January 17, 2025

Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119 Gjoa Haven
Nunavut NU X0B 1J0

RE: *Waste Rock Storage Facility 6 Design Report for 2AM-MEL1631 water licence*

Dear Mr. Dwyer,

Agnico Eagle Mines Limited (Agnico Eagle) thanks the Nunavut Water Board (NWB) for the opportunity to address comments received for Agnico Eagle's Meliadine Gold Mine Waste Rock Storage Facility 6 Design Report.

Agnico Eagle also thanks DFO, CIRNAC and ECCC for their review of the Design Report. The following information and comments are intended to address comments outlined in the below referenced letter:

250113 2AM-MEL1631 REP-WRSF6 Design Report-IFU ECCC Comments-IMLE

Should you have any questions or require further information, please do not hesitate to contact us.

With my best regards,

Anne-Laurence Paquet | Compliance Coordinator
anne-laurence.paquet@agnicoeagle.com | Direct 819.759.3555 |
Agnico Eagle Mines Limited - Meliadine Mine, Suite 879 - Rankin Inlet, Nunavut, Canada X0C 0G0
agnicoeagle.com

Environment and Climate Change Canada (ECCC)

ECCC-1: Drainage from East Side of Waste Rock Storage Facility 6

Comment

Section 7.0 of the Report describes how seepage and runoff from Waste Rock Storage Facility #6 (WRSF6) will all report to collection pond CP9 for Phase 1. It states, "*Seepage and runoff from the north and southeast portions of WRSF6 Phase 1 will naturally flow or be rediverted by a diversion berm to CP9.*" It is not clear from the figures presented if runoff diverted by Berm 4 would drain towards Lake B62 or former Lake B38. Nor is it clear how water accumulating in these areas and in former Lake B37 would make its way to CP9. If water diverted by Berm 4 flows towards Lake B62, it could be necessary to manage potentially sediment laden water to prevent it from entering fish bearing waters since Sump 5 will not be constructed until Phase 2.

Recommendations

ECCC recommends the Proponent provide more details on how runoff and seepage from the eastern side of WRSF6 will be directed to CP9, including:

- flow paths of water diverted by Berm 4.
- how any runoff flowing from the WRSF towards Lake B62 will be managed, if this is predicted to occur.
- where water flowing from the eastern side of WRSF6 will accumulate; and
- how water accumulating in former Lakes B37 and B38 will be managed

Agnico Eagle Answer

Agnico Eagle thanks ECCC for their comment. Figure 1 at the end of this document presents the water flow paths and how runoff and seepage from the eastern side of WRSF6 (Phase 1) are to be diverted to CP9 (Pump 01 Open Pit).

As shown in Figure 1, water diversion Berm 4 for WRSF6 Phase 1 is on the natural catchment boundary which separates the catchment area for Lake B62 and former Lake B38, as a result, runoff water from the northeast portion of WRSF1 Phase 1 will naturally flow by gravity or be diverted to former Lake B38 by Berm 4. Runoff water from WRSF6 Phase 1 is not expected to flow to Lake B62 and downstream Lake B59.

Under baseline conditions, water in former Lake B38 naturally flows to former Lake B37 and then flows to former Lake B36 where CP9 will be formed in Pump 01 Open Pit. As per the current mine development plan, haul roads will be constructed across the narrows between former Lake B36 and former Lake B37 and between former Lake B37 and former Lake B38. When the haul roads are constructed, culverts[1] (as shown in Figure 1) will be installed in the haul roads at the original water flow locations to divert the water collected in the former Lake B38 to former Lake B37 and then CP9.

[1] The design for culverts to be installed will be part of a separate submission to relevant authorities.

ECCC-2: TIMING OF WATER MANAGEMENT INFRASTRUCTURE CONSTRUCTION

Comment

The water management strategy described includes infrastructure to be constructed for WRSF6 Phase 1: Channel 11, collection pond CP 9 and Berm 4. No information was found about the timing of water management infrastructure construction relative to other activities such as the clearing of snow and esker material or the placement of waste rock. The channel, berm and pond should be in place prior to waste rock placement so that any runoff can be diverted from the receiving environment.

Recommendations

ECCC recommends the Proponent construct water management infrastructure prior to the placement of waste rock.

Agnico Eagle Answer

Agnico Eagle thanks ECCC for their comment. WRSF6 and the related water management infrastructure (Channel 11, Berm 4, Collection Pond 9 (CP9) and its Thermal Berm) will be constructed concurrently during the winter of 2025. The water management infrastructure will be completed prior to 2025 freshet; therefore, any runoff from WRSF6 will be diverted from the receiving environment and be directed to CP9.

The material used for construction of the water management infrastructure will come from Pump 01/ CP9 development. This is the same approach that has been successfully used for other infrastructures on site, most recently Waste Rock Storage Facility 3 (WRSF3), Collection Pond 2 (CP2) and the associated channels.

ECCC-3: PLACEMENT OF POTENTIALLY ACID GENERATING WASTE ROCK

Comment

The Design Report proposes encapsulating potentially acid generating (PAG) waste rock in the centre of the WRSF, which is a common strategy to keep the PAG rock frozen and avoid potential acid generation. The Report specifies: "*The PAG storage areas will be located at minimum 15 m, in a horizontal distance, from the edge of WRSF6.*"

The thermal analysis memo presents predicted temperatures in 2128 throughout the WRSF in zones. "*Zone 1 with ground temperature warmer than -0.5°C, located from WRSF6 toe to 20 m inside of the WRSF6 toe. This zone was considered as unfrozen zone due to the pore water salinity caused the freezing point depression*." According to these predictions, PAG rock stored in

the WRSF toe between 15 and 20 m from the edge would not be frozen and could potentially generate acid.

Recommendations

ECCC recommends the Proponent store potentially acid generating waste rock in areas of the facility that are predicted to remain frozen, including more than 20 m from the edge of the toe.

Agnico Eagle Answer

Agnico Eagle would like to reiterate that only approximately 5% of the total waste rock produced from the proposed Pump Open Pits are expected to be classified as potentially acid generating (PAG) or Uncertain (see Section 3.3.3 of the WRSF6 Design Report).

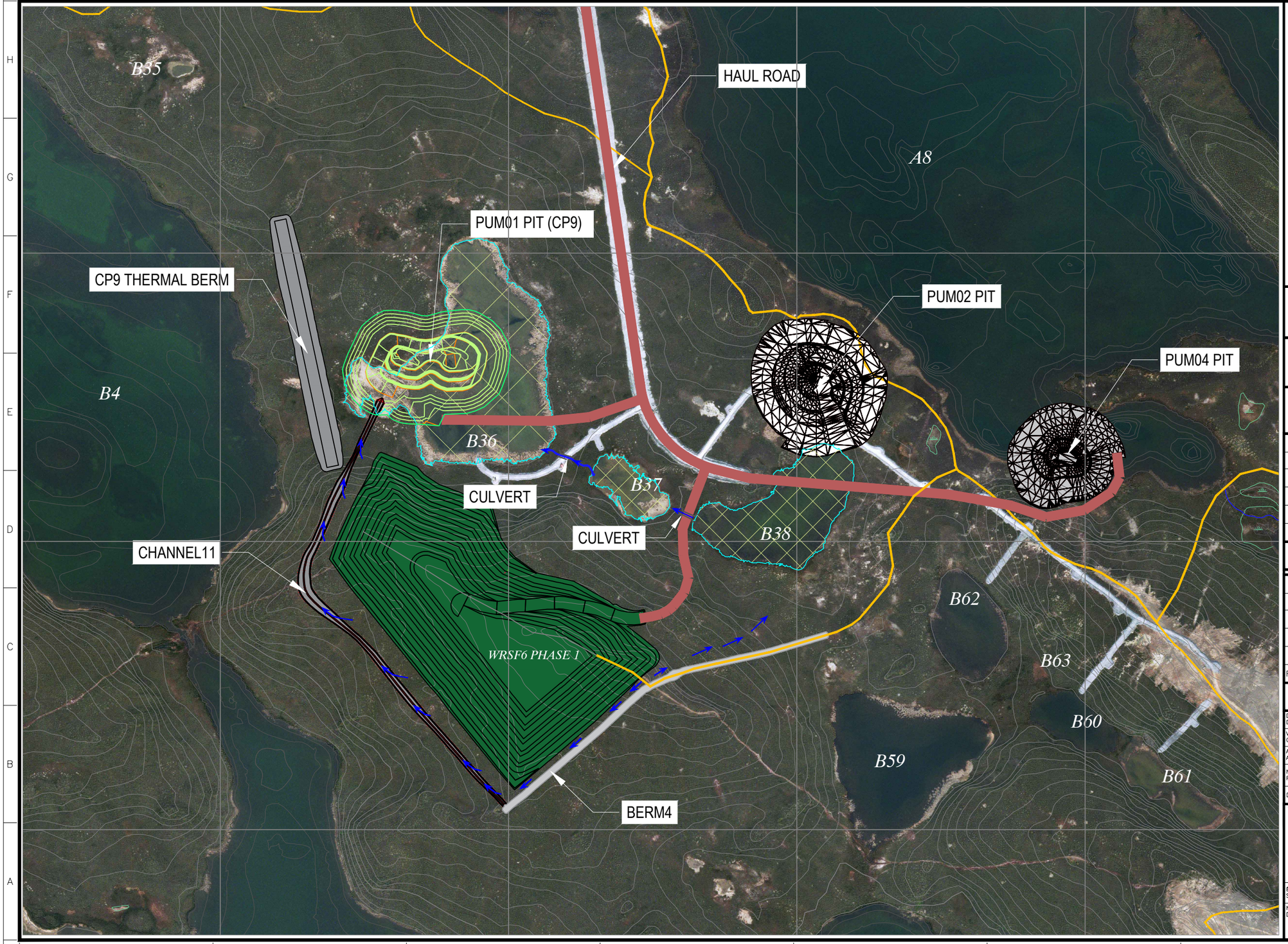
Waste rock that is classified as PAG or Uncertain is mostly from Iron Formation (IF) waste rock. The dominant carbonate mineral in IF waste rock has a potential for the long-term neutralization capacity of acid drainage. Overall, the carbonate mineral composition is highest in the Pump deposits compared to other deposits at the mine.

Further, based on the Acid Base Accounting results from the laboratory tests samples from the Pump area, the paste pH ranges from 8.1 to 8.9 for the waste rock collected, indicating the presence of immediately available neutralization potential.

Nevertheless, Agnico Eagle will follow ECCC's recommendation to place PAG waste rock more than 20 m from the edge of the toe of WRSF6. This will be reflected in the next update of the Mine Waste Management Plan.

NO. DESSIN
DRAWING NO.

FORMAT ANSI B–11x17



LEGEND

- CATCHMENT BOUNDARY
- HAUL ROAD
- WATER FLOW
- DRAINED LAKE AREA
- WASTE ROCK STORAGE FACILITY

AGNICO EAGLE

TETRA TECH

–	–
–	–
–	–
–	–
–	–
–	–
TITRE / TITLE	# DWG

DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

REV	DESCRIPTION	DATE	PAR BY

REVISIONS

DESSINÉ PAR DRAWN BY	HX	DATE	2025–01–15
VÉRIFIÉ PAR CHECKED BY	HX		2015–01–15
APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.	ENG.EARC03140–39		
DATE			

TITRE / TITLE

AGNICO EAGLE – MELIADINE GOLD MINE
WRSF6 PHASE 1 RUNOFF WATER MANAGEMENT PLAN AND FLOW PATHS

ÉCHELLE/ SCALE		FICHIER FILE	.DWG
No. DESSIN/ DRAWING NO.	**FIGURE 1**	REVISION	FEUILLE/SHT 1 / 1

AE–CART–ANSI B

Q:\Edmonton\Engineering\E141\Projects_MELIADINE\General Site Layout Plan–Existing 2024 for WRSF6 WM.dwg–2013–02–19 12:48:40