



AGNICO EAGLE

February 29, 2024

NWB File No. 2BB-MEL1424

Robert Hunter
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1J0

Re: Agnico Eagle's Second Round of Responses to Comments for 2BB-MEL Water Licence Renewal

Dear Mr. Hunter:

Agnico Eagle thanks the Crown-Indigenous Relations and Northern Affairs Canada, and Environment and Climate Change Canada for their additional comments on the Meliadine 2BB-MEL1424 Water Licence Renewal. Agnico Eagle has provided responses to the Comments received in the attached.

Should you have any questions or require further information, please contact the undersigned at your convenience.

Regards,

Manon Turmel
Manon.turmel@agnicoeagle.com
Permitting & Regulatory Affairs Superintendent

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CROWN-INDIGENOUS RELATIONS AND NORTHERN AFFAIRS CANADA (CIRNAC)

Interested Party:	CIRNAC	Rec No.:	CIRNAC-R-01
Re:	Camp Incinerator		

Request Made by Interested Party:

In the Scope Description documents, Agnico Eagle requested that the components related to the camp incinerator be removed from the 2BB-MEL licence. The document stated, “The exploration camp incinerator is no longer in operation, and all putrescible waste is now being incinerated at the main camp incinerator under 2AM-MEL Licence”.

There is no information regarding whether the exploration camp incinerator is being reused for the main camp or being salvaged. There is no information that the incineration site has been cleaned up and reclaimed. Did Agnico Eagle clean up the site and provide any report to NWB?

CIRNAC recommends that Agnico Eagle updates NWB regarding what procedure was followed to decommission the discovery camp incineration site and confirm if any cleanup was done after decommissioning.

Agnico Eagle’s Response to Request:

As per Agnico Eagle’s March 23, 2023 Meliadine Water Licence Inspection Follow-up memo issued to CIRNAC on August 8, 2023, the two functioning incinerators are being stored for use, therefore the incineration site is still being retained. There are also two non-functional incinerators currently in the planning stages of being backhauled.

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Interested Party’s Reply (February 19, 2024):

As per the applicant’s response, “the two functioning incinerators are being stored for use; therefore, the incineration site is still being retained.” Therefore, CIRNAC recommends that the components related to the camp incinerator should not be removed from the 2BB-MEL licence as requested in the renewal application.

Agnico Eagle’s Response:

Agnico Eagle would like to clarify that the licence components pertaining to the camp incinerator’s functionality are requested for removal, as the exploration camp incinerator is no longer in operation and all putrescible waste is now being incinerated at the main camp incinerator under the 2AM-MEL Licence. Reclamation security discussions have been organized for March 7, 2024 in Toronto, ON.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-R-03
Re:	Waste Rock and Ore		

Request Made by Interested Party:

In the Scope Description documents, Agnico Eagle requested that the conditions related to waste rock and ore be removed from the 2BB-MEL licence as the 2AM-MEL licence covers waste rock and ore activities.

CIRNAC understands that the 2BB-MEL and 2AM-MEL licences include waste rock and ore processing activities and wants to highlight that these two licences' purpose and allowed activities are not the same. Moreover, the current 2BB-MEL1424 licence allows advanced exploration (bulk sample) activities beyond the 2AM-MEL licence boundaries, and the licensee has requested further to extend the exploration area under the current 2BB-MEL licence renewal. Reporting on waste and ore activities is a critical component of the annual report. Therefore, CIRNAC believes that waste rock and ore conditions should not be removed from the 2BB-MEL licence, and the licensee should submit an updated Waste Rock and Ore Storage Plan as part of the current renewal amendment application.

CIRNAC recommends that NWB does not remove the conditions related to waste rock from the 2BB-MEL licence and requires the Waste Rock and Ore Storage Plan as part of the renewal amendment application.

Agnico Eagle’s Response to Request:

Agnico Eagle had a discussion with CIRNAC (Andrew Keim) on January 24, 2024 (Vancouver BC) where both parties mutually agreed that conditions relating to waste rock and ore can be excluded from the licence and that the licence type will revert to a “BE type” licence. The scope required under this licence renewal would be exploratory activities (e.g. geological mapping, prospecting, etc.).

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Interested Party’s Reply (February 19, 2024):

CIRNAC (Andrew Keim) and Agnico Eagle discussed the renewal application on January 24, 2024 (Vancouver, BC). In that discussion, CIRNAC indicated no objection to changing the current licence type from “BB type” to “BE type.” In such a case, a Waste Rock and Ore Storage Plan will not be required for the “BE type” licence. CIRNAC is unaware if the applicant has requested NWB to change the licence type. Therefore, a Waste Rock and Ore Storage Plan should be required under the current amendment application if NWB approves it as a “BB type” licence.

Agnico Eagle’s Response:

Agnico Eagle agrees with CIRNAC that the Water Licence should be modified from a type “BB” to a “BE”; Agnico Eagle and CIRNAC (Andrew Keim) also engaged in a phone call on February 20, 2024 to reaffirm this.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-R-04
Re:	Licence Extent		

Request Made by Interested Party:

Agnico Eagle has requested to extend the current licence boundaries to the west of the existing license extent. The renewal amendment application did not specify the type of activities that will be conducted in the extended areas.

CIRNAC recommends that Agnico Eagle clarify and provide details of the activities it intends to conduct in the proposed extended areas, as well as provide proof of their right of access to any lands not currently covered under the authority of the existing license.

Agnico Eagle’s Response to Request:

The licence extent includes a portion of land that is currently under Agnico Eagle’s Licence 2BE-PTR2227 (shown in red on the map below). The 2BE-PTR2227 licence will be abandoned by Agnico Eagle however, as this licence boundary is split (e.g. not one large polygon), Agnico Eagle is requesting to extend the 2BB-MEL licence slightly to capture a portion of the property that would be lost in cancelling the 2BE-PTR licence. Agnico Eagle is requesting lease boundaries beyond the necessary limit to streamline the boundary definitions (e.g. simple polygon). The cancellation of the 2BE-PTR licence will be submitted following the conclusion of this review by the Exploration division.

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Interested Party’s Reply (February 19, 2024):

CIRNAC recommends that Agnico Eagle clarify and provide details of the activities it intends to conduct in the proposed extended areas, as well as provide proof of their right of access to any lands not currently covered under the authority of the existing license. The requested extension of the current licence boundary will include lands beyond what is currently under 2BE-PTR2227. Therefore, Agnico Eagle should clarify and provide details of the activities it intends to conduct in the proposed extended areas and proof of their right of access to any lands not currently covered under the authority of an existing license.

Agnico Eagle’s Response to Request:

Only permitted activities in this water licence renewal are to be conducted in the existing land boundaries. Agnico Eagle does not intend to conduct any activities outside of the 2BE-PTR2227 and the current 2BB-MEL licence boundaries (shown in green and hatched red, respectively below). Agnico Eagle would like to reiterate that no new land claims are being requested at this time, the extension boundaries are to simplify land boundaries to a simple polygon.



Interested Party:	CIRNAC	Rec No.:	CIRNAC-R-05
Re:	Security Estimate		

Request Made by Interested Party:

Agnico Eagle has submitted a revised security estimate (i.e., December 2023) of \$359,491 (\$186,414 water liability) under the current application as opposed to \$1,489,082 (\$965,051 water liability) in the previous estimate (i.e., August 2023). The security estimate difference between the Reclamation and Closure plan versions is manifold. Agnico Eagle did not provide enough information and explanation to reconcile the difference. Therefore, CIRNAC can not comment on the security estimate at this moment. CIRNAC will require a detailed explanation of the units’ rates, lump sum costs, allowances, and other rates and underlined assumptions to better understand the revised security estimate and provide comments.

CIRNAC recommends that Agnico Eagle work cooperatively with all interested parties to address reclamation security for this undertaking.

Agnico Eagle’s Response to Request:

Detailed RECLAIM cost estimate spreadsheets are provided in Appendix A. Agnico Eagle looks forward in collaborating with interested parties and will address questions as they arise.

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Interested Party’s Reply (February 19, 2024):

CIRNAC thanks Agnico Eagle for the cost estimate. CIRNAC proposes that all interested parties meet in the new fiscal year to discuss the reclamation security for this undertaking.

Agnico Eagle’s Response:

Agnico Eagle and CIRNAC (Andrew Keim) engaged in a phone call on February 20, 2024 and reaffirmed mutual interest in modifying the Water Licence type from “BB” to “BE”. As no reclamation securities are required under a “BE” licence, the path forward would be to transfer the reclamation securities required under the current “BB” licence to the 2AM-MEL licence. A workshop to discuss reclamation securities under 2AM-MEL licence has been organized for March 7, 2024 in Toronto, ON.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-R-06
Re:	Management Plans		

Request Made by Interested Party:

The renewal amendment application did not submit any Used Water Management Plan and Wildlife Protection and Response Plan that are part of the current licence. Moreover, Agnico Eagle requested that the requirement of the Waste Rock and Ore Storage Plan and Waste Management Plan be removed from the 2BB-MEL licence as the activities are covered under the 2AM-MEL licence.

CIRNAC believes the Used Water Management Plan and Wildlife Protection and Response Plan should remain part of the 2BB-MEL licence and be updated as required. As mentioned in R-04, the extent of the 2BB-MEL licence is beyond the boundaries of the 2AM-MEL licence. Activities under the 2BB-MEL will likely happen in areas not covered under the 2AM-MEL licence. Therefore, the 2BB-MEL licence should include a Waste Rock and Ore Storage Plan, its own Waste Management Plan, and the Used Water Management Plan and Wildlife Protection and Response Plan.

CIRNAC recommends that NWB require submission of Waste Rock and Ore Storage Plan, Waste Management Plan, Used Water Management Plan and Wildlife Protection and Response Plan as part of the current renewal amendment application.

Agnico Eagle’s Response to Request:

Agnico Eagle has been in extensive collaboration with parties in developing Meliadine Mine Wildlife Protection and Response Plan, which includes the extent of the 2BB-MEL licence. This plan is included in Appendix C.

As detailed in Section 2.1 of the “Amendment Request of Water Licence 2BB-MEL1424”, the exploration camp landfill is not in operation; the landfill under the 2AM-MEL Licence is being used for solid waste. Similarly, the exploration camp incinerator is also not in operation and all putrescible waste is being incinerated at the main camp incinerator under 2AM-MEL Licence. Therefore, there is no requirement for a Waste Management Plan under 2BB-MEL licence.

Similarly, a Used Water Management Plan is no longer required for the 2BB-MEL licence, as treated water from the exploration STP is trucked to the Main Meliadine Mine site, which is covered under 2AM-MEL management plans. Agnico Eagle clarifies that all other activities would be covered under the Water Management Plan that was submitted as part of the 2BB-MEL licence renewal.

See also response to CIRNAC-R-03 in regards to the Waste Rock and Ore Storage Plan.

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Interested Party's Reply (February 19, 2024):

In the response for R-01, Agnico Eagle mentioned, "two functioning incinerators are being stored for use; therefore, the incineration site is still being retained." Therefore, the Waste Management Plan should still be part of the 2BB-MEL licence until the incinerators are decommissioned and the site is reclaimed. The submitted Water Management Plan did not mention what happens to the treated water from the exploration STP (i.e., whether it is trucked to the Main Meliadine Mine site). CIRNAC recommends that the applicant update the submitted Water Management Plan to include components of the Used Water Management Plan. Please refer to CIRNAC's reply to R-03's response regarding the Waste Rock and Ore Storage Plan.

Agnico Eagle's Response:

Agnico Eagle would like to reiterate that the functioning incinerators are in storage and only being stored for potential future use. Therefore, incineration is not a waste management strategy currently required under this licence, as the exploration camp incinerator is out of commission and all putrescible waste is being incinerated at the main camp incinerator under 2AM-MEL Licence. Agnico Eagle has updated the Water Management Plan to include trucking of treated water from the exploration STP to Meliadine Mine site included as Appendix A of this response package.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-R-07
Re:	Terms of the Licence		

Request Made by Interested Party:

Agnico Eagle is requesting the following condition be added to Part F: Conditions Applying to Drilling Operations and Trenching:

“The Licensee is authorized to conduct land-based drilling within thirty-one (31) metres of the ordinary High Water Mark of any water body during winter conditions within the project area, as identified in the Amendment Application.”

Inclusion of this term should not mean that the licensee is allowed to drill on ice, and any waste, including drill cuttings or wastewater from the drilling operations, should be stored/deposited more than 31 meters from the ordinary High Water Mark of any water body.

CIRNAC recommends that NWB clarify in the licence that the proponent is not allowed to drill on ice, and any waste, including drill cuttings, should be stored/transported/ deposited more than 31 meters above the ordinary High Water Mark of any water body.

Agnico Eagle’s Response to Request:

Agnico Eagle thanks CIRNAC for their comment and would like to highlight that the exact wording of the proposed condition is also included in our Meadowbank 2BB-MEA1828 licence. Agnico Eagle will make every effort to drill on land however, it is not always possible to achieve the targeted area strictly on land, especially during the installation of the diamond drill. Agnico Eagle has developed a Drilling on Ice Action Plan (Action Plan) in collaboration with CIRNAC officers in October 2022.

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Interested Party’s Reply (February 19, 2024):

If Agnico Eagle intends to follow the Drilling on Ice Action Plan referenced above, it should be part of the current renewal amendment application. Therefore, CIRNAC recommends that Agnico Eagle submit the Drilling on Ice Action Plan for review and approval to ensure that it meets the conditions of the license.

Agnico Eagle’s Response:

Agnico Eagle had a drilling on ice dry-run on February 1, 2023 with CIRNAC and KivIA, which resulted in the finalization of the Drilling on Ice Action Plan. The Drilling on Ice Action Plan was a result of continuous collaboration between CIRNAC, KivIA, ECCC, and Agnico Eagle. This included:

- A meeting with CIRNAC and ECCC on May 17, 2022, during which Agnico Eagle committed to the development and implementation of a comprehensive Drilling on Ice Action Plan prior to the start of the 2023 winter drilling;

- Review and discussion of the Action Plan and updated procedures with CIRNAC and ECCC through teleconference held on October 26, 2022, and with CIRNAC, ECCC, and KivIA through teleconference held on January 11, 2023;
- Sharing of the Action Plan with CIRNAC and ECCC via email on October 28, 2022, and sharing of the revised Action Plan and improved procedures with CIRNAC, ECCC, and KivIA on January 12, 2023; and
- A “dry run” of the improved procedures related to drilling in ice held at a drill rig located on land on February 1, 2023 which included CIRNAC, KivIA, and Agnico Eagle.

Based on the engagement noted above and completion of corrective actions, Agnico Eagle feels that CIRNAC has approved our activities and exploration drilling on ice.

Interested Party:	CIRNAC	Rec No.:	CIRNAC-R-08
Re:	Security for 2BE-MEP1828		

Request Made by Interested Party:

As per current licence 2BB-MEL1424, the “Interim Reclamation and Closure Plan Water Licenses 2BE-MEP1318 and 2BB-MEL0914” dated August 2013 included estimates of reclamation liability for different components of the Project under both of the listed licenses. The reclamation and closure costs for the Meliadine Project and Meliadine East Camp (under 2BE-MEP1828) were calculated at \$1,489,082 and \$34,126, respectively. An updated Reclamation and Closure Plan was submitted to the NWB on November 26, 2018, specifically for the 2BE-MEP1828 licence, as \$33,681. The plan addresses the requirements of Part I, Item 1 of the 2BE-MEP1828 licence.

In the past, security estimates for 2BB-MEL and 2BE-MEP licences were discussed together. CIRNAC does not hold separate security for the 2BE-MEP licences, and its activity is not covered under the 2AM-MEL licence security. Agnico Eagle is required to fulfill the conditions of Part I for the 2BE-MEP1828 licence, which requires the licensee to complete restoration and progressive reclamation work. Therefore, in CIRNAC’s view, reclamation and closure costs for the 2BE-MEP licence should be factored in when discussing the security estimate for this renewal application.

CIRNAC recommends that reclamation and closure costs associated with the 2BEMEP1828 license not be dropped but continued factored in during the security discussion for 2BB-MEL licence renewal.

Agnico Eagle’s Response to Request:

Agnico Eagle agrees with CIRNAC’s recommendation and added a line item to the reclamation and closure costs of the 2BB-MEL1424 Water Licence renewal, in the amount of \$34,126 for the Meliadine East Camp (as per 2BE-MEP1828 Approved Reclamation and Closure Plan). This has been adjusted in the RECLAIM file provided in Appendix A.

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Interested Party’s Reply (February 19, 2024):

CIRNAC thanks Agnico Eagle for the updated reclamation and closure costs. CIRNAC proposes that all interested parties meet in the new fiscal year to discuss the reclamation and closure costs.

Agnico Eagle’s Response:

A workshop to discuss reclamation securities has been organized for March 7, 2024 in Toronto, ON.

ENVIRONMENT AND CLIMATE CHANGE CANADA (ECCC)

Interested Party:	ECCC	Rec No.:	ECCC-C-02
Re:	Remediation Criteria for Soil Treated in Landfarm		

Request Made by Interested Party:

Several criteria for determining when hydrocarbon impacted soil is sufficiently treated and can be removed from the landfarm are discussed in Section 3.5 of the Landfarm Management Plan (LMP): “Agnico Eagle currently follows the Government of Nunavut Remediation Guidelines (as outlined in the following sections); however, as with the 2AMMEL Licence will apply the soil remediation criteria used to the Abandoned Military Site Reclamation Protocol guidelines for the protection of human health and the management limit, which are more appropriate for the Meliadine site.”

It is not clear when the Proponent will apply the Abandoned Military Site Reclamation Protocol (AMSRP) guidelines, because they are not discussed further in the LMP. It is also unclear why the human health and management limits (for hydrocarbon products approximately equal to the sum of the F1 through F3 fractions below 0.5 m depth) from this protocol would be appropriate. This uncertainty stems in part because proposed disposal for treated soils includes two options, one where the soil would be exposed and another where it would not be at the ground surface. Section 2.1 of the LMP states: “the soils will be removed from the facility and can be used for construction purposes such as part of the cover of the Tailings Storage Facility (TSF) or stacked in the Waste Rock Storage Facility (WRSF).”

The agriculture/wildlife and industrial criteria from the Government of Nunavut Remediation Guidelines are listed as relevant. Section 3.5.1 of the LMP details “remediation to agricultural/wildlife criteria is targeted; however, if these criteria cannot be met, industrial criteria will be followed”, but does not specify if the soil meeting different criteria will be disposed of differently during operations. At closure, Section 3.7 of the LMP describes the different management of soils that meet the agriculture/wildlife criteria and those that meet the industrial criteria: “No excavation will be necessary if the agricultural/wildlife criteria are met. If industrial criteria are used, the Landfarm will be covered with a 2 m thick layer of waste rock, or other suitable material used for reclamation.”

The final disposal location of treated soils and the treatment criteria need to be linked. If soils will be used for cover, they need to meet agricultural/wildlife criteria, since the closure objective in the IRCP is to “return negatively impacted areas to productive and lasting use by wildlife and humans”. Soils only meeting industrial criteria disposed of at the surface have the potential to leach hydrocarbons in surface water over time, so they would have to be disposed of differently, as is acknowledged in the closure section of the plan. The proposed stacking in a WRSF should provide adequate protection, but as mentioned in Section 4.2.3 of the LMP, could require a suitable monitoring program for petroleum hydrocarbons.

ECCC recommends that remediation criteria for treated soils be clarified in the Landfarm Management Plan, specifically:

1. *If the AMSRP guidelines are to be used, the LMP should state the following:*
 - i. *In which circumstances the AMSRP criteria will be used;*
 - ii. *When treated materials have reached the AMSRP thresholds, where will they be disposed of; and*
 - iii. *An explanation of why the specific remedial objectives chosen are appropriate.*
2. *If the AMSRP guidelines are not used, the reference to them should be removed from the Plan.*
3. *The disposal locations of soils meeting different treatment criteria should be specified in the LMP, in order to achieve final closure objectives.*

Agnico Eagle's Response to Request:

Response bullet 1)

- i. Agnico Eagle currently follows the Government of Nunavut Remediation Guidelines however, is proposing to change the soil remediation criteria used to the Abandoned Military Site Reclamation Protocol guidelines for the protection of human health and the management limit, which are more appropriate for the Meliadine site. Full details are provided in the Meliadine Mine Remedial Action Plan (Appendix D).
- ii. Treated material that meet AMSRP threshold can be place in the WRSF or used as cover at the TSF.
- iii. The current land use is for industrial purposes. As Agnico Eagle is currently following the Government of Nunavut Remediation Guidelines, Agnico Eagle will strive to achieve agricultural/wildlife criteria however, the industrial criteria is still appropriate.

Response bullet 2)

See response to bullet 1) i.

Response bullet 3)

As the current land use is for industrial purposes, all treated material that meet the Government of Nunavut Remediation Guidelines' industrial threshold can be place in the WRSF or used as cover at the TSF. However, Agnico Eagle is proposing to change the soil remediation criteria used to the Abandoned Military Site Reclamation Protocol guidelines for the protection of human health and the management limit. The final depth of treated soil will be greater than 0.5 m and the final placement will be greater than 30 m from surface waterbodies.

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Interested Party's Reply (February 19, 2024):

ECCC notes that material used as cover at the TSF could be within 0.5 m of the surface, and therefore would not meet the placement criteria for soils treated to the AMSRP guidelines.

If the Landfarm Management Plan does not include a distinction of where treated material can be disposed of dependent on treatment criteria, a conservative approach would be to use the most stringent

criteria, which is the Environmental Guideline for Contaminated Site Remediation (Government of Nunavut [GN] Remediation Guidelines) for soils at the surface. Currently the Proponent has proposed using the GN remediation guidelines for industrial land use as criteria.

Though the current land use could qualify as industrial, closure objectives are not to return the site to industrial standards. The first closure objective stated in Section 2.8 of the Remedial Action Plan is “physically and chemically stable lands and waters at the reclaimed Meliadine site that are safe for human, wildlife and aquatic life”. The GN remediation guidelines for agricultural/wildland land use would be most appropriate for closure.

Based on the Proponent’s response, ECCC recommends updating the Landfarm Management Plan to use GN Remediation Guidelines, remove references to AMSRP criteria (since the placement criteria would not be met) and include a register of locations where soils not meeting GN Remediation Guidelines for Agricultural/Wildland land use are disposed of at the surface.

Agnico Eagle’s Response:

Agnico Eagle would like to clarify ECCC’s comment “ECCC notes that material used as cover at the TSF could be within 0.5 m of the surface, and therefore would not meet the placement criteria for soils treated to the AMSRP guidelines” is incorrect. The final TSF cover will be covered with a minimum of 0.5 m of waste rock or non-impacted soil, if the surface contains treated soil that do not meet GN Remediation Guidelines for Agricultural/Wildland land use at Closure.

This was stated in Section 7.4 of the Meliadine Mine Remedial Action Plan (provided as Appendix D in Agnico Eagle’s February 6, 2024 Response to Comments).

“At the latest, the treated soil will need to be covered by a minimum of 0.5 m of waste rock or other non-impacted soil when the mine site is undergoing closure.” (WSP, 2021)

With this clarification, it should be noted that there would be no locations at closure where soils would not meet GN Remediation Guidelines for Agricultural/Wildland land use at surface.

Reference:

WSP 2021. Meliadine Mine Landfarm Remedial Action Plan. November 2021

Interested Party:	ECCC	Rec No.:	ECCC-C-05
Re:	Segregation of Contaminants Treated at Landfarm		

Request Made by Interested Party:

The LMP’s discussion of segregation of contaminants lacks some details and contains inconsistencies. Section 2.1 states that “when possible, materials contaminated with heavy hydrocarbons (e.g., hydraulic fluid, grease), are to be segregated, packaged, and shipped south for treatment and/or disposal.” It is not clear what actions are taken when it is not possible to segregate material.

Furthermore, Section 3.1.1 lists hydraulic oil as a product acceptable for treatment, even though it is a type of hydraulic fluid. Section 2.1 identifies hydraulic fluid as a product to be “segregated, packaged, and shipped south for treatment and/or disposal.”

Only soil with contaminants that can be treated on operational timescales should be kept in the landfarm.

ECCC recommends the Landfarm Management Plan be updated to:

- 1. Describe procedures for when it is not possible to segregate materials contaminated with heavy hydrocarbons;*
- 2. Consistently classify hydraulic oil as a contaminant requiring treatment off site or as appropriate for treatment in the landfarm.*

Agnico Eagle’s Response to Request:

Response bullet 1)

When it is not possible to segregate materials contaminated with heavy hydrocarbons, it will be disposed of in the Landfarm, given that they meet the requirements as outlined in Section 3.1.1 of the Landfarm Management Plan. Otherwise, they will be placed in totes/drums for shipment off-site.

Response bullet 2)

Agnico Eagle would like to clarify that the intent of the sentence:

“When possible, materials contaminated with heavy hydrocarbons (e.g., hydraulic fluid, grease), are to be segregated, packaged, and shipped south for treatment and/or disposal”

Is that efforts will be made to segregate heavy hydrocarbon contaminated material for shipment off-site as practicable. This does not mean that the contaminated material is unsuitable for the Landfarm.

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Interested Party's Reply (February 19, 2024):

Based on the Proponent's response, ECCC recommends updating the Landfarm Management Plan to clarify that no materials containing heavy hydrocarbon contamination can be treated at the landfarm.

ECCC further recommends that the Proponent consistently classify hydraulic oil as a contaminant requiring treatment off site or as appropriate for treatment in the landfarm, in the Landfarm Management plan.

Agnico Eagle's Response:

Agnico Eagle has updated the Landfarm Management Plan to remove inconsistencies on classifying hydraulic oil and stated that materials containing heavy hydrocarbons will be segregated, to the extent practical, for disposal/treatment off-site. This is included as Appendix B of the response package.

Interested Party:	ECCC	Rec No.:	ECCC-C-06
Re:	Closure of Landfarm and Drill Hole Sumps in IRCP		

Request Made by Interested Party:

The IRCP is missing details on reclamation of elements that are described in other plans. Compiling all proposed reclamation activities in the Plan will help ensure closure objectives will be met consistently for all elements and infrastructure covered by the water licence.

Section 4: Reclamation of Meliadine Exploration Camp Area of the IRCP lists termination activities for five different surface conditions, but does not include a landfarm or a bermed area. Section 3.7: Landfarm Closure and Reclamation of the LMP includes reclamation activities that would be appropriate in the IRCP.

Section 5: Reclamation of Drill Sites of the IRCP discusses removing casings and plugging drill holes with water and drill cuttings, but does not explain how sumps will be remediated or how drill cuttings will be disposed of. Section 3.4 of the WMP describes some of these elements as well, and could be integrated in the IRCP.

ECCC recommends the Interim Reclamation and Closure Plan be updated to include how the landfarm and drill sumps will be reclaimed and how drill cuttings are disposed of.

Agnico Eagle’s Response to Request:

Agnico Eagle does not intend on digging sumps, drill cuttings will be disposed of within a natural depression, more than 31 meters above the ordinary High Water Mark of any water body. Procedures will be followed as agreed upon with the site inspector.

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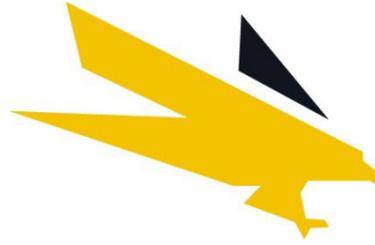
Interested Party’s Reply (February 19, 2024):

ECCC recommends the Interim Reclamation and Closure Plan be updated to include how the landfarm and drill sumps will be reclaimed, and how drill cuttings are disposed of.

Agnico Eagle’s Response:

Agnico Eagle has updated the Interim Closure and Reclamation to include the requested details for how the landfarm and drill sumps will be reclaimed, and how drill cuttings are disposed of. This is attached as Appendix C of this response package.

Appendix A



AGNICO EAGLE

MELIADINE GOLD MINE

WATER MANAGEMENT PLAN

WATER LICENCE No. 2BB-MEL

February 2024



DOCUMENT CONTROL

Version	Date (YMD)	Revision	Issued by
	2007/10	First version	Comaplex Minerals
	2009/09	Site Water Management Plan Addendum	Comaplex Minerals
	2010/08/25	The 2007 Plan and 2009 addendum were consolidated and updated to include recent license amendments	John Witteman (AEM)
	2013/10/16	Complete document revision	Alexandre Gauthier (AEM) Philip Roy (AEM) David Frenette (AEM)
	2014/02/09	Complete document revision	Alexandre Gauthier (AEM) Philip Roy (AEM) David Frenette (AEM) Josee Noel (AEM)
	2016/03/31	Complete document revision	Jeffrey Pratt (AEM) Jamie Quesnel (AEM)
7	December 2023	Revisions throughout for 2BB-MEL Licence Amendment	Agnico Eagle Permitting Department
7	February 2024	Updated to include possible use of water at the landfarm Updated to include trucking of STP water to Meliadine Mine main site	Agnico Eagle Permitting Department



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1.0 Introduction

This Water Management Plan pertains to Nunavut Water Board Licence No. 2BB-MEL for the Meliadine Gold Mine. This Plan addresses water use, waste disposal, geotechnical drilling within 31 meters of water body, exploration activities on the property including ongoing surface diamond drilling.

2.0 Plan Objectives

The objectives of this Plan are to:

- Monitor specified water quality parameters at the camp domestic water intake.
- Monitor the performance of the Sewage Treatment Plant (STP; BIODISK Rotating Biological Contactor) for grey and black water.
- Document water use for routine exploration activities.
- Report the quantity of water used and the results of water quality monitoring activities.

3.0 General Water Management

General code of conduct guidelines for exploration activities with respect to water management include the following:

- There is to be no diamond drilling within 31 m of a natural water body or water course unless authorized to do so.
- There is to be no fuel storage or handling of fuel vessels within 31 m of a natural water body or water course unless authorized to do so.
- A spill contingency plan is implemented for fuel, oil, and different type of hazardous materials spill prevention and preparedness.
- Drill cuttings are to be controlled and contained in depressions near the drill hole; sludge line, “Aquadam” (water filled berms) and/or silt fences can be deployed to prevent drill cutting from entering receiving waters.
- If necessary, flocculants can be employed to reduce the Total Suspended Solids (TSS) in the waste water coming from the drills.
- Drill sites are to be rehabilitated (put back to their natural state).
- When drilling through lake ice is planned, water samples are collected before, during, and after the drilling to ensure that the water quality of the lake has not been impacted by the activity.
- Use of freshwater may be used at the landfarm to ensure sufficient soil moisture to prevent dust generation.

3.1 Water Consumption Records

Water Licence No. 2BB-MEL allows for a total of 299 m³ per day of raw water to be drawn. Water consumption is monitored, logged, and reported in the annual report to the NWB.



3.2 Camp Water Management

The domestic camp water system has been in use since 1997. Water is drawn from Meliadine Lake at pumping station labeled MEL-1. Since early June 2019, treated sewage from the Exploration Camp STP is deposited in Collection Pond 1 (CP1) or trucked directly to the Meliadine Mine main site. If the Exploration Camp STP operators suspect any upsets in the Exploration Camp STP prior to receiving accredited lab results, the effluent will be placed in the arctic corridor lift station for additional treatment in the main camp sewage treatment plant.

Agnico Eagle continues to monitor the quality of the effluent whenever the Exploration Camp STP is operational at the MEL-7 station. Parameters for which the samples are tested include: BOD5, TSS, oil & grease, fecal coliforms and pH. These tests are required by Section J, Item 7.

3.3 Wastewater Management

All wastewater generated by the exploration camp is directed to two equalization tanks (EQ Tanks) in which wastewater is homogenized through the use of aeration diffusers and pumped to the BIODISK and BIONEST units for initial biological treatment. The following information is from the manual provided by BIODISK Corporation regarding its operations.

The wastewater treatment facility at the exploration camp is a tertiary treatment aerobic sewage treatment plant. The unit is designed to remove phosphorus, and destroy nitrogenous products and organic material. It is comprised of a primary clarifier, rotating bacterial contactor (RBC) and final clarifier.

Each BIONEST is designed to operate and discharge final effluent that would meet discharge parameters outlined in the 2BB license, however, the water that is discharged from each unit is piped into the main sewage treatment plant building where it is mixed with the wastewater discharged from the BIODISKS and subsequently disinfected in the disinfection loop.

The contents of EQ tank 2 are pumped into the first chamber of each BIONEST, which is referred to as a septic tank compartment. Once filled, the wastewater passes through an effluent filter and into the second chamber referred to as the bioreactor. It is in the bioreactor where the biological treatment occurs (nitrification, just as in the RBC bio-zone of the BIODISKS). Instead of disk media, the BIONEST bioreactor contains ribbon shaped polymer media onto which bacterial cultures adhere. The third chamber acts as a final clarifier to remove residual solids before the water exits the system. Each BIONEST is equipped with a UV disinfection system at the final outlet, which are redundant in this configuration due to the discharge being later disinfected in the disinfection loop.

Sludge removal for the BIONESTs occurs when the sludge blanket in the septic tank portion of the unit reaches a thickness of approximately 18 inches, which according to the manufacturer occurs approximately every two years.

3.4 Diamond Drilling Water and Sludge Management

Agnico Eagle will not drill within 31 m of an open body of water unless authorized to do so. Drill cuttings (grinded rock) are not allowed to flow into any body of water. If needed, Agnico Eagle uses “Aquadams” and/or silt curtains and/or sludge line to manage TSS. Once the sludge has settled and TSS are removed, the water is allowed to flow into a natural water course.

Quite commonly, the process of drilling creates a depression around the borehole and the sludge is concentrated in and adjacent to that depression. Experience has shown that if the drilling sludge is spread as a thin layer around the hole, the area will re-vegetate completely within a couple of years. If a thick layer of drill sludge is deposited into depressions, re-vegetation is hindered. The present approach to drill site re-habilitation has worked well for the last 15 years.

All efforts are made to stabilize and re-contour the ground upon completion of work. Following the completion in drilling a hole, all attempts are made to pull the casing. Where this is not possible, the casing is cut off at or below the surface. Water flowing into the hole or cut off casing will freeze as all drill holes are in areas of permafrost.

When drilling on ice and passing through the water column, water samples are collected before, during (weekly) and after the drilling. The samples are analyzed for physical parameters and trace metals as set out in Section J, Item 9 of 2BB-MEL Licence.

4.0 Water Monitoring Requirements and Mitigation Measures

The exploration camp supports ongoing surface exploration activities, as well as advanced exploration activities and project development related activities.

Table 3 below outlines the monitoring requirements for the monitoring stations specified in Water License No. 2BB-MEL, while Figure 1 shows their location. The camp water is drawn from Meliadine Lake from station MEL-1, which remains unchanged since 1997. Drill water is obtained from Meliadine and small ponds proximal to the drilling targets.

Table 3: Water License No. 2BB-MEL1424 Water Quality Monitoring Stations

Monitoring Station	Location	Status
MEL-1	Raw water supply intake at Meliadine Lake	No sampling is required, only volume recorded.
MEL-6	Point of discharge for the contaminated soil treatment area	The landfarm is not decommissioned but no water has been released since 2016 as the water is transferred to the Landfarm A oil separator system and treated before being discharged in CP1.
MEL-7	Final effluent discharge from the BIODISK treatment system	Treated water from the exploration STP is trucked to CP1 or to the Main Camp STP depending on recent water quality trends. Monitoring for this station still occurs when the exploration camp STP is in operation to ensure the efficiency of the treatment system, but discharge directly to Meliadine Lake no longer occurs.



Figure 1: Water Sampling Stations Location



Appendix B



AGNICO EAGLE

MELIADINE MINE

**Landfarm Management Plan –
2BB-MEL Water Licence**

**February 2024
Version 5**

EXECUTIVE SUMMARY

Agnico Eagle Mines Limited (Agnico Eagle) operates the Meliadine Gold Mine (the Mine), located approximately 25 kilometres (km) north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut.

This document presents the Landfarm Management Plan for the Type B Water Licence (2BB-MEL) Landfarm B.

On-site storage and remediation has been established as the preferred method for treatment of light petroleum hydrocarbon contaminated soil that may be generated on the proposed mine site. The landfarm is designed to receive soils, rock, snow, and ice contaminated with petroleum hydrocarbons. This will include light hydrocarbons such as diesel and gasoline being treated in the landfarm.

The priority is to use Landfarm A (Water Licence 2AM) for placement of contaminated material. The current material in Landfarm B will be moved to the Landfarm A facility progressively to facilitate remediation. This volume has been accounted for in the design of the future facility.

A report of landfarm activities will be prepared annually by the Environment Department indicating the volume of material added to the facility, amount of material removed and disposed of or re-use location, all analysis results, volume and type of nutrient addition, visual inspection results, and volume of contact water pumped.

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DOCUMENT CONTROL

Version	Date	Section	Page	Revision	Author
1	April 2015			First version of the Landfarm Management Plan	John Witteman, Env. Consultant, Agnico Eagle
2	February 2015	All		Operational revision for the year 2014	Meliadine Environmental department
3	March 2017	All		Operational revision for the year 2017	Meliadine Environmental department
4	February 2018	1.1, 2.1, 2.3.1	1, 3, 6	-Approximate volume of material adjusted to 2200 m3	Meliadine Environmental department
		2.1	4	-Added "Due to increased volume of material placement in 2017, transfer of material from the 2BB landfarm to the 2AM landfarm will likely be required to ensure appropriate decontamination"	
		2.3.1	6	-Added "At this time, no additional contaminated soil is being deposited into the 2BB landfarm; the 2AM landfarm has been commissioned and is operational." -Corrected residual capacity of landfarm to 300m3	
		3.2.1	9	- Added "In-house wet chemistry and portable VOC monitoring" for spill excavation assessments	
		3.1	8	- Antifreeze removed from list of acceptable contaminants for landfarm disposal	
		1.3	2	-Added reference to Oil Pollution Emergency Plan	
5	December 2023	Throughout		- Updated for Water Licience Amendment	Permitting Department
5	February 2024	3.1.1		- Added "Materials containing heavy hydrocarbons will be segregated to the extent practical for disposal/treatment offsite"	Permitting Department
		1.1, 2.1		- Removed hydraulic fluid as an example of a heavy hydrocarbon	

SECTION 1 • INTRODUCTION

1.1 Project History

Agnico Eagle Mines Limited (Agnico Eagle) operates the Meliadine Gold Mine (Meliadine Mine or the Mine), located approximately 25 kilometres (km) north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut.

The Landfarm Management Plan (Plan) focuses on minimizing the waste footprint on-site, and maximizing remediation potential through implementation best practices.

During the advanced exploration phase of the Meliadine Mine, the Nunavut Water Board (NWB) approved amendment #6 to Water Licence 2BB-MEL1424, which allowed the operation of light PHC soil stockpile. This approval supported using a landfarm developed inside a bermed and lined area previously used to store fuel bladders. Soil contaminated with light PHC was being deposited in this bermed and lined area for treatment.

When possible, materials contaminated with heavy hydrocarbons (e.g. grease), are to be segregated, packaged, and shipped south for treatment and/or disposal.

1.2 Objectives

On-site storage and remediation has been established as the preferred method for treatment of light PHC contaminated soil that may be generated at the proposed mine. Specifically, remediation through landfarming has been identified as the primary treatment option and, as such, the focus of this Plan is the management of contaminated soil.

This Plan is a component of the Responsible Mining Management System (RMMS). The objectives of this Plan are to:

- provide an overview of the actual contaminated soil management at the Meliadine Mine;
- describe the physical setting, location, and design criteria of the landfarm;
- define acceptable types of contaminated soils to be placed in the landfarm and conditions for removal of treated soil;
- define operating procedures and monitoring requirements for the landfarm; and
- describe contingency options for alternate treatment/storage of PHC contaminated soil.

1.3 Related Documents

Spill prevention is the first stage in the contaminated soil management for the Meliadine Mine. Documents containing information related to this Plan are submitted as part of the Type A and B Water Licenses and include:

- Spill Contingency Plan;
- Environmental Management and Protection Plan; and

- Risk Management and Emergency Response Plan.

There is also a related Oil Pollution Emergency Plan, which is specific to spills at Agnico Eagle's Itivia Oil Handling Facility located in Rankin Inlet. The Oil Handling Facility is located on the shore of Melvin Bay, which is part of Hudson Bay. The Oil Pollution Emergency Plan was prepared as a requirement of Canadian Shipping Act and associated regulations. It will be submitted to Transport Canada for approval prior to any shipping related to the development of the proposed mine.

1.4 Spill Prevention

Similar to the waste management philosophy, Agnico Eagle actively works towards minimizing spills through the implementation of suitable plans and work procedures. Plans developed from the environmental impact study address the management of spills on land, ice, water, and into the marine environment. When spills do occur, the goal is to limit the spread of the spill, and then manage contaminated material resulting from the spill. The Spill Contingency Plan describes spill prevention measures.

SECTION 2 • LANDFARM DESIGN

2.1 Background

In the event of a spill, on-site storage and remediation is the most practical and efficient method in handling contaminated soil, particularly in an isolated location such as the Meliadine Mine. Any PHC contaminated soils generated during the construction, operation, and closure phases will be adequately managed. Soils contaminated with light PHCs, such as diesel, will be treated on-site in a landfarm. This method involves spreading and placing the contaminated soil within a containment area to promote conditions favorable for the volatilization and aerobic microbial degradation of hydrocarbons.

When possible, materials contaminated with heavy hydrocarbons (e.g. grease), are to be segregated, packaged, and shipped south for treatment and/or disposal.

There are currently PHC contaminated soils stored on-site in the 2BB-MEL1424 Landfarm, resulting from spills that occurred during the exploration and pre-construction phase. This material will be moved to the Water Licence A landfarm facility progressively to facilitate remediation. This volume has been accounted for in the design of the future facility.

A landfarm options analysis prepared for Agnico Eagle by Golder (2007) identified factors relevant to landfarming in the north. These include environmental factors and physical properties of the soil that affect microbial growth and rates of biodegradation, such as temperature, pH, soil moisture, nutrient content, salinity, and soil particle size.

Although rates of biodegradation decline with temperature, landfarming is still a feasible technique in Arctic climates as demonstrated by the Meadowbank landfarm. Degradation in the north is typically restricted because microbial activity stops between 0 to -5 degrees Celsius (°C) limiting biodegradation to the months of June to September (even though bioremediation ceases below -5°C, volatilization of the PHCs does continue but at a much slower rate). Nevertheless, degradation was reported at 90% over two summers on Resolution Island (Paudyn et al. 2008).

It is estimated that soils contaminated with light-end PHCs would require three full summer seasons for complete remediation. When remediated, the soils will be removed from the facility and can be used for construction purposes such as part of the cover of the Tailings Storage Facility (TSF) or stacked in the Waste Rock Storage Facility (WRSF). Based on a remediation period of three seasons, it would be possible to close the Licence B landfarm facility on the third year following the start of construction and usage of the Licence A landfarm facility.

*Due to increased volume of material placement in 2017, transfer of material from the 2BB landfarm to the 2AM landfarm will likely be required to ensure appropriate decontamination.

2.2 Location

The overall site plan showing the main infrastructure for the Meliadine Mine, including the landfarm B, is shown in Figure 2-1.

2.2.1 Proximity of Surface Water

The landfarm is located at the most elevated point of the local topographical area.



Figure 2-1 Main Infrastructure for the Meliadine Mine, including the Landfarm B

2.2.2 Proximity of Groundwater

In the Meliadine Mine area, the groundwater within the active layer is estimated to reach 1.5 m in October. The active layer begins to form in July when temperatures largely remain above 0°C, and deepens to a maximum in October. The shallow groundwater in the area of the landfarm flows towards Meliadine Lake, located approximately 620 m from the landfarm.

To prevent movement of contaminants from the landfarm facility into the groundwater and the surrounding environment, the Meliadine Landfarm has an impervious liner.

2.3 Design

The Landfarm was originally designed as a lined containment to hold PHC fuel bladders for exploration purposes. In 2016, the edges of the landfarm containment were resloped and locations of exposed liner were recovered to ensure protection. The contaminated material placed in the Landfarm can include light hydrocarbons such as diesel and gasoline. The design volume of the Landfarm is based on the allowances for the materials being treated at Meadowbank during

operation, as described below.

2.3.1 Soil Volume Requirements

Remediation of the existing contaminated soil in the Licence B Landfarm is ongoing. The total capacity of the Landfarm is approximately 2,500 m³ and the actual quantity of contaminated soil being remediated is approximately 2,200 m³. The estimated remaining capacity for future contaminated material represents approximately 300 m³, until the decontamination activity from the Water License 2BB landfarm is transferred to the Water License 2AM landfarm. However, the priority is to use Landfarm A for placement of contaminated material.

It is estimated that soils contaminated with light-end PHCs would require three full summer seasons for complete remediation (Agnico Eagle, 2008). When remediated, the soils will be removed from the Landfarm and used on-site, placed in the WRSF or used as cover at the TSF.

SECTION 3 • LANDFARM OPERATION AND MANAGEMENT

Agnico Eagle will be responsible for managing and implementing the Landfarm operation plan. Operation and monitoring of the Landfarm as well as determining the training requirements for personnel will be the responsibility of the Environment department.

3.1 Acceptable Landfarm Material

The priority is to use Landfarm A for placement of contaminated material.

3.1.1 Contaminants

The Landfarm facility will only treat and/or store light PHC contaminated soils that have been generated through mine related activities at the Meliadine Mine. Materials containing heavy hydrocarbons will be segregated to the extent practical for disposal/treatment offsite. Material from the Hamlet of Rankin Inlet or other sites will not be accepted without approval from the NWB, Crown Indigenous Relations and Northern Affairs Canada, Water Resources Inspectors, and the Kivalliq Inuit Association.

The following products are acceptable for treatment in the Landfarm if used on-site and has resulted in contamination of soil:

- diesel fuel;
- gasoline;
- aviation fuel (Jet A);
- hydraulic oil;
- other light oil (e.g., engine oil, lubricating oil); and

In the event that the contaminant source is unknown, soil samples will be analyzed for PHCs and possibly additional contaminants prior to placement in the Landfarm. These additional parameters could include BTEX , PAH, total metals, oil and grease, and volatile organic compounds. Analysis for additional compounds will be determined by the Environment Department on a case-by-case basis. Concentrations of contaminants will be compared to the site background values (for metals) and/or criteria in the Government of Nunavut (GN) *Guidelines for Contaminated Site Remediation* (GN 2009); however, Agnico Eagle proposes to use different criteria that is more applicable to Meliadine Mine (refer to Section 3.5 for more details). If this analysis indicates soil contamination above background or GN guidelines for any substance not approved for landfarming (i.e., non-PHC contaminants), the spill material will not be placed in the Landfarm. This is to ensure that PHC contaminated soils are not contaminated with other products.

Spills of non-PHC material (e.g., solvents) will be placed in drums and stored on-site for shipment south to approved facilities during shipping season.

3.1.2 Grain Size

Bioremediation of very coarse-grained larger soil material is inhibited as it does not readily retain moisture. However, volatilization will occur more rapidly (SAIC 2006). It has been noted that this material likely contains lower concentrations of contaminants due to a lower volume and surface area ratio, and can typically be screened out prior to landfarming (SAIC 2006). As a result, soils and rock material with grain size less than 2.5 centimetres (cm) will be segregated from larger-grained material, where possible. This will occur at the spill location or in the landfarm using a screen sieve, should it prove necessary. The two soil fractions will be treated separately in the Landfarm when possible.

3.2 Contaminated Soil Additions

3.2.1 Spill Excavation

Soil contaminated with the above-described petroleum hydrocarbon materials will be excavated and transported to the Landfarm facility in dump trucks or other available means of transportation. Care will be exercised to ensure that the entire spill is excavated (verified by olfactory, visual, in-house wet chemistry, portable VOC monitor or sampling if necessary, by the Environment Department) and that none of the contaminated material is lost during transport.

3.2.2 Placement in the Landfarm

As above, larger coarse material (rocks) will be separated from the finer material (sand and gravel) in the Landfarm when possible and assessed visually for PHC staining and product. If the material is saturated it will be spread to allow volatilization in the designated area of the landfarm.

Materials identified as acceptable in the Landfarm will be dispersed as space permits. A record will be kept by the on-site Environmental department of the amount of contaminated soil placed in the Landfarm and the location of each load within it.

3.3 Contaminated Snow

Petroleum hydrocarbon contaminated snow and ice will be placed in a designated area of the Landfarm and treated as contact water after snowmelt. After snowmelt, the water will be pumped through the site's EVAC water treatment system. The treated water will be discharged in the environment, if discharge criteria are met, as prescribed in the License 2BB-MEL1424.

3.4 Remediation

Remediation of fine grained PHC contaminated soil in landfarms occurs naturally through volatilization and aerobic microbial degradation. Soil aeration and nutrient amendment are recognized as methods of improving rates of remediation. While it is recognized that pH, salinity, moisture content, and microbial population density also contribute to rates of degradation, these factors will not be explicitly investigated or managed unless remediation rates are too slow to allow meeting targets set for closure.

3.4.1 Absorbent Materials

Coarse-grained soils are not readily bio-remediated, but concentrations of PHC contaminants may still be reduced through volatilization. Oil absorbent pads will be used to help remove visible product from coarse-grained material.

3.4.2 Aeration

Natural aeration would occur with material sparsely placed in the Landfarm, if possible. The goal will be to mechanically aerate the soil with earth-moving equipment. The soil will be run through a gravel separator to separate the large rock from the smaller grained materials. Following this, the material will be turned over to promote aeration to allow the PHC to volatilize.

3.4.3 Soil Moisture

Prior to turning over the soil, site personnel will ensure that the soil has sufficient moisture to prevent generation of significant dust. It will be equally necessary to ensure soil is not overly saturated. If soil is too dry, non-contaminated water from within the Landfarm containment area will be used as a moisture source. If no accumulated water is available, freshwater will be used.

3.5 Removal of Soil From the Landfarm

Agnico Eagle currently follows the Government of Nunavut Remediation Guidelines (as outlined in the following sections); however, as with the 2AM-MEL Licence will apply the soil remediation criteria used to the Abandoned Military Site Reclamation Protocol guidelines for the protection of human health and the management limit, which are more appropriate for the Meliadine site.

3.5.1 Government of Nunavut Remediation Guidelines

The following parameters will be measured and compared with the GN industrial remediation criteria to determine whether PHC contaminated soil has been adequately remediated:

- benzene, toluene, ethylbenzene and xylene (BTEX); and
- petroleum hydrocarbon fractions 1 - 4.

The GN remediation criteria are characterized for agricultural/wildlife, residential/parkland, commercial, and industrial land uses. At the Meliadine Mine, remediation to agricultural/wildlife criteria is targeted; however, if these criteria cannot be met, industrial criteria will be followed.

The GN remediation criteria for coarse-grained soils and Licence 2BB-MEL Part D, item 15 criteria will be applied. Table 3-1 presents the applicable Tier 1 criteria for coarse-grained soil, assuming agricultural/wildlife or industrial land uses.

Table 3-1 Summary of Relevant GN Tier 1 Soil Remediation Criteria for Surface Soil (mg/kg)

	Land Use Criteria (mg/kg)	
	Agricultural/Wildlife	Industrial
Benzene	0.03	0.03
Toluene	0.37	0.37
Ethylbenzene	0.082	0.082
Xylene	11	11
PHC Fraction 1	30	320
PHC Fraction 2	150	260
PHC Fraction 3	300	1,700
PHC Fraction 4	2,800	3,300

mg/kg = milligram per kilogram

3.5.2 Sampling and Analysis

Landfarm soils will be sampled bi-annually, at the earliest possible time and at the end of the summer season, to determine if remediation objectives have been met. Representative composite samples will be taken to estimate remaining PHC concentrations. For each 10 m of windrow length, two composite samples will be collected, one consisting of three surface sub-samples and the other from three sub-samples at 1 m depth. Sub-samples will be taken approximately 3.3 m apart, and will be taken randomly in the sub-cell.

Sample collection will follow the QAQC protocols established for the Project which includes collecting one duplicate for every ten samples.

After two seasons of treatment in the Landfarm, degradation rates will be assessed to estimate the total remediation time required for PHC contaminated soil under these conditions. If remediation to GN guidelines is feasible within the life-of-mine timeframe, Landfarm operations will continue with aeration. If rates of degradation are not sufficient through this method, alternative options will be further investigated as described in Section 4.2.

3.5.3 Soil Removal

Coarse-grained soils will be assessed near the end of the summer season by the Environment department technicians for PHC product and odour. A photoionization detector (PID) may be employed to assist in petroleum-based vapour detection. When PHC odours are no longer detected, the material will be removed to the WRSF, or used at the TSF for cover material.

When analysis of the fine-grained material at the end of a season indicates that concentrations of contaminants are below GN guidelines, the appropriate section of soil suitable for removal from the facility is completed. Interim monitoring may also be conducted of the headspace with a portable instrument (e.g., flame ionization detector), however, prior to any material removal, samples will be confirmed to be of suitable quality by an accredited laboratory beforehand.

When remediated, the soils will be removed from the facility and can be used for construction purposes such as normal overburden (i.e., part of the cover of the TSF) or stacked in the WRSF.

3.6 Water Management

Since the Landfarm facility is uncovered to facilitate natural weathering, water accumulating inside the bermed area may come into contact with contaminated material.

3.6.1 Snow Management

Non-contaminated snow will be removed as much as possible during winter to minimize the quantity of spring melt inside the berm. Care will be taken to ensure contaminated snow/soil is not disturbed by leaving a base layer of snow of no less than 10 cm in place. Following snowmelt, any contaminated product left from winter spill clean-up operations could be padded up.

3.6.2 Water Management

While, the Landfarm will have an impermeable liner, visual inspections by the Environment department will be conducted for seepage of contact water coming through the perimeter berm, or the accumulation of water within the containment berm. This will be conducted on a weekly basis starting after freshet and continuing until October when water is likely to be present. In the event of water accumulation or seepage, the ponded water will be pumped through the site's oil-water separator (EVAC by Ci.Agent) to remove PHC residue and will be analyzed for BTEX, lead, and oil and grease prior to discharge to the environment, only if discharge criteria from the Water Licence 2BB-MEL1424 part D, item 15, are met (Table 3-2).

Table 3-2 Licence 2BB-MEL1424 Part D, Item 15 STP

Licence 2BB-MEL-1424	
Criteria limits (ug/L)	
Benzene	370
Ethylbenzene	2
Toluene	90
Lead	1
Oil & Grease	15,000 and no visible sheen
Phenols	20

3.7 Landfarm Closure and Reclamation

After removal of all remediated soil and prior to closure and reclamation of the Licence B Landfarm, the berm and base will be sampled on a 10 m grid to determine if these soils are free from PHC contamination. Results of this analysis will be compared to GN and CCME criteria set out in Table 3-1. No excavation will be necessary if the agricultural/wildlife criteria are met. If industrial criteria are used, the Landfarm will be covered with a 2 m thick layer of waste rock, or other suitable material used for reclamation. The surrounding berm will be breached to avoid water accumulation on the landfarm.

3.8 Summary of Activities

A summary of Landfarm activities including monitoring of the physical condition is provided in Table 3-3. An annual report will be prepared indicating the volume of material added to the facility, amount of material removed, disposal or reuse location, all analysis results, volume and type of nutrient addition, visual inspection results, and volume of contact water pumped. This information will be appended to Agnico Eagle's NWB Annual Report.

Table 3-3 Summary of Landfarm Activities, Analyses, and Records

Activity	Analysis	Frequency of Analysis	Record
Excavation of spill and transport of contaminated material to landfarm.	If unsure of full excavation - F1-F4, BTEX If contaminant source unknown, F1-F4, BTEX, metals, oil and grease, VOCs	As needed	Date, time and location of spill and excavation; estimated volume of spill; estimated quantity of excavated soil; storage/disposal location of excavated soil, if applicable. Any evidence of remaining product
Soil aeration	NA	As possible	Date and time of the aeration; location; soil condition (moisture, odour, granulometrie, etc.)
Sampling for progress of remediation	Hydrocarbon vapour in headspace (by PID); F1-F4, BTEX (laboratory)	Vapour – as needed; Laboratory – Bi-annually	Date and time; location; odour; laboratory report
Soil removal from landfarm	Removal subject to meeting GN criteria	Once GN criteria are met	Date and time; location; quantity of soil removed; final location
Ponded contact water	Table 3-2 – as specified in Water Licence 2BB-mel1424 Part D, Item 15	Prior to any dewatering; if re-used in landfarm, no sampling necessary	Date and time, location, laboratory report, in Annual Report
Seepage	Visual inspection; Table 3-2 – as specified in Water Licence 2BB-mel1424 Part D, Item 15	Weekly during summer	Location, extent, approximate depth, evidence of sheen
Identification of maintenance requirements	Visual inspection of landfarm	Twice over the summer	Inspected areas; condition of berm and base; previously unidentified safety concerns

SECTION 4 • CONTINGENCY OPTIONS

This section describes the contaminated soil management plan, should a large spill event occur, and if Landfarm treatment proves not successful.

4.1 Large Spill Event

A large spill event producing a quantity of soil may occur, in this event, soils will be placed in the A Landfarm.

4.2 Alternate Treatment Options

Should Landfarm treatment not perform as anticipated in which the rates of degradation are not sufficient to meet GN Tier 1 criteria within the life-of-mine and the anticipated closure period, the following alternative treatment options will be considered. Implementation will only occur once a detailed protocol and revised plan is approved by the NWB.

4.2.1 Soil Amendment

Since pH, salinity, moisture content, and microbial population density all affect rates of biodegradation by microbes, these factors may be monitored and adjusted through soil amendments if they are not found to be optimal (SAIC 2006). In addition, the dispersion of soil could be repeated to maximize air exposure if space in the Landfarm allows.

4.2.2 Tier 2 – Modified-Criteria Approach

According to the GN *Environmental Guideline for Contaminated Site Remediation* (GN 2009), in cases where site conditions, land uses, receptors, or exposure pathways are different from those assumed in the development of the Tier 1 criteria, modified criteria may be permitted. This process requires the collection of site-specific information on exposure and risk estimates, and is subject to GN approval. For the Meliadine Mine, landfarmed soils are to be encapsulated in a WRSF rather than used in surface applications, as assumed in Tier 1, reducing the likelihood of exposure to any remaining contamination. Therefore, the Tier 2 approach could be warranted if Tier 1 criteria cannot be met. Any consideration for this approach would be based on soil sampling results and science based information.

4.2.3 Direct Placement in Waste Rock Storage Facility or on Tailings Storage Facility

Another option for management of contaminated soil, if bioremediation proves ineffective, would be the direct placement of this material in a WRSF or on the TSF. Although the use of PHC contaminated soils in these storage areas is not optimal, the quantity generated on-site is small in comparison to the quantity of waste rock and cover on the TSF. While this method would not result in the treatment of soil, it is a viable contingency option because it would allow for the safe disposal of the contaminated material. Encapsulation and freeze-back would occur, eliminating any movement of contaminants. Over time, this material would undergo natural degradation. Consideration of this option would also include a suitable monitoring program for PHCs, which would be incorporated into the Closure and Reclamation Plan.

SECTION 5 • ASSESSMENT AND REPORTING

5.1 Feasibility

After three seasons of treatment in the Landfarm, degradation rates of PHC contaminants will be assessed to estimate the total remediation time required under these conditions. If remediation to GN guidelines is feasible within the life-of-mine timeframe, Landfarm operations will continue, with aeration and possible nutrient amendments, as described above. If rates of degradation are not sufficient through this method, alternative options will be further investigated (Section 4).

5.2 Reporting

Reporting of Landfarm activities will be submitted annually by Environment department, indicating the volume of material added to the facility, amount of material removed and disposal or re-use location, confirmatory analysis results, and, whether or not nutrient amendment was used.

5.3 Plan Review and Continual Improvement

The Landfarm Management Plan will be reviewed and updated on annual basis, as required, to reflect changes in operations and/or technology.

REFERENCES

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Golder (Golder Associates Ltd). 2007. Technical Memorandum: Landfarm Option Analysis, Meadowbank Gold Project, Nunavut. Prepared for: Agnico-Eagle Mines Ltd. August 23, 2007.

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Appendix C



MELIADINE GOLD PROJECT

INTERIM RECLAMATION AND CLOSURE PLAN

for Water Licence

2BB-MEL

February 2024

DOCUMENT CONTROL

Version	Date (YMD)	Revision
	2010/08/04	The 2009 Plan was completely rewritten.
	2010/11/02	The Plan was modified to include Mel East, Water Licence 2BE-MEP0813
	2013/03/28	The Plan was updated to reflect changes to the camp, addition of the Tiriganiaq borrow pit, a landfill and an additional bulk sample.
	2013/07/19	Revision (DF)
	2016/02/12	Revision (DF)
	2016/03/29	Reclaim calculation revision (JW)
	December 2023	The Plan was modified per the 2BB Water Licence Amendment and includes the removal of 2BE-MEP as an independent Reclamation and Closure Plan was submitted to the NWB in November 2018
	February 2024	Updated Section 4 and 5 to include details on landfarm, drill sump and disposal of drill cuttings. Removed securities associated with this plan, as they are to be moved to the Meliadine Mine 2AM-MEL1631 Water Licence

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1. Introduction and Background

Agnico Eagle Mines Limited (Agnico Eagle) has been conducting mineral exploration at the Meliadine Mine since their purchase in 2010. These lands are Inuit Owned Lands (IOL) pursuant to the Nunavut Agreement and exploration activities have been authorized by the Kivalliq Inuit Association (KIA) under land use permits.

Water Licence 2BB-MEL requires Reclamation and Closure Plan. The reclamation of the camp would see the removal of all buildings, sea cans, and equipment. The core storage would be the only component to remain after reclamation.

2. General Approach to Reclamation and Closure

The Meliadine Mine reclamation objectives are to minimize negative environmental effects of advanced exploration wherever practicable, practice progressive reclamation, and upon closure, return negatively impacted areas to productive and lasting use by wildlife and humans. Reclaimed areas will be chemically and physically stable, and should ultimately support the same functions as the surrounding, undisturbed land. Because of the proximity of the mine site to Rankin Inlet, particular attention will be paid to ensuring that reclaimed areas are safe for future traditional use.

A practical, cost-effective approach will be central to reclamation and closure. The intent is to pursue reclamation and closure so there are no long-term care and maintenance requirements. The plan will be developed, updated, and revised on a regular basis, ultimately resulting in a final plan upon closure. Each iteration of the plan will provide more detail and greater certainty regarding the sequence of events in reclamation and closure.

Progressive reclamation will be used to reclaim areas no longer needed for advanced exploration by stabilizing disturbed land surfaces and promoting revegetation. This approach will employ best practices and will ultimately advance the return of areas to natural conditions while at the same time reducing the overall cost of reclamation. In a similar manner, obsolete equipment, surplus chemicals, and buildings will be removed as they are no longer needed.

Hazardous waste will be managed on an ongoing basis; consequently, there will be little to no accumulation of such wastes, subject to seasonal shipping considerations.

3. Demobilization

All equipment and structures will be removed from the area. Buildings and materials with ongoing value to the company will be removed by Agnico Eagle. Local persons and businesses will be given the opportunity to salvage any remaining buildings and materials that would otherwise be dismantled or demolished as part of final site reclamation process. The only materials and structures remaining will be drill core stored in permanent racks on gravel pads. All demolished buildings and other solid, non-hazardous waste will be taken to the landfill or transport to a southern approved facility for disposal.

3.1 Structures

There are rigid “Atco” type trailers, which serve as the Accommodation Complex and auxiliary units (such as office, kitchen, STP/WTP, dry) for contingency use, as well as the core shack and garage. There are also multiple seacans which are used to storage materials and related equipment for drilling purposes. It is expected that all the trailer unit buildings will be salvaged by Agnico Eagle for either return to the south or placed for sale in Rankin Inlet.

3.2 Drilling Supplies and Chemicals

All useful material such as salt and other drilling compounds such as grease will be relocated to Rankin Inlet. These will either be sold to local interests or shipped to Southern Canada.

All chemicals, explosives, and hazardous materials still in unopened packages at closure will be shipped south. Open packages and waste materials will be shipped to a certified waste management company for treatment, recycling and/or disposal in another provincial or territorial jurisdiction.

The ongoing annual removal of surplus chemicals and hazardous waste, and the immediate clean-up of spilled fluids will minimize the quantity of material requiring handling, packaging and removal upon closure.

4. Reclamation of Meliadine Exploration Camp Area

The camp area will be allowed to re-vegetate naturally once cleared of all buildings and other infrastructure. Revegetation will be slower in higher, drier areas than in low lying, moist areas. Where they exist, irregular surfaces will be left in place as these capture snow over the winter which in turn provides moisture to plants in the spring. The application of fertilizer is generally most effective in moist sites and while it helps on drier sites, the response by the tundra plant community on the higher ground will be slower. Only indigenous plant species approved by the GN DoE will be used in revegetation in accordance with GN Guidelines established for revegetation work in Nunavut. In most instances promotion of natural vegetation from adjoining plant colonies will be the preferred practice.

Five different surface conditions will require reclamation on termination of activities:

- Areas of heavy traffic - In these areas, the total amount of vegetation on surface is diminished thereby reducing the insulative layer over the permafrost. The effect is an eroded surface settlement and rocks protruding through to the surface. These sites are stable and reclamation will involve applications of fertilizer to accelerate natural re-vegetation. Plants on the margins of disturbed areas will benefit from the applications of fertilizer and possibly enhance seed production.
- Gravel pads - Gravel has been placed on the lease area to establish a level supporting surface under buildings. The natural surface remains stable and is bordered by natural vegetation. The gravel surface will be treated with peat and fertilizer and dispersed.
- Building bases - The prolonged presence of a building has prevented plant growth by blocking light to the plants underneath. Similar conditions existed at the former camp site which was vacated in late winter 1996. The natural revegetation of those building sites is progressing slowly. The ground

surface at building sites remains stable and time alone will allow plants to become established. This will be enhanced by limited scarification to improve the germination of seeds from adjacent plants. Application of fertilizer throughout the lease area should generally assist in re-vegetation.

- Burned and contaminated sites - Sites that have been used to burn wood and other non-hazardous combustibles on demobilization will be few in number, limited in size and always on an existing rock pad or road surface. The sites will be raked, any metal removed to the landfill, the ash scattered, the road surface scarified, and the sites fertilized. All sites with contaminated soils will be identified with GPS locations for monitoring.
- Landfarm - After removal of all remediated soil and prior to closure and reclamation of the Landfarm, the berm and base will be sampled on a 10 m grid to determine if these soils are free from PHC contamination. No excavation will be necessary if the Government of Nunavut (GN) GN Remediation Guidelines for Agricultural/Wildland land use are met. If the GN Remediation Guidelines for industrial land use or Abandoned Military Site Reclamation Protocol (AMSRP) guidelines were used during operations, the Landfarm will be covered with a 2 m thick layer of waste rock, or other suitable material used for reclamation. The surrounding berm will be breached to avoid water accumulation on the landfarm.
- Roads – Roads will be scarified and allowed to revegetate naturally. There is a single water crossing and this will be removed. If necessary, the area surrounding the water crossing will be stabilized with waste rock.

5. Reclamation of Drill Sites

All drill sites are reclaimed on a progressive basis. Following completion of a drill hole, the casing is pulled if possible, or cut off at or below ground level. Water and drill cuttings flow down the hole or casing and freeze in place thereby plugging the drill hole. As per the water management plan, drill cuttings are not allowed to flow into any body of water. If needed, Agnico Eagle uses “Aquadams” and/or silt curtains and/or sludge line to manage TSS. Once the sludge has settled and TSS are removed, the water is allowed to flow into a natural water course. Agnico Eagle does not intend on digging sumps, drill cuttings will be disposed of within a natural depression, more than 31 meters above the ordinary High Water Mark of any water body. Procedures will be followed as agreed upon with the site inspector.

Quite commonly, the process of drilling creates a depression around the borehole and the sludge is concentrated in and adjacent to that depression. Experience has shown that if the drilling sludge is spread as a thin layer around the hole, the area will re-vegetate completely within a couple of years. If a thick layer of drill sludge is deposited into depressions, re-vegetation is hindered. The present approach to drill site re-habilitation has worked well for the last 15 years.

6. Storage of Drill Core

At closing, the drill core in storage at the Meliadine site will be evaluated for long term storage stability. Core stored in unstable conditions will be restacked on more durable and stable gravel pads for long term storage and access.

7. Roads

Decommissioning of the roads on site will be accomplished by loosening compacted surfaces (ripping surface with a dozer mounted ripping unit), flattening side slopes, removing all culverts and other potential obstructions to drainages paths. The objective will be to make the road surface impassable to vehicular traffic and by loosening the top, allow plants to establish.

8. Cost of Implementation

8.1 History

The first Site Liability Security Deposit Review document was provided to the NWB in September 2007. This report provides details on Agnico Eagle's \$950,000 security deposit (Letter of Credit) with the KIA that covers the entire project including both the camp and underground exploration site. The NWB set security at \$639,000 in water license 2BB-MEL1424. Together, the total security held by KIA and the federal government is \$1,589,000.

On or about July 8, 2011, Agnico Eagle and AANDC (currently referred to as Crown Indigenous Relations and Northern Affairs Canada; CIRNAC) agreed that a security of \$824,483 was appropriate for the level of activity, which included the extension of the ramp and a ventilation shaft. The NWB indicated in its approval of the underground extension on January 6, 2011 that *"the NWB will, in accordance with Part B Item 4, revisit the amount of security prior to the commencement of the underground extension program."* In preparation for the commencement of the underground extension program, Agnico Eagle recalculated the security using the Reclamation Cost Estimating Model -Version 6.1 (RECLAIM Model). In March 2013, the reclamation and closure costs for the Meliadine Project and Mel East were calculated at \$1,489,082 and \$34,126, respectively.

An updated Reclamation and Closure Plan was submitted to the NWB on November 26, 2018, specifically for the 2BE-MEP1828 licence. On July 3, 2019, the plan was provided to interested parties for information. No comments were received; therefore, the NWB acknowledged the plan addresses requirements of Part I, Item 1 of the 2BE-MEP1828 licence.

At the time of issuance of the 2014 2BB-MEL Licence renewal/amendment, Agnico Eagle was in the process of permitting the Meliadine Mine with the Nunavut Impact Review Board (i.e., environmental assessment) and then subsequently the water licensing regulatory process with the NWB. The Type A 2AM-MEL1631 Water Licence was approved by the Minister on May 19, 2016; and security was established.

9. Post Closure Monitoring

Water and soil sampling after the site has been re-habilitated is the primary method of ensuring that the area has been brought back to productive habitat suitable for use by wildlife and humans.

Environmental monitoring will continue during and after the post-closure phase of the reclamation until it can be established that licensed criteria have been met. The amount and frequency of post-closure monitoring that is required will diminish with time as natural reclamation takes hold and all parties are satisfied that the reclamation has satisfactorily met its objectives.