



Sahtu Land and Water Board

Staff Report

Division: Water	Report No. 3
Date Completed: May 31, 2022	File No. S18L3-001
Meeting Date: July 5, 2022	
Subject: Déljñę Municipal Water Licence Annual Reports 2017, 2018, 2019, and 2020	

1. Purpose

The purpose of this Report is to present to the Sahtu Land and Water Board for information the 2017, 2018, 2019, and 2020 Annual Water Licence Reports (Annual Reports) submitted by Déljñę Got'jñę Government (DGG) required by Licence S18L3-001, Part B, condition 16, and Schedule 1.

2. Background

- **May 5, 2018:** S12L3-006 renewed as S18L3-001
- **2018:** Groundwater monitoring wells were installed by MACA (7 wells) as part of the SNP and to implement the Closure and Reclamation Plan for Déljñę;
- **October 29, 2021:** 2017, 2018, 2019, and 2020 Annual Reports received;
- **November 17, 2021:** 2017, 2018, 2019, and 2020 Annual Reports distributed for review;
- **December 9, 2021:** Comments on Annual Reports due;
- **December 16, 2021:** Responses to comments due (none received);
- **February-May, 2022:** Board staff reaches out to DGG municipal representatives;
- **May 31, 2022:** Staff Report completed;
- **July 5, 2022:** Board meeting;
- **May 4, 2023:** expiry date for S18L3-001.

3.0 Discussion

3.1 Overview – S18L3-001 – Municipal Water Licence – Déljñę Got'jñę Government

Water Licence S18L3-001 (Licence) entitles DGG to use Water and dispose of Waste for the purpose of municipal undertakings at Déljñę, Northwest Territories. On October 29, 2021, DGG submitted the 2017, 2018, 2019, and 2020 Annual Reports (**Attachments 1-4**). These Annual reports summarize

activities undertaken by DGG during the previous years, including the results of monitoring activities. The Annual reports are not for Board approval, however, the Board must be satisfied that DGG has completed annual reporting in accordance with Licence requirements.

Board staff combined the reviews of the 2017, 2018, 2019, and 2020 Annual Reports, which were submitted at the same time in fall 2021. Annual Reports are due by March 31 each year, and reports were all submitted late, some by years.

Table 1 summarizes information included in the reports in relation to licence requirements and for comparison across years, highlights include:

- **Water Usage:** not tracked in 2017 and not complete for 2018 and 2019. Water usage was well below Licence value.
- **Sludge Quantities or Removal:** no records. Week-long decanting conducted in June 2017, 2018, 2019, 2020 with no reason for decanting provided. Decanting is suspected to have contributed to exceedances in effluent quality in 2018 and 2019.
- **SNP Surface Water Monitoring:** data missing for 2017 and 2020 and not complete for 2018 and 2019. Groundwater monitoring not completed 2017-2020.
- **Effluent Quality:** exceedances recorded for prior to discharge to a wetland during years when SNP data collected.
- **Spills:** one to three spills recorded each year. Spills included sewage, oil products, petroleum gas, glycol. No follow-up available.
- **Training:** no SNP or other training recorded for 2017-2020, even though the Inspector's Report notes training in 2018.
- **Construction Modifications or Closure and Reclamation Work:** none from 2017-2020.
- **Actions Taken to Address Concerns:** none from 2017-2019, although Board compliance concern letter acknowledged in 2019; some concerns acted on in 2020.
- **Board Requests:** revisions/update to the Closure and Reclamation Plan for the SWF in 2020.
- **Revisions/Updates to Plans:** in 2018 to the Spill Contingency Plan, Sewage Waste Disposal Facilities Operation and Maintenance Plan, Solid Waste Disposal Operation and Maintenance Plan and in 2020 new SWF Operation and Maintenance plan (Version 2).

Table 1. Summary of information and activities included in Déliņę Water Licence Annual Reports, 2017-2020.

Schedule 1 Annual Water Licence Report, Attached to Water Licence S18L3-001	2017	2018	2019	2020
The Annual Water Licence Report referred to in Part B, condition 16 of this licence shall include but not be limited to the following information:				
1. The monthly and annual quantities in cubic metres (m ³) of fresh Water obtained from all sources.	Not tracked, estimated from average of 2016 and 2018 water intake from Great Bear Lake. Total annual water use estimated to be 20,573.45 m ³ .	Recorded; December estimated. Total annual water use was 19,139.89 m ³ .	Recorded except for January, February, part of March (those months estimated). Total annual water use was 18,541.90 m ³ .	Recorded for every month. Total annual water use was 18,221.01 m ³ .
2. The monthly and annual quantities in cubic metres (m ³) of each and all Waste discharged.	Provided (formula) monthly/annual totals. Total estimated as 3,159.075 m ³ .	Provided (formula) monthly/annual totals. Total estimated as 3,274.05 m ³ .	Provided (formula) monthly/annual totals. Total estimated as 3,421.875 m ³ .	Provided (formula) monthly/annual totals. Total estimated as 33,301.425 m ³ .
Sewage Deposited to Primary Sewage Cells	Estimated as the same as the total water volumes (20,573.45 m ³).	Estimated as the same as the total water volumes (19,139.89 m ³).	Estimated as the same as the total water volumes (18,541.90 m ³).	Estimated as the same as the total water volumes (18,221.01 m ³).
Decanting of Sewage Lagoon	June week-long duration, volume unknown.	June week-long duration, volume unknown.	June week-long duration, volume unknown.	June week-long duration, volume unknown.
3. The annual quantities in cubic metres (m ³) of sludge in the Sewage Lagoon.	No records.	No records.	No records.	No records.
4. The monthly and annual quantities in cubic metres (m ³) of solid Waste removed from the Waste Disposal Facilities.	No records.	No records.	No records.	No records.
5. The monthly and annual quantities in cubic metres (m ³) of all Sewage and	No records.	No records.	No records.	No records.

<p>solid Waste deposited into the Waste Disposal Facilities by commercial, industrial, and institutional operators working outside the municipal boundaries of Deline.</p>				
<p>6. A Surveillance Network Program Report as required under the Surveillance Network Program in accordance with reporting requirements in Part A, condition 2 of Annex A of this Licence.</p>	<p>No SNP sampling data found for 2017.</p>	<p>Samples collected for 4 stations. Exceedances at 0555-4 (effluent quality): June for fecal coliforms, Hexane Extractable Material (HEM; oil and grease) and Carbonaceous Biochemical Oxygen Demand (CBOD) and July for Total Suspended Solids (TSS), HEM, and pH.</p> <p>No data available for SNP groundwater sampling stations.</p>	<p>Samples collected at 3 stations. Exceedances at 0555-4 in July for TSS and August for pH.</p> <p>No data available for SNP groundwater sampling stations.</p>	<p>No SNP sampling data found for 2020.</p>
<p>7. A list and description of all Spills and Unauthorized Discharges that occurred during the previous calendar year, including the date, NWT spill number, volume, location, and summary of the circumstances and follow-up actions taken, and the status (i.e., open or closed), in accordance with the reporting requirements referred in Part G of this Licence.</p>	<p>One spill: 30 litre glycol. Follow-up information unavailable.</p>	<p>Three spills: 2500 litre raw sewage; 6000 litre sewage; 150 litres heating oil. Follow-up information unavailable.</p>	<p>Two spills: 20 litre crude oil; 40 litre engine coolant. Follow-up information unavailable.</p>	<p>Three spills: 375 litre heating oil; 5 litre petroleum gas; 176 m² petroleum gas. Follow-up information unavailable.</p>
<p>8. An outline of any Spill Training and/or other operator training carried out.</p>	<p>No spill training reported.</p>	<p>No spill training reported.</p>	<p>No spill training reported.</p>	<p>No spill training reported.</p>

9. A description of Construction, Modifications and/or major maintenance work carried out on the Water Supply and Waste	No work carried out.	No work carried out.	No work carried out.	Construction of the New Solid Waste Facility 2020. As-built drawings are to be completed Summer 2021
10. A description of any Closure and Reclamation work completed during the year and an outline on any work anticipated for the next year.	None completed.	No updates or revisions to plan.	No	No
11. A description of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector.	No actions recorded as being completed.	No actions recorded as being completed.	SLWB letter to DGG regarding compliance concerns. No records indicate any actions taken to address concerns.	Deline Water Licence Inspection Report and Inspector's Letter – Use of Incinerators at the New Solid Waste Facility filed. Barricades and signage placed at the lagoon to reduce illegal disposal. Additional barricades and signage completed at the temporary solid waste facility. The new solid waste facility did not make use of the referenced home-made incinerator. Additional drainage was completed. Paper signage planned.
12. A description of any studies requested by the Board that relate to Waste Disposal, Water Use, or reclamation, and a brief description of any future studies planned.	No studies requested or completed.	No additional studies completed.	None requested or completed.	Revisions for final closure and reclamation of the solid waste facilities were requested.
13. Any updates or revisions to the:				

i.	Approved Spill Contingency Plan referred to in Part G.	No	Yes	No	No
ii.	Approved Temporary Solid Waste Disposal Operation and Maintenance Plan referred to in Part D.	No	No	No	No
iii.	Approved Sewage Waste Disposal Facilities Operation and Maintenance Plan referred to in Part D.	No	Yes	No	No
iv.	Approved Water Treatment Plant Operation and Maintenance Plan referred to in Part D;	No	No	No	No
v.	Approved Solid Waste Disposal Operation and Maintenance Plan referred to in Part D; and	No	Yes	No	Deline new solid waste facility Operation and Maintenance plan (Version 2).
vi.	Approved Final Closure and Reclamation Plan referred to in Part H.	No	No	No	No
14.	Any other details on Water Use, operating procedures, Modifications, maintenance work or other topics, requested by the Board by November 1 of the year being reported.	None requested or completed.	None requested.	None requested.	None requested.

4.0 Comments

Issues with data collection and record keeping are evident. Resources implicated in information gaps.

Compliance/deficiency issues were identified by Inspectors and Board staff in years prior to the submission/review of the annual reports.

Inspection Report Issues and Concerns:

2017

- current landfill well past its capacity
- posting, signage issues
- windswept waste should be collected at least twice a year
- properly handling, storage, disposal of waste discussed
- 2016 Annual Report not submitted

2018

- minor cracks in containment berm at new sewage lagoon; monitor and repair as needed
- temporary Hazardous Waste containment area has overflowing drums, broken batteries, and signs of spilt waste throughout
- posting, signage unacceptable
- C&R plan unacceptable (only 2014 plan on record)
- SNP station at Airplane Lake was removed from new water Licence and needs to be re-established due to concern for the public
- SNP training conducted with DGG staff and further training with Dillion recommended for groundwater sampling
- 2017 Annual Report not submitted
- standing water at TSWF and new SWF
- no coordinates of water supply for dust suppression purposes

2019

- note: no inspection report included in Annual Report
- “Notice of Compliance Concerns...” letter the Board sent to DGG regarding compliance concerns and reporting issues, including outstanding submissions and re-submissions (**Attachment 5**)

2020

- some waste disposal at old sewage lagoon site, requires fencing and signage
- standing water at TSWF
- new sewage lagoon requires signage
- TSWF and new SWF require proper signage
- improper use of incinerators at new SWF
- C&R plan unacceptable (only 2014 plan on record)
- drainage required at new SWF
- signage required for SNP areas
- SNP sampling needs to be conducted as per Licence
- 2019 Annual Report not submitted

Déljñę Water Licence will expire on May 4, 2023. DGG will need to be submitting renewal application within the next 3-6 months.

5. Public Review

Comments on the annual reports were received from two reviewers (**Attachment 6**):

- Environment and Climate Change Canada (ECCC)
- The Government of the Northwest Territories, Department of Environment and Natural Resources – Environmental Assessment and Monitoring (GNWT-ENR)

DGG provided no response to comments/issues raised, even after Board staff reached out.

5.1 Main Issues Raised during Reviews

Status of New Solid Waste Facility and Temporary Solid Waste Facility

ECCC (Comment ID 2) noted that the construction of the new Solid Waste Facility (SWF) took place in 2020 (Annual Report 2020). To clarify the status of the new SWF and the Temporary SWF, ECCC recommends the following information be provided in the 2021 annual report:

- New SWF: Whether the new facility is completed and in use, and how hazardous wastes are managed (segregated, stored, and final disposal procedures). Development of an operation and maintenance manual for the new facility.
- Temporary SWF: How hazardous wastes are managed (segregated, stored, and final disposal procedures). Whether the Temporary SWF will it be closed, any closure measures undertaken, remaining closure measures, and an estimated schedule. A closure plan to be developed well in advance of decommissioning.

Status of the Operations and Maintenance Plan (O&M Plan)

GNWT-ENR (Comment ID 1) note that SLWB had requested revisions to the O&M Plan in 2019. ENR is unclear if the O&M Plan has been revised to address concerns as information on leachate quality and the closure and reclamation plan for the temporary facility are lacking. ENR recommends that DGG amend the O&M Plan to address the concerns raised, or if revisions are complete to submit the revised plan.

SNP Monitoring Gaps

ECCC (Comment ID 4) stresses the importance of monitoring and note the annual reports contain SNP sampling gaps. Both ECCC and GNWT-ENR (Comment ID 3) note that no SNP results were provided in the 2017 and 2020 reports. GNWT-ENR recommends that the community government explain why monitoring results are missing and provide sampling information if it can be acquired. ECCC recommended DGG identify barriers to conducting routine SNP sampling and potential solutions, and ENR recommends that DGG outline measures and planning procedures to facilitate yearly SNP sampling.

SNP Monitoring: Effluent Quality Exceedances

Effluent quality at SNP 0555-4, which monitors effluent quality from the Sewage Disposal Facilities prior to discharging to a wetland, showed elevated concentrations of CBOD and TSS, and well as elevated fecal coliform count in 2018 (GNWT-ENR Comment ID 3). Results in 2019 showed elevated

concentrations of TSS and HEM. ENR recommends that actions/approaches be examined to reduce these concentrations and improve wastewater prior to entering the wetland.

SNP: Other Issues

ECCC (Comment ID 6, 7, and 8) identified other concerns associated with the SNP monitoring program, including:

- Issues with test parameters: samples received past holding time; results uncertain due to air in vial; and test requested but no sample received at laboratory. ECCC recommends that the DGG contact the laboratory to discuss how to improve future monitoring to minimize these issues.
- No record of ambient conditions at time of sampling to support interpretation of monitoring data. ECCC recommends measuring ambient weather parameters, pH and temperature of receiving waterbody, and other notable conditions (e.g., algal growth) at time of SNP sampling, although these are not part of the licence conditions.
- Annual reports do not indicate whether QA/QC information is collected. ECCC recommends DGG work with the laboratory to design QA/QC procedures, including collection of duplicate samples, and incorporation of field blanks and travel blanks in analysis.

Water Consumption

ERN (Comment ID 2) noted that tracking information for water use in 2017 was not available. In addition, water withdrawal volumes were not recorded in December 2018 and January, February, and part of March in 2019. ENR recommends DGG identify what created the interruptions and how these can be overcome in the future.

Sludge Monitoring

ECCC (Comment ID 5) noted the Sewage Lagoon O&M manual states that sludge volumes are to be measured every 2-5 years to determine when sludge removal is required. Sludge depths were not monitored based on the 2017-2020 annual reports. Clarification is required on whether sludge depth/volume are periodically monitored and what the past monitoring results are.

Homemade Incinerators

ECCC (Comment ID 3) referred to the presence of homemade incinerators that did not meet incineration standards during a 2020 ENR inspection. ECCC discourages the use of any incinerators that do not follow federal and territorial standards and guidance and recommend the 2021 annual report clarify whether operation of homemade incinerators has been discontinued.

Compliance Self-Reliance

GNWT-ENR (Comment ID 4) notes that DGG would likely benefit from assistance and education on ways to improve compliance with their water licence requirements to reduce possible risks to the environment. ENR identifies groups and agencies that have roles and responsibilities in enabling, assisting, and improving compliance, and building capacity and self-reliance:

- Municipal and Community Affairs (MACA);
- Environment and Natural Resources (ENR);
- Health and Social Services (HSS);

- Sahtu Land and Water Board; and
- Déljñę Got'jñę Government (DGG).

ENR recommends the SLWB organize and conduct a meeting with DGG and all parties involved to discuss resolving compliance issues and identify a path forward.

6. Security

Not applicable.

7. Conclusion

Board staff conclude that the four Annual Reports, as submitted, provide an overview of activities that occurred under the Licence during the reporting years of 2017, 2018, 2019, and 2020. The 2017, 2018, and 2019 Annual Reports were submitted well past the reporting period and SNP and other monitoring data are missing. In addition, the 2020 Annual Report did not follow the S18L3-001 Annual Report Template provided by Board staff in August 2020, which was developed to assist DGG with reporting requirements.

The Annual Reports are not for Board approval; however, the Board may wish to follow up with DGG, based on information provided in the Annual Reports, reviewer comments, and past direction provided to DGG regarding compliance issues, submission of updated Operations and Maintenance Manuals, and use of the S18L3-001 Annual Report Template. In addition, Board staff note that the Community did not respond to comments and recommendations provided during the public review process and did not respond to SLWB staff attempts to contact them.

Board staff conclude that DGG could be reminded of the S18L3-001 Water Licence conditions, including SNP monitoring requirements and submission deadline for Annual Reports. In addition, DGG could be reminded to use the S18L3-001 Annual Report Template (updated, **Attachment 7**) for 2021 and future Annual Reports exactly as is to comply with reporting requirements. DGG could be advised to follow template instructions and to provide a clear response for sections (1-21) and reasons if no information is provided.

The Board could also request that DGG include the following items in the 2021 Annual Report under the appropriate under "19. Other Information" or submit responses to reviewer comments:

- Clarify the status of the new Solid Waste Facility (New SWF), and describe how Hazardous Wastes are handled, stored, and disposed at the SWF.
- Describe how Hazardous Wastes are handled, stored, and disposed at the Temporary Solid Waste Facility (TSWF).
- Clarify whether the TSWF will be closed, closure measures undertaken to date, remaining closure measures, and provide closure schedule. Indicate if a closure plan will be developed for the TSWF in advance of decommissioning this facility, and development state of the closure plan.
- Reasons for water usage not recorded in 2017 and recording gaps in 2018 and 2019. Identify how data gaps will be overcome in the future.

- Reasons for SNP sampling not reported in 2017 and 2020, and inconsistency in 2018 and 2019 sampling. Reasons for SNP groundwater sampling not undertaken. Identify barriers to conducting SNP sampling and potential solutions such that Licence requirements are met.
- Discussion of Effluent Quality Criteria exceedance of TSS, CBOD, HEM, and pH in 2018 and/or 2019 at SNP 0555-4, and what actions/approaches will be taken to improve the quality of wastewater prior to entering the wetland.
- Consult with analytical laboratory and provide appropriate quality control measures for SNP sampling, including duplicate samples, field blanks, and travel blanks. Provide measures that will be taken to minimize data qualifiers.
- Clarify whether lagoon sludge depth/volume is periodically monitored, frequency of monitoring, and past results. If not sampled over 2017-2021, identify when will this be undertaken.
- Clarify whether operation of the homemade incinerators has been discontinued.

In alignment with the Operation and Maintenance Plan Version 3 for the new SWF, DGG could be requested to report on:

- monitoring of the geosynthetic clay liner for 2021.
- the routine litter cleanup for 2021.

In addition, the Board could remind DGG of overdue submissions and resubmissions, including:

- a revised **Operations and Maintenance Manual for the Sewage Lagoon** as per Part D, condition 2, due by June 18, 2018.
- a revised **Operations and Maintenance Manual for the Solid Waste Disposal Facility** as per Part D, condition 4 for the original SWF, due by June 18, 2018.
- an **Interim Closure and Reclamation Plan** for the New SWF, due by December 22, 2021.
- **As-built Report** for the sewage lagoon as per Part E, condition 7.

Board staff note that Version 3 of the Operations and Maintenance Manual for the new Solid Waste Disposal Facility is lacking some information that was contained in Version 2. The Board could request that Version 3 include this information.

Board staff note confusion in front page titles and dates of some documents submitted. The Board could advise DGG of this issue and request changes.

Board staff note GNWT-ENR's recommendation to organize a meeting of all involved parties involved with and conclude that it would be beneficial to address compliance and reporting issues and determine a path forward.

8. Recommendations

Board staff recommend the Board:

- **acknowledge the 2017, 2018, 2019, and 2020 Annual Water Licence Reports** submitted by the Déljné Got'jné Government to fulfill Part B, condition 16, and Schedule 1 of municipal Licence S18L3-001.
- organize and conduct a community meeting with the Deljné Got'jné Government and other parties having roles and responsibilities with municipal compliance to discuss a path forward in resolving compliance issues such as:
 1. the timely submission for Annual Reports and SNP monitoring results
 2. responses to the outstanding questions from this review
 3. discuss needs for training in sample collection, record keeping, completing the template, etc.
 4. discuss needs and resources to complete the outstanding document submissions.
- remind DGG of upcoming Licence renewal, as application submission is required within next 3-6 months.

Additionally, regarding overdue documents and other concerns, the Board could request DGG to submit outstanding document submissions and resubmissions, as well as address other reporting issues.

A draft letter is attached for the Board's consideration (**Attachment 8**). This letter contains an attachment listing items that the Board could request DGG to provide to deal with outstanding and current compliance and reporting issues prior to the community meeting.

9. Attachments

1. 2017 Annual Report ([hyperlink only](#))
2. 2018 Annual Report ([hyperlink only](#))
3. 2019 Annual Report ([hyperlink only](#))
4. 2020 Annual Report ([hyperlink only](#))
5. Board 2019 Notice of Compliance Concerns letter ([hyperlink only](#))
6. Review Summary Table
7. S18L3-001 Déljné Annual Report Template (updated)
8. Draft Letter and Attachment from the Board

Respectfully submitted,

Reviewed by:

Approved by:

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Regulatory Specialist

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Reviewer Comments and Proponent Responses

Project: Deline Got'ine Government Water Licence
 Board: Sahtu Land and Water Board
 Organization: Deline Got'ine Government

No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Environment and Climate Change Canada (ECCC) - Victoria Shore				
1	ECCC Cover Letter	ECCC Cover Letter	N/A	
2	<p>Topic: New Solid Waste Facility and Temporary Solid Waste Facility</p> <p>References: 1. 2020 annual water licence report</p>	<p>The 2020 annual report states that construction of the New Solid Waste Facility (SWF) took place in 2020. To clarify where and how solid waste is currently managed, the 2021 annual report should provide an update regarding the status of the New SWF and Temporary SWF, and describe closure measures.</p>	<p>ECCC recommends that the following information be provided in the 2021 annual report:</p> <ul style="list-style-type: none"> • Clarify whether the New Solid Waste Facility is completed and in use; • Clarify whether the Temporary Solid Waste Facility will be closed and, if so, describe any closure measures taken to date; • Describe any remaining closure measures that need to be taken at the Temporary Solid Waste Facility and provide an estimated schedule; and • Describe how hazardous wastes are managed at the New SWF and the Temporary SWF, including whether and how hazardous wastes are segregated and stored in secondary containment, and final disposal procedures. <p>ECCC also recommends that a closure plan be developed for the Temporary Solid Waste Facility well in advance of decommissioning this facility, and that an operation and maintenance manual be developed for the New Solid Waste Facility.</p>	
3	Topic: Homemade incinerators	The September 2020 ENR Inspector's Report (Attachment B) and Inspector's letter (Attachment C) note the presence of homemade incinerators at the New SWF, which do not meet	ECCC recommends that the 2021 annual report provide an update regarding whether operation of the homemade incinerators has been discontinued. ECCC also recommends that	

		<p>incineration standards, and outline concerns with these incinerators.</p> <p>ECCC strongly discourages the use of any incinerators that do not follow federal and territorial standards and guidance, as toxic substances (e.g., dioxins/furans, mercury, heavy metals) could be released to the environment. Relevant guidance documents are available from ECCC and the Government of Nunavut.</p> <p>References:</p> <ol style="list-style-type: none"> 2020 annual report: Attachment B (ENR Water License Inspection Report) and Attachment C (Inspector’s Letter – Use of Incinerators at the New Solid Waste Facility) Technical Document for Batch Waste Incineration (Environment Canada, January 2010) Environmental Guideline for the Burning and Incineration of Solid Waste (Government of Nunavut – Department of Environment, 2012) 	<p>the Licensee consult the following documents to support responsible solid waste management:</p> <ol style="list-style-type: none"> Technical Document for Batch Waste Incineration (Environment Canada, January 2010) https://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1#:~:text=Environment%20Canada%20has%20developed%20a,%20of%20the%20Canada-wide%20Standards Environmental Guideline for the Burning and Incineration of Solid Waste (Government of Nunavut – Department of Environment, 2012) https://www.gov.nu.ca/environment/documents/guideline-burning-and-incineration-solid-waste-2012 	
4	<p>Topic: Surveillance Network Program (SNP) monitoring</p> <p>References:</p> <ol style="list-style-type: none"> Annual water licence reports for 2017, 2018, 2019 and 2020 	<p>Monitoring is important to track the performance of the sewage treatment facilities, leachate and runoff quality from the solid waste disposal facilities, and water quality of the receiving environment. However, the annual reports contain SNP sampling gaps. In particular, no SNP sampling data was provided in the 2017 and 2020 annual reports. ECCC encourages the Licensee to prioritize SNP sampling, as such data gaps hinder the assessment of sewage treatment performance, detection of exceedances, and tracking trends in sewage- and waste-related parameters onsite and in the receiving environment.</p>	<p>ECCC recommends that the Licensee identify any barriers to conducting routine SNP sampling and potential solutions.</p>	
5	<p>Topic: Sludge monitoring</p> <p>References:</p>	<p>Section 2.13 (Sludge Management) of the Sewage Lagoon O&M manual states that sludge volumes are to be measured and recorded every 2 to 5 years in order to determine when sludge removal is required. As the annual reports for 2017 to</p>	<p>ECCC recommends that the Licensee clarify whether lagoon sludge depth/volume is monitored periodically and, if so, indicate the frequency and provide past monitoring results.</p>	

	<p>1. Sewage Lagoon O&M manual (February 2018); Attachment D of 2018 annual report</p> <p>2. Annual water licence reports for 2017, 2018, 2019 and 2020</p>	<p>2020 do not mention sludge monitoring, it is unclear whether sludge depth is measured periodically.</p>		
6	<p>Topic: Laboratory analysis reports</p> <p>References: 1. Annual water licence reports for 2018 and 2019</p>	<p>The laboratory analysis reports for 2018 and 2019 contain several data qualifiers that indicate issues with some test parameters (for example, samples received past holding time, result uncertain due to air in vial, test requested but no sample bottle received).</p>	<p>ECCC recommends that the Licensee reviews the 2018 and 2019 laboratory analysis reports to flag recurring data qualifiers, and contacts the laboratory to discuss how to improve future monitoring to minimize data qualifiers.</p>	
7	<p>Topic: Field monitoring</p> <p>References: 1. Surveillance Network Program monitoring</p>	<p>ECCC notes that it is important to record ambient conditions as well as any notable conditions that occur at the time of sampling, in order to support the interpretation of SNP monitoring results.</p>	<p>ECCC recommends measuring and recording the ambient conditions (including precipitation, wind speed and direction, air temperature, and pH and temperature of receiving waterbody) and any other notable conditions (such as algal growth) at the time of SNP sampling, and using this information to support the interpretation of monitoring data.</p>	
8	<p>Topic: Quality control sampling</p>	<p>Quality control sampling information is important to support interpretation of monitoring results, and to detect potential issues with collection and shipping of samples. The annual</p>	<p>ECCC recommends that the following quality control sampling information be collected during SNP sampling and included in future annual reports:</p>	

	References: 1. 1. Surveillance Network Program monitoring	report does not indicate whether QA/QC information is collected.	<ul style="list-style-type: none"> • In consultation with the analytical laboratory, plan how and when to collect duplicate samples, field blanks and travel blanks; • Incorporate at least one travel blank per sampling event; and • Ensure that the quality control samples represent at least 10% of the total samples collected. 	
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
GNWT-ENR - EAM (Environmental Assessment and Monitoring) - Erin Goose				
1	Appendix B, Annual Report 2019, Roshni Sebastian comments	The Board had asked for revisions to operations and maintenance (O&M) plan which had not been addressed according to the letter sent to Deline Got'ine Government in 2019. It is not clear if the revisions asked have been addressed even in the annual report for 2020. For instance, there is no information on leachate quality or the closure and reclamation plan for the temporary facility.	1) ENR recommends that the proponent address the concerns raised and make amends to the O&M plan. If it has been addressed as of 2021, ENR recommends submitting the revised O&M plan.	
2	Water Consumption, Jeanne Arsenault comments	Information submitted for water consumption in 2017 specified that "Tracking information about the water intake from Great Bear Lake was not available in 2017". Water withdrawal volumes were not recorded for December in 2018, and for January, February, and part of March in 2019. Water withdrawal was recorded for every month in 2020.	ENR commends the Déljñę Got'jñę Government for monitoring all year without interruption in 2020. ENR also recommends that the community government identifies what may have created these interruptions in previous years, and how these occurrences/difficulties can be overcome in the future.	
3	SNP Monitoring Results	In both 2017 and 2020, no SNP results were provided in the annual report, under the rationale that "No SNP sampling data was found for the reporting year". Results monitored at SNP 0555-4 in 2018, which location is to monitor effluent quality from the Sewage Disposal Facilities prior to discharging to the wetland, recorded elevated concentrations of CBOD (131 mg/L on June 7th), TSS (146 mg/L on July 16th), as well as an elevated count of fecal coliforms of 50,000 CFU/100 ml on June 7th.	ENR recommends that the Déljñę Got'jñę Government provide information on likely causes of elevated concentrations of TSS, CBOD and HEM monitored in 2018 and 2019, at the SNP 0555-4 sampling location. ENR recommends that the community government specifies which actions and/or approaches would help in future years to reduce these concentrations and improve the quality of wastewater prior to entering the wetland.	

		<p>Results monitored in 2019 at the same location, also revealed elevated concentrations of TSS (108 mg/L on July 4th) and hexane extractable material (HEM) at 6.4 mg/L on July 4th.</p>	<p>ENR recommends that the community government explain the reasons why monitoring results were absent in 2017 and 2020, and if it still might be possible for these results to be acquired.</p> <p>Should SNP results be unavailable for 2017 and 2020 because no sampling was conducted, ENR recommends that the community government outline which measures/planning procedures can be put in place, in order to facilitate SNP sampling yearly in the future.</p>	
4	Unrenewed Water Licence & Water Licence Compliance Self-reliance	<p>An unofficial compilation of NWT and Nunavut communities' compliance with the requirement of their water licence was prepared during the Northern Territories Water and Waste Association (NTWWA) yearly conference, in order to attribute the "Water Protection" and "Waste Management" awards to communities in both territories.</p> <p>ENR notes that the score attributed to the Déljñę Got'jñę Government in 2018 and 2019 appears to indicate that the community would benefit from assistance and education on ways to improve compliance with the requirements of their water licence, in order to reduce possible risks to the environment and receiving water bodies from waste management practices and facilities.</p> <p>Various groups and agencies such as Municipal and Community Affairs (MACA), Environmental and Natural Resources (ENR), Health and Social Services (HSS), the Sahtu Land and Water Board (SLWB) and the Déljñę Got'jñę Government itself, have roles and responsibilities in enabling, assisting and ultimately improving compliance, building capacity and self-reliance, as described in the (March 2018) MVLWB Municipal Water Licences: Roles and Responsibilities, adapted with permission from the Inuvialuit Water Board.</p>	<p>ENR recommends that the SLWB organize and conduct (if not already done) a community meeting with the Déljñę Got'jñę Government and other parties having roles and responsibilities with municipal compliance to discuss a path forward in resolving compliance issues</p>	

		ENR encourages the SLWB to determine most efficient and relevant course of actions (eg. community meeting via Zoom, etc.), and invite all parties involved. Discussions between the Board and community's officials/staff (i.e. SAO, Mayor, operators, etc.), as well as with other parties (if/when required) would be helpful to identify possible solutions, and paths forward.		
5	Cover Letter	Comment Cover Letter		

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

ECCC File: 5200 000 010/002
MVLWB File: S18L3-001



December 9, 2021

via online review system

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

Dear Bonnie Bergsma:

RE: S18L3-001 – Deline Got'ine Government – Municipal Water Licence – 2017, 2018, 2019 & 2020 Annual Reports

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Sahtu Land and Water Board (SLWB) regarding the above mentioned Annual Reports. You will find our comments, attached.

ECCC is providing technical, science-based information and knowledge based on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*. These comments are intended to inform the assessment of this project's potential effects in the receiving environment and on valued ecosystem components. Any comments received from ECCC in this context do not relieve the proponent of its obligations to respect all applicable federal legislation.

If you need more information, please contact Victoria Shore at Victoria.Shore@ec.gc.ca

Sincerely,

[original signed by]

Victoria Shore
Senior Environmental Assessment Coordinator

Attachment(s): ECCC Comments Excel Sheet

cc: Jody Small, Acting Head, Environmental Assessment North (NT and NU)



December 9, 2021

Bonnie Bergsma
Regulator Coordinator-Specialist
Sahtu Land and Water Board
Po Box 1, Fort Good Hope, NT
X0E 0H0

Dear Bonnie Bergsma,

Re: Délįnę Got'įnę Government S18L3-001 - 2017-2020 Annual Reports

The Department of Environment and Natural Resources, Government of the Northwest Territories has reviewed the application at reference based on its mandated responsibilities under the *Waters Act*, ENR comments and recommendations have been submitted to the On-line Review System for the consideration of the Board.

Comments and recommendations were provided by ENR technical experts in the Waters Division and the Waste Management Division.

Technical questions on this submission can be addressed by:

Roshni Sebastian: Waste Management Advisor. Roshni_Sebastian@gov.nt.ca

Jeanne Arsenault: Pollution Control Specialist, Jeanne_Arsenault@gov.nt.ca

Should you have any general questions or concerns, please do not hesitate to contact Erin Goose in the Environmental Assessment and Monitoring unit at email gnwt_ea@gov.nt.ca

Sincerely,

Erin Goose
Environmental Regulatory Analyst
Environmental Assessment and Monitoring Section
Department of Environment and Natural Resources
Government of the Northwest Territories