collaboration with Dalhousie University, upcoming recommendations relating to monitoring and management best practices for backwash, wastewater and/or</p>	June 10: Agreed	

		spent CIP, may be considered and used to support condition(s) implemented the WLWB, as deemed necessary, to provide clear directives to the Proponent.		
9	Topic: Sludge Monitoring and Management	<p>Comment When used, coagulant residuals may alter the chemical composition of backwash discharges and other WTP residual wastes. WTP using coagulant injection processes would also be generating another type of WTP waste, a sludge. The MVLWB WTP Template indicates that no coagulant will be used as part of Wekweeti WTP operations (Section 6, p. 15 of 188, as part of WTP O&M Technical Manual - Part 1). However, the WTP O&M Technical Manual also specifies that Wekweeti's WTP has provisions to inject coagulants in the future (see Section 3.4 (p. 133), Section 3.19.3 (p. 47), Section 5.1 (p. 57), Section 5.2 (p. 61), Section 6.2.6 (p. 76) and (p. 30 of 188)).</p> <p>Recommendation 1) ENR recommends that Wekweeti clarify if coagulants will be used in the future.</p>	<p>June 10: No coagulants are proposed for Wekweeti that would generate sludge.</p>	
10	None	<p>Comment None</p> <p>Recommendation 2) Should coagulants be used in the future, ENR recommends that condition(s) be added to the Water Licence, in order to adequately capture these operational specifications.</p>	<p>June 10: Acknowledged</p>	
11	None	<p>Comment None</p> <p>Recommendation 3) Should the Proponent clarify that no coagulants will be used in the future, details specified in the WTP O&M Technical Manual " Part 1,</p>	<p>June 10: The statement that the process system of the plant allows for coagulants to be added in the future should be left in as current however it is noted and agreed that if in the future operational</p>	

		referring to provision for use of coagulants in the future, should be removed to reflect the current operations and plans. In this case, ENR notes that any future operational changes of this nature at the WTP will require a Water Licence amendment.	changes are required that would require coagulants to be added, notification and proper amendments would to the regulators would take place.	
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Tlcho Lands Protection Department: Violet Camsell-Blondin

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Two-Year Extension Request	<p>Comment The SNP Station Table C of the draft Amended Water License document - SNP Station 001-2 indicated parameters that will be monitored for sewage effluent at the outflow of the sewage lagoon to be the wetland. But total phosphorus was not part of the parameters, probably it's not a requirement by the Board.</p> <p>Recommendation There is a growing concern that this parameter should be measured because of possible bloom of harmful algae in water bodies resulting from effluent discharges or run off from other sources containing phosphorus and nitrogen.</p>	June 10: Acknowledged	

Wek' eezhii Renewable Resources Board: Randi Jennings

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Community Government of Wekweètã - Water Licence Amendment - Waste Discharge from Water Supply Facilities (W2017L3-0001)	<p>Comment The WRRB have no comments at this time.</p> <p>Recommendation The WRRB have no recommendations at this time.</p>	June 10: Acknowledged	

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Characterization and Testing Plan	<p>Comment To address the proposed discharge of waste from the WSF and to be consistent with the Board's Decision for the Community Government of Gameti's (CGG) Water Licence, Board staff have proposed two additional conditions (Part D, Conditions 10 and 11): Condition 11 would require the submission of a Characterization and Testing Plan to help identify chemicals produced as a by-product of the WSF (backwash and wastewater), as well as help identify the parameters that may require future testing. Currently, the Characterization and Testing Plan for the Water Supply Facility for the Community of Gamèti has been submitted to the Board and is out for public review.</p> <p>Recommendation 1) If a Characterization and Testing plan is required, does the Community Government of Wekweètì (CGW) expect the plan to be different or similar to the one prepared for the community of Gamèti? Please explain. 2) If CGW believes a Characterization and Testing plan is not necessary, please provide rationale.</p>	<p>June 10: Current sampling programs at the Wekweeti WTP include: &bull; continuous online measurements of turbidity in the raw water, filtered water, and treated water storage; &bull; continuous online measurements of free chlorine in CT tank and treated water tank; &bull; thrice daily in-plant grab testing of the treated water for chlorine and turbidity &bull; weekly bacteriological sampling for total coliforms and e.coli; &bull; annual chemical analysis of both the raw and treated water of the 29 parameters identified in the Water Supply Regulations; Operators also perform in-plant testing of the post clean in place water for chlorine and pH to ensure water has been fully de-chlorinated and are of a neutral pH before sending it to the wastewater holding tank, which ultimate gets pumped out to the sewage lagoon for further treatment. No chemical addition, other than post-filter chlorination, is completed in this water treatment plant process for the discharge on land. Filtered water used in the backwash is not chlorinated. Additional long term sampling of the backwash water and the wastewater tank would not provide any different information from that of the Gameti WTP. Therefore, an onerous long-term sampling program on backwash water and wastewater tank would not provide information of practical value to the operations and is not</p>	

			recommended. We would request that the required information submitted for the Gameti WTP be used for decision making and requirements of a Waste Characterization and Testing Plan for Wekweeti. 	
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Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
P.O. Box 2310
Yellowknife, NT X1A 2P7

ECCC File: 5200 000 032/002
SLWB File: W2017L3-0001



June 2, 2020

via online review system

Anneli Jokela
Regulatory Specialist
Wek'èezhii Land and Water Board
1-4905 48th Street
Yellowknife, NT X1A 3S3

Dear Anneli Jokela:

RE: W2017L3-0001 – Community Government of Wekweètì – Water Licence Amendment – Waste Discharge from Water Supply Facilities

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Wek'èezhii Land and Water Board (WLWB) by Community Government of Wekweètì (the proponent) regarding the above-mentioned Water Licence Amendment. ECCC's has uploaded our comments to the WLWB's online review system.

ECCC's bases our specialist advice on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*.

If you need more information, please contact Eva Walker at (867) 669-4474 or Eva.Walker@Canada.ca.

Sincerely,

[original signed by]

Eva Walker
A/Senior Environmental Assessment Coordinator

Attachment(s): ECCC Comments Excel Sheet

cc: John Olyslager, Acting Head, Environmental Assessment North (NT and NU)





June 4, 2020

Joseph Mackenzie
Chair
Wekeezhii Land and Water Board
#1-4905 48th Street
Yellowknife, NT
X1A 3S3

Dear Mr. Mackenzie,

**Re: Community Government of Wekweeti
Type B Water Licence Amendment (WLWB Motion) - W2017L3-0001
Construction of a New Water Supply Facility (WSF) and Waste Discharge
Request for Review and Comments**

The Department of Environment and Natural Resources, Government of the Northwest Territories has reviewed the amendment 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* provides the following comments and recommendations for the consideration of the Board.

Topic 1: Characterization and Testing Plan

Comment(s):

A 'Characterization and Testing Plan' (CTP), requested last year following Gameti's Water Licence amendment process, was submitted to the Wek'eezhii Land and Water Board (WLWB), and is currently in the process of being reviewed. The current Water Licence amendment process for Wekweeti is very similar to the one conducted last year with Gameti, regarding insertion of additional Water Licence conditions relating to their new Water Treatment Plants (WTP).

Section 2 (p. 7) of Gameti's CTP specifies that a "Research team at Dalhousie University has been engaged by MACA, ENR and MVLWB to study impacts of WTP residuals and waste to the environment across NWT. The initial report is expected by end of the summer, 2020. The study will be outlining recommendations on best practices and whether there would be value in additional long-term sampling."

While outcomes from this collaborative work will be informative, it was also identified as part of this effort that only a small data set of quality results was available for WTP wastes in the NWT.

As such, the submission of a CTP under specifications provided further below (not on-going, as requirements planned to be completed within a year), would be beneficial in the current case for Wekweeti WTP, and to make further contribution to WTP wastes quality data set for WTP in the NWT. Information provided by MACA also clarified that some water treatment differences may exist between Wekweeti WTP (Class II - Membrane Ultrafiltration) and Gameti WTP (Class I - Membrane Ultrafiltration).

Recommendation(s):

- 1) Even though recommendations from the WTP residual research collaborative work may be available in the summer of 2020 and inform regarding WTP monitoring and management practices all throughout the NWT, ENR supports the requirement that a 'Characterization and Testing Plan' be required for Wekweeti (further details provided in comments below).

Topic 2: Components of a Characterization and Testing Plan

Comment(s):

A brief overview of Gameti's CTP currently for review, reveals that monitoring locations were specified to facilitate sample collection. Results for backwash, wastewater, raw water and treated water were provided in the CTP, with specifications that the Clean-in-Place (CIP) residuals would be monitored when possible, once travel restrictions relating to COVID-19 are lifted. However, results provided were not presented as tabulated summary, which may not facilitate prompt comparison and interpretation.

While a requirement for a CTP was added to Gameti's Water Licence last year, no associated details or schedules were specified to clarify the expected components of a CTP, which prompted subsequent exchanges between ENR, MACA and the community.

A minimum of two samples was recommended by ENR at the time for characterization of backwash, wastewater and CIP. The 2 sampling events should be conducted several months apart, so that the quality of these wastes is captured, not only early in the life of the WTP during the commissioning of the facility, but also after several months of operation and up to year after commissioning.

Recommendation(s):

- 1) To provide further clarity and directives to the community of Wekweeti, ENR recommends that the CTP required components be outlined in the Water Licence as a Schedule, or as deemed most appropriate by the Board.
- 2) ENR recommends that required components of a CTP include specifications on accessible monitoring locations for each backwash, wastewater, and spent CIP.
- 3) ENR recommends that the minimum number of samples required to characterize each type of WTP wastes also be specified as components required in a CTP.
- 4) Finally, ENR recommends that a provision be provided to clarify that data be presented in a format that facilitates data interpretation, and in a tabular summary with results for various types of wastes.

Topic 3: Part A – Scope and Definitions

Comment(s):

A definition on ‘Receiving Environment’ was added to Part A of the Water Licence in Scope and Definitions.

Recommendation(s):

- 1) ENR supports this addition to Wekweeti’s current Water Licence.

Topic 4: Part D, Items 10

Comment(s):

Part D item 10 specifies that:

“The Licensee shall not discharge Waste from the Water Supply Facilities to the Receiving Environment, unless authorized in writing by an Inspector.”

As specified in Gameti’s CTP, several wastes are generated at a WTP, such as backwash, wastewater, CIP spent water.

As more than one type of WTP residual is generated, the wording of the above condition may not be practical because of the frequency of discharge of some of these wastes (eg. backwash discharges several times a day). This condition may also create unreasonable expectations for the ENR Inspector, who would be tasked to

make a decision on the acceptability of various WTP wastes while characterization and/or expected quality is still currently being investigated.

Recommendation(s):

- 1) As explained above, ENR recommends the removal of Part D item 10, from Wekweeti's amended Water Licence.
- 2) Following completion of the research conducted by GNWT in collaboration with Dalhousie University, upcoming recommendations relating to monitoring and management best practices for backwash, wastewater and/or spent CIP, may be considered and used to support condition(s) implemented the WLWB, as deemed necessary, to provide clear directives to the Proponent.

Topic 5: Sludge Monitoring and Management

Comment(s):

When used, coagulant residuals may alter the chemical composition of backwash discharges and other WTP residual wastes. WTP using coagulant injection processes would also be generating another type of WTP waste, a sludge.

The MVLWB WTP Template indicates that no coagulant will be used as part of Wekweeti WTP operations (Section 6, p. 15 of 188, as part of WTP O&M Technical Manual – Part 1).

However, the WTP O&M Technical Manual also specifies that Wekweeti's WTP has provisions to inject coagulants in the future (see Section 3.4 (p. 133), Section 3.19.3 (p. 47), Section 5.1 (p. 57), Section 5.2 (p. 61), Section 6.2.6 (p. 76) and (p. 30 of 188)).

Recommendation(s):

- 1) ENR recommends that Wekweeti clarify if coagulants will be used in the future.
- 2) Should coagulants be used in the future, ENR recommends that condition(s) be added to the Water Licence, in order to adequately capture these operational specifications.
- 3) Should the Proponent clarify that no coagulants will be used in the future, details specified in the WTP O&M Technical Manual – Part 1, referring to provision for use of coagulants in the future, should be removed to reflect the current operations and plans. In this case, ENR notes that any future operational changes of this nature at the WTP will require a Water Licence amendment.

Comments and recommendations were provided by ENR technical experts in the Water Management and Monitoring Division and the North Slave Region and were coordinated and collated by the Environmental Assessment and Monitoring Section (EAM), Environmental Stewardship and Climate Change Division.

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.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Clancy', written in a cursive style.

Patrick Clancy
Environmental Regulatory Analyst
Environmental Assessment and Monitoring Section
Environmental Stewardship and Climate Change Division
Department of Environment and Natural Resources
Government of the Northwest Territories