

DECISION

WATER LICENCE NO: 2AM-MEL1631 - EMERGENCY AMENDMENT NO. 1

Licensee:	Agnico Eagle Mines Limited
Licence No:	2AM-MEL1631 Type “A”
Licence Issued:	April 15, 2016
Amendment No. 1 Effective:	April 29, 2020
Amendment No. 1 Expiry:	October 31, 2020
Licence Expiry:	March 31, 2031

Pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada (Nunavut Agreement)* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (*NWNSRTA* or Act), with respect to the Application for an emergency amendment to the Licence noted above, dated March 24, 2020, provided by Agnico Eagle Mines Limited (Agnico Eagle or Applicant), the Nunavut Water Board (NWB or Board) hereby grants the following licence amendments (Amendment No. 1).

The Licence issued April 1, 2016, with an expiry date of March 31, 2031, shall be amended (as set out in the attached Amendment No. 1) to include terms and conditions, with respect to the use of Waters and the deposit of Waste, to allow for:

- the time-limited discharge (May 2020 – October 2020) of effluent from the Containment Pond 1 (CP1) into Meliadine Lake through the Meliadine Lake Outfall Diffuser (Monitoring Program Station MEL-14) and the Water discharged shall not exceed 3,500 mg/L for the Maximum Average Concentration (MAC) of the Total Dissolved Solids (TDS).

The Board notes that the activities approved under this Amendment do not include changes to the management and discharge of saline groundwater into the marine environment recently proposed by Agnico Eagle and currently being considered under a separate application that was filed with the Nunavut Impact Review Board (NIRB File No. 11MN034).

Procedural and Regulatory History

The Application Before the Board

On March 24, 2020, the Nunavut Water Board (NWB or Board) received a request to amend Type “A” Water Licence No: 2AM-MEL1631 (Licence) submitted by Agnico Eagle Mines Limited

(Agnico Eagle or Applicant).⁴ This request sought amendments to the Licence to be considered on an emergency basis under ss. 43, 52 and 55 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 (*NWNSRTA*) to authorize the time-limited release of effluent from the Containment Pond 1 (CP1) that exceeds the Total Dissolved Solids (TDS) concentration limits prescribed under Part F, Item 3 of the Licence prior to the 2020 freshet expected in May (Amendment Application).

The Scope of the Amendment Application includes the following activities:

- Time-limited discharge (May 2020 – October 2020) of effluent from the Containment Pond 1 (CP1) into Meliadine Lake through the Meliadine Lake Outfall Diffuser (Monitoring Program Station MEL-14) not exceeding 3,500 mg/L for the Maximum Average Concentration (MAC) of the TDS; and
- Approval of the “*Water Quality Management and Optimization Plan (WQMOP), Implementation Plan for Total Dissolved Solids*”, dated March 24, 2020, prepared by Golder Associates Ltd.

Regulatory Requirements

Sections 52(2)(c) and 55(5) of the *NWNSTRA*, state:

52(2) A public hearing need not be held...

(c) in the case of an application for the amendment of a licence where the Board, with the consent of the Minister, declares the amendment to be required on an emergency basis.

55 (5) Subsections (1) and (4) [requiring Notice of an Application, a public comment period and advance notice of Public Hearings] do not apply in respect of an application for the amendment of a licence where the Board, with the consent of the Minister, declares the amendment to be required on an emergency basis.

On this basis, with the consent of the Minister, the Board may declare that an amendment is required on an emergency basis. If the Minister consents to the NWB’s declaration, this allows the Board to waive the normal notice, public hearing and comment requirements typically associated with the Board’s consideration of an application to amend a Type “A” Water Licence and to process the amendment application on an expedited basis.

With respect to the pre-licensing requirements associated with the Amendment Application, (land use plan conformity review by the Nunavut Planning Commission and impact assessment by the

⁴ Jamie Quesnel (Agnico Eagle) to Karen Kharatyan (NWB); RE: Request for Expedited Amendment to Permit Ministerial Approval of Amendment to 2AM-MEL1631 on or before May 1, 2020; March 24, 2020.

Nunavut Impact Review Board) under the *Nunavut Agreement* and the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*), the Emergency Situations part of the s. 152(1)(c) specifies the following:

152. (1) This Part does not apply in respect of any project that is carried out in response to

(c) an emergency if the federal Minister certifies that an emergency exists and that it is in the interest of ensuring the health or safety of an individual or the general public, or of protecting property or the environment that the project be carried out without delay.

Consequently, if the Minister certifies that the amendments proposed in the Amendment Application are required on an emergency basis, the conformity and assessment requirements of the *NuPPAA* do not apply. However, the NWB notes that if s. 152(1)(c) applies, the proponent of the emergency activities is required to report to the Nunavut Planning Commission, the Nunavut Impact Review Board and the federal Minister under s. 152(2) of the *NuPPAA*:

152(2) As soon as practicable after undertaking a project referred to in subsection (1), the person or entity carrying it out must submit a written report to the Commission, the Board and the federal Minister describing

(a) all of the works or activities that have been undertaken or carried out in response to the emergency referred to in paragraph (1) (a), (b) or (c), as the case may be; and

(b) any further works or activities required after the end of that emergency to complete the project or maintain a work referred to in paragraph (a).

Technical and Procedural History

The following table summarizes the technical and procedural history associated with the Amendment Application to date:

Date	Procedural Milestone
Early March, 2020	Agnico Eagle initiated a discussion with the NWB and other parties to inform them about the elevated TDS concentrations of the Water currently contained in CP1 and the necessity to discharge this Water from CP1 in order to protect the integrity of the infrastructure (DCP1 Dike).
March 24, 2020	Agnico Eagle submitted the Amendment Application to the NWB requesting to amend the Water Licence on an emergency basis.
March 25, 2020	NWB distributed the Amendment Application for public review and requested the interested parties to provide their comments on the following:

Date	Procedural Milestone
	<ol style="list-style-type: none"> 1. whether they were in agreement that emergency circumstances exist; 2. identify any questions or technical review comments about the Amendment Application; and 3. indicate whether they were interested and available to participate in a Board-hosted teleconference.
April 2, 2020	KivIA, CIRNA and ECCC filed written submissions regarding the Amendment Application and these submissions were subsequently forwarded to Agnico Eagle.
April 6, 2020	Agnico Eagle submitted their responses to the interveners' comments.
April 7, 2020	NWB forwarded Agnico Eagle's responses to the interveners for their review and consideration of whether the interveners were satisfied with the response, and the NWB sent out the Agenda for the teleconference scheduled to Wednesday, April 15, 2015, asking to submit the parties' presentations by Thursday, April 9, 2020. Note: the deadline to receive presentations was extended to April 14, 2020 as per KivIA's request.
April 14, 2020	<p>The parties filed their presentation materials in preparation for the teleconference.</p> <ul style="list-style-type: none"> • KivIA, CIRNA and Agnico Eagle submitted their presentation materials. • ECCC indicated that they would not be providing a formal presentation, but expressed their interest in participating in the Teleconference.
April 16, 2020	<ul style="list-style-type: none"> • The NWB conducted the discussion of the technical and procedural aspects of the Amendment Application via teleconference between 9:00 am – 2:00 pm (MDT). Representatives of Agnico Eagle, the KivIA, CIRNA, and ECCC participated to discuss the Amendment Application, the technical comments provided by parties and to briefly discuss the process associated with the Board's consideration of the Amendment Application. • Following the conclusion of the teleconference, Agnico Eagle provided a written closing statement summarizing their final responses to the questions and comments provided by the parties and the NWB staff during the Board's consideration of the Amendment Application, including issues raised during the teleconference.
April 17, 2020	The NWB issued follow up guidance to all parties and issued a further request for comments regarding the limitations and contingencies that may be necessary if Water sampling and laboratory testing is impacted

Date	Procedural Milestone
	by on-going travel restriction resulting from the public health response to the COVID-19 (novel coronavirus) pandemic.
April 21, 2020	Agnico Eagle and KivIA provided responses to the NWB's request for comments.
April 23, 2020	The NWB's decision-making panel responsible for the file, Meliadine Panel (Panel P15), met via teleconference and concluded that emergency circumstances have been established. Panel P15 also granted Amendment No. 1 to the Licence and directed the staff to issue this correspondence seeking the Minister's consent for the Board to process the Amendment Application on an emergency basis, these Reasons for Decision and Emergency Amendment No. 1 to Type "A" Water Licence No: 2AM-MEL1631

Summary of Technical Comments Provided During the Board's Consideration of the Amendment Application:

Kivalliq Inuit Association (KivIA):

The KivIA participated throughout the Board's consideration of the Amendment Application and identified the following issues, comments and concerns:

- Expressed concern regarding the timeline and emergency process requested by Agnico Eagle, as this process would not give the community a chance to engage on this issue (the KivIA identified that the public may have concerns about how higher TDS levels may be perceived to affect drinking Water quality in Meliadine Lake);
- Agreed that some draw down of water in CP1 must occur in May to prevent impacts to DCP1, but did not agree that the full dewatering of CP1 proposed by Agnico Eagle is necessary as the preparation for 2021 should be included within the scope of the next amendment application (on the basis that a longer-term amendment application that Agnico Eagle expects to file in the summer of 2020 could be reviewed and processed by the NWB prior to freshet of 2021);
- Concluded that the scope of the emergency should be confined to what is necessary for freshet 2020, and not extended to 2021;
- Requested to include Maximum Grab Sample limit, as well as the Maximum Average Concentration limit proposed by Agnico Eagle;
- Did not see any reason why the interim TDS target at the edge of the mixing zone should be increased from 500 mg/L to 1,000 mg/L;
- Requested that additional testing and modeling be conducted;
- Requested more robust monitoring (weekly at the edge of the mixing zone, monthly in the reference areas) during the discharge from CP1;
- Requested further information as to why Reverse Osmosis (RO) treatment of the water in CP1 or transfer of the Water into other containment ponds on-site were not considered to be alternatives to this amendment;
- Proposed that Agnico Eagle develop thresholds that would trigger the requirement for

- adaptive management prior to discharges from CP1 commencing;
- Proposed contingency measures that could be implemented if the sampling and laboratory analysis proposed by Agnico Eagle under the monitoring program to be carried out during the CP1 discharge becomes unavailable due to the public health measures associated with the COVID-19 pandemic.

Crown-Indigenous Relations and Northern Affairs (CIRNA):

CIRNA participated throughout the Board's consideration of the Amendment Application and provided the following comments:

- Agreed that time is of the essence in terms of the discharge from CP1, and that emergency circumstances have been established; and
- Asked for Agnico Eagle to provide their rationale regarding why the discharge from CP1 as proposed in the Amendment Application is the only reasonable course of action at this time.

Environment and Climate Change Canada (ECCC):

ECCC participated throughout the Board's consideration of the Amendment Application and provided the following comments:

- Indicated that ECCC defers to the NWB as to whether the Amendment Application is required on an emergency basis;
- Proposed that Agnico Eagle consider remote monitoring options for when the ice is present; and
- Proposed that Agnico Eagle develop thresholds that would trigger the requirement for adaptive management prior to discharges from CP1 commencing.

Agnico Eagle Mines Limited (Agnico Eagle):

In the Amendment Application and Agnico Eagle's responses to the comments and questions of interveners, Agnico Eagle indicated the following:

- Emphasized that the current situation is an emergency and to prevent an emergency, both in the near term and in the longer term;
- Emphasized that the third-party experts from Tetra Tech clearly support the view that delay of the Amendment Application could result in significant, and, in some cases, irreversible adverse effects;
- Emphasized that the proposed discharges would not be toxic to aquatic life, as demonstrated in the report prepared by Golder⁵, but conceded that the TDS may exceed the aesthetic limits applicable to drinking water;
- Clarified that the scope of the Amendment Application includes discharges commencing prior to the May freshet, and periodically from May through to October 2020 in order to dewater CP1 to an elevation of 63.0 metres (the operating standard) by the end of October 2020;

⁵ *Water Quality Management and Optimization Plan (WQMOP), Implementation Plan for Total Dissolved Solids*; Golder Associates Ltd.; March 24, 2020.

- Clarified that Agnico Eagle had evaluated the alternatives to the discharge from CP1, but had concluded that there are no reasonably feasible alternatives available to manage the excess water between now and freshet in May;
- Proposed an additional robust monitoring program for the 2020 discharge season (daily monitoring of flow volumes, weekly monitoring of field measurements and water chemistry at the end of pipe, monthly monitoring of field parameters and water chemistry at a total of three stations at the edge of mixing zone);
- In response to questions, Agnico Eagle expressed a willingness to give further consideration to the feasibility of the 21-day *Daphnia magna* survival and reproduction test as a potential alternative to the three-brood *Ceriodaphnia dubia* test;
- Proposed the establishment of a Working Group (KivIA, CIRNA, ECCC, NWB) that would receive the data from the proposed monitoring program and would be consulted about the development of thresholds for adaptive management as part of the monitoring process;
- Clarified that Agnico Eagle has already implemented contingency measures for Agnico Eagle to meet their existing monitoring program obligations in light of the operational and travel restrictions imposed under the public health measures implemented in response to the COVID-19 pandemic. Consequently, Agnico Eagle does not anticipate any logistical concerns related to compliance with the additional monitoring program associated with the proposed discharges from CP1 within the scope of the Amendment Application;
- Agnico Eagle did propose alternatives to the monitoring approach if additional limitations arise while the proposed monitoring program during discharge from CP1 is being carried out.

The Amendment Application and associated documentation filed by Agnico Eagle is available from the NWB's ftp site at the following link:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MEL1631%20Agnico/1%20APPLICATION/2020%20Emergency%20Amendment/>

The parties' written submissions about the Amendment Application are available from the NWB's ftp site at the following link:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MEL1631%20Agnico/2%20ADMIN/3%20SUBMISSIONS/2020%20Emergency%20Amendment/>

The Board's Decisions and Recommendations

Is the Amendment Application Required on an Emergency Basis?

Agnico Eagle acknowledged that, at the time the Amendment Application was submitted, the site conditions were not yet an emergency. However, Agnico Eagle provided evidence from third-party experts from Tetra Tech, who noted that, based on the current water levels in CP1, and the

volumes of water projected to be added to CP1 (reporting to CP1) during the upcoming freshet, if Agnico Eagle cannot discharge from CP1 as proposed in the Amendment Application, there could be “*significant, and in some cases irreversible adverse effects.*”⁶

During the technical review of the Amendment Application, CIRNA and the KivIA acknowledged that in the immediate short term, discharge(s) from CP1 must occur on an emergency basis to prevent harm to the water management infrastructure on site, and in particular, damage to the dike structure DCP1 that supports containment of the water in CP1.

Although the *NWNSRTA* does not define what constitutes an “emergency” under the Act, the Board has considered the following factors to assess whether the Amendment Application is required on an emergency basis:

- The potential for harm or damage to human health or safety to occur if the Amendment Application is not dealt with on an urgent basis;
- The potential for harm or damage to the environment to occur if the Amendment Application is not dealt with on an urgent basis; and
- The potential for harm or damage to property to occur if the Amendment Application is not dealt with on an urgent basis.

The Board agrees with CIRNA and the KivIA that the evidence provided by Agnico Eagle makes it clear that unless discharges from CP1 take place prior to the upcoming freshet, permanent damage may occur to critical water management infrastructure. The Board is concerned that such damage could lead to the failure of containment of the water in CP1, which could result in harm or damage to the environment and harm or damage to human health or safety as well. Consequently, the Board has concluded that the amendments proposed in the Amendment Application are required on an emergency basis as set out in the *NWNSRTA*.

In considering the Amendment Application on an emergency basis, the NWB has not limited the scope of the amendment to only the discharges from CP1 necessary to draw down the pond to accommodate water volumes reporting to CP1 during freshet as recommended by the KivIA. Although the Board is hopeful that, prior to the freshet in 2021, Agnico Eagle will have submitted, and the NWB and interested parties will have reviewed and considered, a more permanent amendment to the Licence to better manage water volumes on-site, the Board also understands that there are many factors outside the control of the Board, Agnico Eagle and the interveners that could result in delays in the Board’s processing of any future amendment application. The Board is concerned that factors such as continued limits on public gatherings and travel restrictions associated with the COVID-19 pandemic could have an impact on whether the amendments required to authorize discharges from CP1 during the 2021 freshet could be considered in a timely manner. In addition, Agnico Eagle provided evidence that if CP1 is not dewatered as proposed in

⁶ Jamie Quesnel (Agnico Eagle) to Karen Kharatyan (NWB); RE: April 16, 2020 Teleconference Written Closing Remarks – Type A Licence No. 2AM-MEL1631 Emergency Amendment Application; April 16, 2020; and Agnico Eagle’s teleconference presentation entitled: “Meliadine Gold Mine – Emergency Amendment, NWB Technical Meeting”, Slide # 12; April 16, 2020.

the Amendment Application by the end of October 2020, that the resulting high water levels in CP1 could damage the containment infrastructure over the course of the winter

Consequently, the Board has concluded that it is reasonable for the scope of Emergency Amendment No. 1 to include the entire 2020 summer discharge season, which is expected to be May 2020 through October 2020 and to include the activities required to discharge the Water from CP1 in order to protect the integrity of the water management infrastructure.

The Board's Recommendations Regarding Amendment No. 1

The Board commends Agnico Eagle's commitment to establish and work collaboratively with a specific Water Management Working Group (KivIA, CIRNA, ECCC, NWB) in order to discuss the monitoring progress and develop the adaptive management thresholds applicable to the discharges from CP1. However, the Board requires that the following preliminary adaptive management thresholds should be used until the final thresholds are developed by the Water Management Working Group during the Group teleconference to be scheduled tentatively within two weeks following the commencement of the discharge from CP1:

- If two consecutive end-of-pipe sampling events identify TDS concentrations equivalent to, or greater than, 3,500 mg/L, Agnico Eagle will increase sampling frequency; and
- If two consecutive edge-of-mixing-zone sampling events identify TDS concentrations equivalent to, or greater than, 75% of the interim target of 1,000 mg/L, Agnico Eagle will increase sampling frequency.

The Board notes that the first meeting of the Water Management Working Group will be tentatively within two weeks following the commencement of the discharge from CP1. The NWB expects that Agnico Eagle will provide a summary table with all monitoring results acquired prior to this and all next meetings, so that the Working Group can review the data and provide constructive feedback during each meeting. Additionally, the NWB expects that Agnico Eagle will provide adaptive management and mitigation options in advance of each meeting if either of the following occurs:

- There have been any instances of non-compliance with the effluent quality criterion of 3,500 mg/L MAC TDS, as measured at MEL-14, and/or
- There have been any instances of non-compliance with the interim TDS threshold as applied at the edge of the Mixing zone.

The Board notes that a specific monitoring program was developed for the 2020 Discharge and incorporated into the Emergency Amendment 1 under Schedule I, Table 3. This monitoring program was proposed by the Applicant and discussed with the intervening parties during the technical review/ teleconference. The Board notes that there were a few divergences of opinions regarding a number of monitoring strategies associated with the monitoring of Mixing Zone and Reference Areas. The Board is of the opinion that the weekly water quality sampling at the edge of the Mixing Zone and monthly sampling at the Reference Areas will be the most appropriate way to validate that the Effluent discharged during the 2020 Discharge season behaves as predicted

in the *WQMOP*, and specifically, is diluted to at least 1,000 mg/L TDS at the edge of the Mixing Zone, is fully assimilated within the receiving environment, and will not result in deleterious effects on aquatic life. At the same time, the Board advises that the sampling strategy presented in Table 3 of Schedule I may be further adjusted as per the NWB's direction based on the monitoring results' discussions with the Water Management Working Group.

Keeping the Community Informed

The Board also shares KivIA's concern that due to the processing of the Amendment Application in emergency circumstances, coupled with public health measures that limit the ability of community members to gather and engage in the regulatory process, that there has been a lack of opportunity for the exchange of information and community involvement in respect of the Amendment Application. Recognizing the concerns expressed by the KivIA that community members may perceive that these discharges from CP1 will adversely impact the quality of drinking water drawn from Meliadine Lake, the Board strongly recommends that Agnico Eagle consider how to ensure the public is informed about their planned discharges from CP1 over the course of the summer. Such measures could include posting information on Facebook or other social media platforms that are readily available to community members, and the information provided should include items such as plain language and translated summaries about:

- The progress of discharges from CP1;
- The overall current water quality baseline conditions in Meliadine Lake; and
- The updated water quality in Meliadine Lake as indicated by monitoring undertaken during the CP1 discharges in 2020.

Monitoring Contingencies

The NWB agrees with the KivIA that the following contingency measures should be implemented to ensure that robust monitoring continues even if the currently proposed laboratory analysis becomes unavailable due to public health measures implemented in response to the COVID-19 pandemic:

- Use of specific conductivity or TDS field measurements as a surrogate for laboratory measured TDS and the contributing ions (development of a statistical relationship between field measurements of specific conductivity and laboratory measured TDS); and
- Agnico Eagle should consult with the Water Management Working Group in respect of all monitoring and adaptive management measures implemented by Agnico Eagle over the course of the CP1 discharges in 2020.

Additionally, the Board appreciates Agnico Eagle's commitment to consider alternative monitoring approaches, such as installation of the remote monitoring stations at the edge of the mixing zone that would enable Agnico Eagle to continue to collect the necessary data, if limitations (*i.e.* ice cover on Meliadine Lake) arise while the proposed Monitoring Program applicable to the discharges from CP1 are being carried out.

Based on the information provided above, the Panel P15, by way of Motion No: 2020-01-P15-05 has acknowledged that the application for Amendment No. 1 to Water Licence No: 2AM-MEL1631 received on March 24, 2020 should be processed by the NWB on an emergency basis. Further, if the Minister consents to processing the Application for Amendment No. 1 on an emergency basis, the Panel P15 has, by way of Motion No: 2020-01-P15-06, authorized the issuance of these Reasons for Decision and the specified amendments to Water Licence No: 2AM-MEL1631 (Amendment No. 1) that are attached.

EMERGENCY AMENDMENT NO. 1

PART F: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

Insert Item 21:

The Discharge of Effluent from the Final Discharge Point at Monitoring Program Station MEL-14 shall be directed to Meliadine Lake through the Meliadine Lake Outfall Diffuser and shall not exceed the Effluent quality limits required under Part F, Item 3, except TDS that shall not exceed the following Effluent quality limits during the 2020 Discharge:

Parameter	Maximum Average Concentration	Maximum Concentration of Any Grab Sample
TDS (mg/L) (measured)	3,500	—

Insert Item 22:

The Licensee shall implement the Plan entitled “*Water Quality Management and Optimization Plan (WQMOP), Implementation Plan for Total Dissolved Solids*”, dated March 24, 2020, that was submitted as additional information with the March 24, 2020 Application for an amendment to Type “A” Water Licence No: 2AM-MEL-1631 to authorize the 2020 Discharge (the Amendment Application) that has been approved by the Board with the issuance of the Emergency Amendment No. 1. The Licensee shall submit to the Board for review an updated Plan, prior to starting the 2020 Discharge, to reflect all commitments made during the review of the Amendment Application.

PART I: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING

Insert Item 23:

The Licensee, in addition to the requirements as referred to in Part I, Item 6, during the 2020 Discharge, shall undertake the Water Monitoring Program provided in Table 3 of Schedule I.

Insert Item 24:

The Licensee shall submit to the Board for approval, within the 2020 Annual Report, an updated Aquatic Effects Monitoring Program (AEMP) to take into account the results of the monitoring of the receiving environment during the 2020 Discharge.

Insert Item 25:

The Licensee shall provide to the Board for review the 2020 Discharge Plume Delineation Study summary report as soon as all necessary data and results become available.

Schedule A: Scope, Definitions, and Enforcement

Insert:

“2020 Discharge” means the time-limited discharge (May 2020 – October 2020) of Effluent from the Final Discharge Point (Containment Pond 1 (CP1)) at Monitoring Program Station MEL-14 to Meliadine Lake through the Meliadine Lake Outfall Diffuser as indicated in the Amendment Application, dated March 24, 2020.

Schedule I: Conditions Applying to General and Aquatic Effects Monitoring

Insert:

Table 3 – Water Monitoring Program during the 2020 Discharge:

Station Locations	Description	Monitoring Parameters	Reporting Frequency
MEL-13-XX/ MEL-01-XX	Mixing zone in Meliadine Lake, minimum of three sampling locations within and/or at the edge of Mixing zone	(a) Field physico-chemical water column profile (temperature, specific conductivity); (b) Water quality monitoring: <ul style="list-style-type: none"> • Conventional; • Major ions and TDS; • Nutrients; • Total and dissolved metals. 	Weekly during discharge or as per NWB's direction
		(c) Chronic toxicity tests with: <ul style="list-style-type: none"> • Pelagic crustacean – <i>Daphnia magna</i> (21-day test); • Epibenthic/ Benthic Insect - <i>Hyalella azteca</i>; • Plant or Alga (duckweed, <i>Lemna minor</i>); • ELS fish – Rainbow Trout or Fathead minnow (7-day test). 	Monthly during discharge
MEL-14	Water treatment plant from CP-1 (post-treatment), end of pipe in the plant before offsite release	(a) Water quality monitoring: <ul style="list-style-type: none"> • Conventional • Major ions and TDS • Nutrients • Total and dissolved metals 	Weekly during discharge
		(b) Acute toxicity tests with: <ul style="list-style-type: none"> • <i>Daphnia magna</i> • Rainbow trout 	Monthly during discharge

MEL-02-XX	Mid-field exposure area	(a) Water quality monitoring: <ul style="list-style-type: none"> • Conventional • Major ions and TDS • Nutrients • Total and dissolved metals (b) Chronic toxicity tests with: <ul style="list-style-type: none"> • Pelagic crustacean – <i>Daphnia magna</i> (21-day test); • Epibenthic/ Benthic Insect - <i>Hyaella azteca</i>; • Plant or Alga (duckweed, <i>Lemna minor</i>); • ELS fish – Rainbow Trout or Fathead minnow (7-day test). 	Monthly during discharge or as per NWB's direction
MEL-03-XX	Reference Area 1		
MEL-04-XX	Reference Area 2		
MEL-05-XX	Reference Area 3		

Il remaining terms and conditions of Type “A” Water Licence No: 2AM-MEL1631, issued on April 15, 2016, and approved on May 19, 2016, still apply.

This Licence Amendment No. 1 issued and recorded at Gjoa Haven, NU on April 29, 2020.



Lootie Toomasie
Chairperson
Nunavut Water Board



APPROVED
BY: Daniel Vandal
Minister of Northern Affairs

DATE:

12/05/20