

May 2015



AGNICO EAGLE

**CLOSURE AND RECLAMATION STRATEGY
AND SECURITY ESTIMATE**

Type B Water Licence

Submitted to:

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B1J0

Executive Summary

On 26 April 2011, Agnico Eagle Mines Ltd. (Agnico Eagle) submitted a Project proposal to the Nunavut Impact Review Board (NIRB) for an environmental assessment of the proposed Meliadine Gold Project (Project). Following screening and review of the Project by the NIRB, Agnico Eagle was issued Project Certificate No. 006 for NIRB File No. 11MN034 for development on 26 February 2015. Agnico Eagle submitted its Type A Water Licence Application for the Project to the Nunavut Water Board (NWB) on May 15, 2015. Following submission of the application it may take up to one year before Agnico Eagle receives a Ministerial approved Type A Water Licence authorizing full development of the Project. Since construction scheduling and implementation for the Project is dependent upon, and restricted by, the seasonal sea lift to support mobilization of supplies and equipment, waiting up to a year to receive a Type A Water Licence before starting construction has significant impact on the overall project schedule.

The regulatory framework provided in the Nunavut Land Claims Agreement (NLCA) and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA or Act) allows for interim, short-term approvals for water uses related to exploration or development work (referred to as pre-development work herein) for a proposal under development impact review. Since a Project Certificate was recently issued by the NIRB, the NWB is not restricted from issuing an interim, short-term period water license for pre-development work related to the Project.

In the Final Environmental Impact Statement for the Project (Volume 2, s.2.2.2), Agnico Eagle identified specific pre-development (site preparation) activities that would be beneficial in accelerating the overall project schedule if they could be started as early as possible. It was planned that these activities would be separately permitted immediately after the Project Certificate is issued, allowing construction to start soon thereafter, before waiting for other permitting issues involving mine operations to be addressed. This pre-development permitting approach could allow construction work to start this summer (i.e., in 2015), which would be a substantial gain considering the very small window for construction in the Arctic each year.

In accordance with the Act or NWNSRTA, Agnico Eagle is required to furnish and maintain security with the Minister, in a form determined by the Regulations or satisfactory to the Minister. In order for the NWB to be able to issue a licence, Agnico Eagle must satisfy the Board that the company has the financial ability to adequately implement mitigation measures and apply any costs associated with closing or abandonment of the undertaking.

This document provides for the closure and reclamation approach proposed by Agnico Eagle and an estimate of financial liability for the site as it pertains to the facilities and infrastructure related to pre-development and site preparations of the Project in advance of receipt of a Type A Water Licence.

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1.0 INTRODUCTION

Agnico Eagle Mines Ltd. (Agnico Eagle) is developing the Meliadine Gold deposit (Project), located approximately 25 kilometres (km) north of Rankin Inlet, and 80 km southwest of the hamlet of Chesterfield Inlet in the Kivalliq Region of Nunavut. Situated on the western shore of Hudson Bay, the Project site is located on a peninsula between the east, south, and west basins of Meliadine Lake (63°1'23.8" N, 92°13'6.42"W) on Inuit Owned Land. The Project is located within the Meliadine Lake watershed of the Wilson Water Management Area (Nunavut Water Regulations Schedule 4).

The Project is composed of five known gold deposits: Tiriganiaq, F Zone, Pump, Wesmeg, and Discovery. Agnico Eagle proposes to develop these deposits in a phased approach to manage the initial capital investment required and to allow production to commence while ongoing exploration continues to increase the known ore reserve. The initial phase of development (Phase 1) focuses on the development of the Tiriganiaq gold deposit using a traditional open-pit mining method and underground mining. Phase 2 will be defined and permitted during Phase 1, once the other deposits are better defined through ongoing exploration drilling. Both Phase 1 and 2 are within the Project that was the subject of the environmental and socio-economic assessment conducted by the Nunavut Impact Review Board (NIRB), culminating in the issuance of Project Certificate No. 006.

Approximately 12.1 million tonnes (Mt) of ore will be mined from Tiriganiaq over a nominal mine life of approximately eight years. The operation will produce approximately 31.8 Mt of waste rock, 7.4 Mt of overburden waste, and 12.1 Mt of tailings. Proposed Phase 1 mining facilities in the area include a plant site and accommodation buildings, two open pits, three ore stockpiles, a tailings storage facility (TSF), three waste rock storage facilities (WRSFs), and a water management system including water treatment facilities, several water diversion channels, retention dikes/berms, collection ponds, and a discharge diffuser.

The Project is subject to the regulatory requirements of the the Nunavut Land Claims Agreement (NLCA) and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA or Act), and as such is required to obtain a project certificate from the NIRB and a Type A Water Licence (Application) from the Nunavut Water Board (NWB) to allow for mine development and mining of the Project. A project certificate was issued by the NIRB on February 26, 2015 and Agnico Eagle filed a Type A Water Licence Application with the NWB on May 15, 2015.

Following submission of the Type A Water Licence Application it may take up to one year before Agnico Eagle receives a Ministerial approved Type A Water Licence authorizing full development of the Project. Since construction scheduling and implementation for the Project is dependent upon, and restricted by, the seasonal sea lift to support mobilization of supplies and equipment, waiting up to a year to receive a Type A Water Licence before starting construction has significant impact on the overall project schedule. The regulatory framework provided in the NLCA and the Act allows for interim, short-term approvals for water uses related to exploration or development work for a proposal under development impact review. Since a Project Certificate was recently issued by the NIRB, the NWB is not restricted from issuing an interim, short-term period water licence for development work related to the Project. As such Agnico Eagle is submitting the Type B application (the Application) for development work.

2.0 REGULATORY CONTEXT

A detailed overview of the legislative and regulatory requirements are provided in Section 2.0 of the Main Application Supporting Document submitted in support of the Application. In summary:

- The Project is subject to conformity determination to the Keewatin Regional Land Use Plan. On June 8, 2011, the NPC issued a positive conformity determination for the Project proposal and forwarded the Project proposal and determination to the NIRB for screening (NPC 2011).
- The Project is subject to environmental and socio-economic impact assessment processes by the NIRB established under Article 12 of the NLCA. Project Certificate No. 006 was issued on February 26, 2015 (NIRB 2015). For more information on the timelines and processes used by the NIRB in screening and review of the Meliadine Gold Project, refer to the Main Application Document submitted in support of the Type A water Licence Application (Type A MAD, S.2.4.1).
- The Project is subject to the requirements of the NWNSRTA, Regulations for water management. A Type A water licence application is pending. A Type B water licence is required from the NWB in order for Agnico Eagle to undertake site preparation and pre-development works.
- The Meliadine property consists of 52,173 hectares (ha): 887 ha as claims, and 51,286 ha as leases. The 51,286 ha are held under the Canada Mining Regulations, administered by AANDC; and are referred to as Crown Land. As well, Agnico Eagle has 3,430 ha of sub-surface NTI concessions, where the sub-surface mineral rights are administered directly by NTI. Compensation has been paid to the respective owning entities (NTI and AANDC) for Project land use and access to date.
- The proposed Rankin Inlet port facility, laydown area, fuel tank farm, Bypass Road and the first 2 km of the All-weather Access Road (AWAR) are sited on Commissioner's land, administered by the Department of Community and Government Services (CGS) for the benefit of the Hamlet of Rankin Inlet. The Phase 1 AWAR was constructed under land use permits issued by CGS on municipal land, and the KIA on Inuit Owned Land (IOL). Rankin Inlet infrastructure will also require leases from the CGS, and the GN will require Rankin Inlet municipal consent before issuing such leases.
- Fisheries protection and pollution prevention measures for the Project are subject to the requirements of the *Fisheries Act* s.35, which states that no person shall carry on any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational, or Aboriginal fishery (CRA), or to fish that support such a fishery. The Project is not expected to cause serious harm to fish that are part of CRA fisheries, or to fish that support the CRA fisheries in the Peninsula waterbodies, or affect the productivity of the Meliadine Lake CRA fishery, which includes Arctic grayling, Arctic char, and lake trout as the most important species of the fishery. Therefore, it is not anticipated that an authorization will be required under the *Fisheries Act* for the proposed Project undertakings, works, or activities.
- The Meliadine Gold Project will be subject to Metal Mining Effluent Regulations (MMER) requirements (Government of Canada 2012). Pre-development works proposed in the Application will not require deposit of mine effluent. Agnico Eagle will ensure requirements of the MMER are met under the Type A water licence application.

CLOSURE AND RECLAMATION STRATEGY

- The Project may be subject to the *Navigation Protection Act* (NPA). Agnico Eagle met with Transport Canada to explore the implications of applying the NPA to the Project. At this time, Agnico Eagle does not believe that the small lakes, ponds and streams within the Project's footprint are navigable waterbodies. Agnico Eagle recognizes that Meliadine Lake, Meliadine River, and Melvin Bay in Rankin Inlet are navigable waterbodies, and will continue to work with Transport Canada to determine appropriate mitigation measures and strategies to protect navigable waterbodies and ensure compliance with the NPA.

3.0 SCOPE OF DEVELOPMENT WORKS

The scope of pre-development works is provided in Section 3.0 of the Main Application Supporting document of this Application. In summary the following pre-development works are proposed:

- **Satellite Infrastructure in Rankin Inlet**
 - construction of the fuel storage facility in Rankin Inlet
 - preparation of the laydown and material storage area in Rankin Inlet
- **Mine Areas, Site Infrastructure and Water Management**
 - new portal and conveyor ramp with ventilation infrastructure to the underground mine
 - Stripping of open pits (overburden and waste rock) and ore/waste rock stockpiling
 - construction of a pad for the permanent camp
 - installation of pilings for the permanent camp and infrastructure
 - start of work on concrete foundations
 - construction of the access roads
 - installation of culvert No. 2
 - begin construction of diversion Channel 2 to divert non-contact water away from the industrial site pad
- **Mobilization and Accommodation**
 - pre-delivery of material (i.e., equipment, material, and fuel)
 - accommodation for construction personnel estimated to be 250 persons (supported under existing exploration licence 2BB-MEL1424)

Agnico Eagle has entered into an agreement with the Hamlet of Rankin Inlet (Government of Nunavut) to lease fuel storage space within the community's existing fuel storage facility during the period of pre-development. Agnico Eagle does not anticipate construction of the fuel storage facility as originally projected; however, including the fuel storage facility in the Application allows for flexibility and inclusion of construction of the fuel storage facility as contingency. Agnico Eagle is committed to providing the NWB with detailed engineering drawings related to the fuel storage facility in Rankin Inlet at least 60 days prior to proposed construction and revising the spill contingency plan and monitoring plans to account for the change in operation, if implemented prior to issuance of a possible Type A Water Licence.

CLOSURE AND RECLAMATION STRATEGY

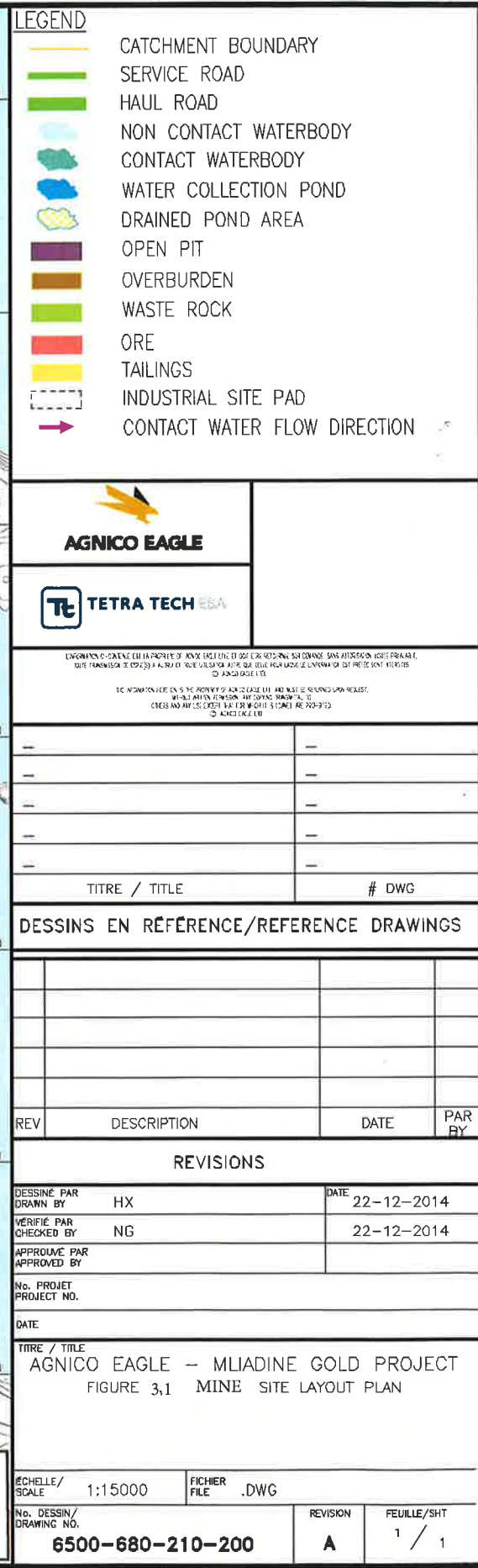
Borrow pit and quarry materials will be used for the construction and maintenance of the Itivia laydown. Borrow pit and quarry materials will also be used in construction of the infrastructure pad at the proposed Mine site and maintenance of the AWAR between Rankin Inlet and the Meliadine site. Best management practices will be used in the selection, construction, and operation of borrow pits and quarries for the Project. These include: minimizing the surface area and cuts of quarries and borrow pits, where possible; maintaining the floor of the quarries and borrow pits slightly above the elevation of the surrounding area to promote drainage to avoid creating quarry lakes; preventing erosion and sedimentation through appropriate control measures; and carrying out Acid Rock Drainage/Metal Leaching (ARD/ML) testing and water quality monitoring in support of mitigation measures. The quarries and borrow pits selected for building the AWAR showed no potential to generate acid drainage. Visual examinations of materials and additional testing will be conducted during construction to confirm that the best available building materials are being used. For additional information refer to the Borrow Pits and Quarries Management Plan (Agnico Eagle 2015).

Installation of the spud barge originally identified in the FEIS as a potential pre-development activity is not requested as part of this Application as it is a marine mine site component and will be undertaken on approval of the Type A Application. Similarly, the stripping of open pit(s) (overburden and waste rock) and ore/waste rock stockpiling originally proposed in the FEIS for pre-development is not requested as part of this Application. It has been determined through further evaluation of existing borrow pit and quarry material sources that sufficient sources are available for the proposed pre-development work construction activities. Quarry development will be undertaken through existing authorization from the KIA and AANDC. The quarry development to generate aggregate suitable for construction purposes is detailed within the Borrow Pits and Quarries Management Plan (Agnico Eagle 2015).

The portal and ramp will be started at the mine site as part of pre-development activities (Figure 3.1). The mine infrastructure pad, an area of approximately 70,000 square metres, will also be prepared involving the spreading of waste rock and borrow pit materials to an average thickness of approximately 3 m over the pad area for a total volume of approximately 200,000 cubic metres (m^3). The material to construct the proposed infrastructure pad will come from two main sources:

Ramp development waste rock:

- The extension of the ramp to 400 m below surface was approved by the NWB under Water Licence 2BB-MEL1424, Amendment #3. The development of the ramp is presently underway to explore deeper portions of the Tiriganiaq ore deposit. Waste rock from developing the ramp is being stored on a pad near the portal; and
- Waste rock available at the time from ramp development; approximately 150,000 m^3 of waste rock should be available to construct the infrastructure pad.



CLOSURE AND RECLAMATION STRATEGY

Borrow pits B5 and B6A located near the AWAR (Figure 3.2):

- Borrow pits B5 and B6A combined supplied approximately 100,000 m³ of material in constructing the AWAR;
- Borrow Pits B5 and B6A will supply an additional 50,000 m³ of material for constructing the proposed infrastructure pad. This will result in the expansion of the two borrow pits. Figure 3.2 shows the extent of the borrow material available, along with the area excavated in constructing the AWAR; and
- In extending the two borrow pits, a buffer of at least 31 m of undisturbed land will be maintained between the two borrow pits and waterbodies.

Only a portion of the infrastructure pad is being constructed as pre-development works at Year -5. The volumes indicated above represent the full quantity and volumes needed to construct the entire infrastructure pad for operations (Figure 3.3).

Water management structures (water retention dikes/berms and diversion channels) will be constructed as needed to contain and manage the contact water from the areas affected by the mine or mining activities. The water management infrastructure pre-development activities resulting from construction of the infrastructure pad includes the following:

- installation of culvert No. 2; and
- begin construction of diversion Channel 2 to divert non-contact water away from the infrastructure pad.



LEGEND

- PROPOSED MINE SITE
- QUARRY/BORROW PIT LOCATION
- WATERCOURSE CROSSING
- ALL-WEATHER ACCESS ROAD (AWAR)
- ROAD - NEW
- ROAD - EXISTING
- WATERCOURSE
- WATERBODY
- TERRITORIAL PARK



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TITRE / TITLE

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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

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REVISIONS

DESSINE PAR DRAWN BY	CDB	DATE	01-12-2014
VERIFIÉ PAR CHECKED BY	LY		24-03-2015
APPROUVE PAR APPROVED BY	DRW		24-03-2015

No. PROJET
PROJECT NO. 1405283

DATE

TITRE / TITLE

AGNICO EAGLE - MELIADINE DIVISION
FIGURE 3.2 LOCATION OF BORROW PITS AND QUARRIES
FOR THE MELIADINE GOLD PROJECT

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SCALE 1:125,000

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DRAWING NO.

REVISION

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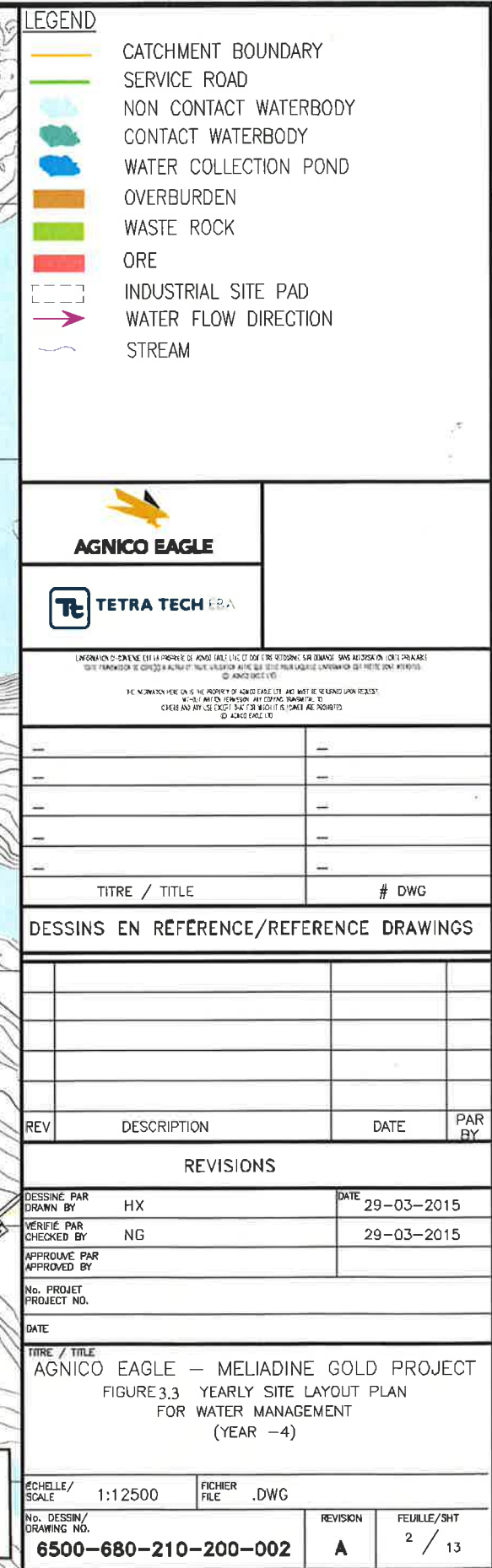
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0 5,000 m

Scale: 1:125,000

REFERENCE

1. BASE DATA OBTAINED FROM AGNICO EAGLE MINES LIMITED.
2. DATUM: NAD83 PROJECTION UTM ZONE 15



4.0 CLOSURE AND RECLAMATION APPROACH

Agnico Eagle estimates that the company could initiate pre-development work by late summer of 2015 subject to NWB approval of the Type B Application for pre-development works. Given that Agnico Eagle predicts the overall Project approval (i.e., the Type A Application for Mining) is unlikely until Q2 of 2016, allowance for construction and mobilization in the summer of 2015 would yield a substantial gain for the Project when taking into account the very small window for construction in the Arctic each year. The process for application for pre-development work in this case is similar to the approach taken by Agnico Eagle for the pre-development work completed at the Meadowbank Mine.

Agnico Eagle acknowledges that the NWB may require the company to furnish and maintain security with the Minister, in a form determined by the Regulations or satisfactory to the Minister. As such, Agnico Eagle has provided this Closure and Reclamation Approach and Security Estimate (the Plan). The Plan includes an estimate of financial liability for pre-development works and site preparation. of \$1.05 M; however, Agnico Eagle would propose the NWB defer full consideration of security of project liability to the Type A Water Licence submitted to the NWB on May 15, 2014.

For further information on Agnico Eagle's past performance and financial responsibility refer to the Type A Main Application Document (Sections 1.3 and 1.4; Agnico Eagle 2015a).

In accordance with the Nunavut Mine Site Reclamation Policy, Agnico Eagle's financial security cost estimate for the pre-development works requested in the Application for a Type B Water Licence has been developed assuming third party contractor rates, on the basis that Agnico Eagle is somehow unable to fulfill its closure and reclamation obligations, and the government is required to take over reclamation of the works.

The decision to implement the Type B closure and reclamation approach does not mean Agnico Eagle would abandon its current work program for which it holds valid authorizations, licenses and permits. Therefore, Agnico Eagle proposes to defer security of the pre-development components to the Type A Water Licence.

Should the predevelopment activities require the implementation of the reclamation and closure plans as outlined Section 5.0 in advance of receipt of a Type A water licence, the pre-development works remediation and closure will be undertaken at the same time as current approvals for the Meliadine site (refer to Section 2.3 of the Main Application Supporting Document for the Type B Application). For additional information on closure and reclamation refer to the Closure and Reclamation Plan submitted under the Type A Water Licence (where appropriate).

The closure and reclamation activities associated with the proposed Type B water licence pre-development work will follow applicable Kivalliq Inuit Association and federal/territorial guidelines and policies, and the closure and reclamation objectives and criteria outlined in this document and in general the Preliminary Closure and Reclamation Plan submitted with the Type A water licence application for the Project.

5.0 CLOSURE AND RECLAMATION ACTIVITIES

Closure and reclamation of proposed the pre-development and site preparation works described in Section 3 will include:

- Infrastructure Pads – Mine Site and Rankin Inlet

CLOSURE AND RECLAMATION STRATEGY

- The surface openings will be sealed: the portal and associated ramp will be capped to eliminate access.
- The area around the closed surface opening will be contoured and disturbed surface areas will be re-contoured to establish positive natural drainage patterns and blend in with the surrounding topography to the extent possible.
- In Rankin Inlet, the laydown and material storage area will be reclaimed. As mentioned in Section 2.0, the proposed laydown and material storage area is situated on lands leased from the Government of Nunavut.
- An assessment will be carried out to identify areas where soils may be contaminated by hydrocarbons. Contaminated soils will be excavated and hauled off site or managed as described under the authorized water license 2BB-MEL1424 which authorizes the use of an existing landfarm.
- Salvageable surface structures will be dismantled and demobilized from the site.
- Non-salvageable structures will be dismantled or demolished, and inert non-hazardous materials disposed of in the landfill area.
- Hazardous wastes will be removed for disposal by a licensed handler.
- Concrete foundations and pilings will be cut in pieces and buried, or removed, to a point about 1 m below the final ground surface or the final re-graded surface.
- All disturbed site areas will be re-graded to suit the surrounding topography. In areas where the original ground surface was lowered for site grading or structural requirements, the slopes will be stabilized and contoured. Cover materials may be required for erosion and dust control. It is anticipated that a succession of indigenous plant species will naturally re-vegetate the surface over time.
- Fuel not required during the closure and reclamation activities will be sold, returned to suppliers, disposed by a licensed handler, or incinerated.
- Diversion Channel #2
 - The diversion channel #2 will be re-contoured, and/or surface-treated according to site-specific conditions to minimize wind-blown dust and erosion from surface runoff to enhance the site area for natural re-vegetation and wildlife habitat post-closure.
- Site Access Roads including Culvert #2
 - The roads not required for post-closure monitoring will be decommissioned and the terrain restored.
 - Decommissioning will occur by loosening compacted surfaces and flattening side slopes.
 - The road surface will be scarified, allowing the native plant community to naturally establish itself on the former road surface.
 - Slopes will be stabilized against erosion potential.
 - If necessary, wildlife access will be provided at suitable intervals by re-grading the embankment shoulders to provide flatter slopes.

CLOSURE AND RECLAMATION STRATEGY

- Should potentially acid generating bedrock be exposed along the roadway, these areas will be covered with a minimum 2 m thick layer of non-potentially acid generating and non-metal leaching soil or rock to direct water away from the surface.
- Culvert #2 will be removed and original drainage patterns restored.
- Borrow Pits – B5 and B6A
 - Reclamation and closure of granular borrow pits will depend on the individual site conditions.
 - All mobile and stationary equipment will be removed.
 - Excavated slopes will be stabilized and contoured.
 - Native vegetation is anticipated to naturally re-establish on disturbed areas.
 - Should acid-generating bedrock be exposed, these areas will be covered with a minimum 2 m thick layer of non-acid generating soil or rock.

Monitoring and maintenance of the reclaimed facilities will be carried out during pre-development, operations and into closure. Period inspections will be performed to visually assess the reclaimed areas.

Surface and groundwater will be sampled if site specific conditions dictate during the closure period.

6.0 SCHEDULE OF CLOSURE AND RECLAMATION ACTIVITIES

Agnico Eagle requests a term of one (1) year to allow for construction of some basic infrastructure and for site preparation for the pre-development phase of the Project. Agnico Eagle would request that should a Type A Water Licence be issued for the Project in the future, that the Board incorporate the scope of this Type B Application/Licence into the Type A Water Licence.

Similar to the Term of Licence, Agnico Eagle also requests that should a Type A Water Licence be issued for the Project in the future, that the Board incorporate the security required under the Type B Licence into the Type A Water Licence such that a “double bonding” for project activities of the same scope does not occur.

Agnico Eagle estimates that if the Type A licence is not issued, it would require 1 to 2 summer seasons to complete the work noted in this Plan. Agnico Eagle anticipates the Type A Water Licence will be issued, so this Plan would not need to be implemented.

7.0 ESTIMATE OF PROPOSED PRE-DEVELOPMENT WORKS FINANCIAL LIABILITY

A permanent closure and reclamation financial security cost estimate for the proposed pre-development works described in this Plan has been prepared to a conceptual level using RECLAIM Version 7.0, March 2014 (Attachment A).

A summary of the financial security cost estimate for the pre-development works is provided in Table 7.1.

CLOSURE AND RECLAMATION STRATEGY

Table 7.1: Summary Financial Security Cost Estimate

CAPITAL COSTS	COMPONENT NAME	COST	LAND LIABILITY	WATER LIABILITY
OPEN PIT	Tiriganiaq Pit 1	\$0	\$0	\$0
	Tiriganiaq Pit 2	\$0	\$0	\$0
UNDERGROUND MINE	Tiriganiaq	\$120,122	\$0	\$120,122
TAILINGS FACILITY	Tailings Storage Facility	\$0	\$0	\$0
ROCK PILE	Waste Rock Facility East	\$0	\$0	\$0
	Waste Rock Facility West	\$0	\$0	\$0
	Waste Rock Facility H19-H20	\$0	\$0	\$0
BUILDINGS AND EQUIPMENT		\$529,501	\$0	\$529,501
CHEMICALS AND CONTAMINATED SOIL MANAGEMENT		\$0	\$0	\$0
SURFACE AND GROUNDWATER MANAGEMENT		\$0	-	\$0
INTERIM CARE AND MAINTENANCE		\$0	-	\$0
	SUBTOTAL: Capital Costs	\$649,623	\$0	\$649,623
	PERCENT OF SUBTOTAL		0%	100%
INDIRECT COSTS		COST	LAND LIABILITY	WATER LIABILITY
MOBILIZATION/DEMOBILIZATION		\$156,216	\$0	\$156,216
POST-CLOSURE MONITORING AND MAINTENANCE		\$39,000	\$0	\$39,000
ENGINEERING	5%	\$32,481	\$0	\$32,481
PROJECT MANAGEMENT	5%	\$32,481	\$0	\$32,481
HEALTH AND SAFETY PLANS/MONITORING & QA/QC	1%	\$6,496	\$0	\$6,496
BONDING/INSURANCE	1%	\$6,496	\$0	\$6,496
CONTINGENCY	20%	\$129,925	\$0	\$129,925
MARKET PRICE FACTOR ADJUSTMENT	0%	\$0	\$0	\$0
	SUBTOTAL: Indirect Costs	\$403,095	\$0	\$403,095
TOTAL COSTS		\$1,052,718	\$0	\$1,052,718

ATTACHMENT A

Security Estimate - Reclaim Model v.7.0 - Meliadine Type B Water
Licence for Pre-development Works

Underground Mine Name	Tiriganiaq		UG Mine # 1					
ACTIVITY/MATERIAL	Notes	Unit	Qty	Code	Unit Cost	Cost Land	Cost	Water Cost
CONTROL ACCESS								
Fence		m		#N/A	\$0.00	\$0	\$0	\$0
Signs		each	1	SH	\$37.08	\$37	\$0	\$37
Block roads		m3		#N/A	\$0.00	\$0	\$0	\$0
Berm		m3		RB1H	\$17.05	\$0	\$0	\$0
Concrete wall in portals		m3		#N/A	\$0.00	\$0	\$0	\$0
Cap bulkhead, pit portal		each		MBK	\$79,590.60	\$0	\$0	\$0
Backfill portal #1		m3		#N/A	\$0.00	\$0	\$0	\$0
Backfill portal #2		m3		#N/A	\$0.00	\$0	\$0	\$0
Cap portal / raises and/or stopes		each	1	MBK	\$79,590.60	\$79,591	\$0	\$79,591
Cap raise # 1		m3		#N/A	\$0.00	\$0	\$0	\$0
Cap raise #2		m3		#N/A	\$0.00	\$0	\$0	\$0
Cap shaft #1		m3		#N/A	\$0.00	\$0	\$0	\$0
Cap shaft #2		m3		#N/A	\$0.00	\$0	\$0	\$0
Backfill adits		m3		#N/A	\$0.00	\$0	\$0	\$0
Backfill open stope		m3		#N/A	\$0.00	\$0	\$0	\$0
Concrete cap over open stope		m3		#N/A	\$0.00	\$0	\$0	\$0
Contour portal area		m3	6,864	SB1H	\$5.90	\$40,495	\$0	\$40,495
Other				#N/A	\$0.00	\$0	\$0	\$0
REMOVE HAZARDOUS MATERIALS								
Remove hazardous materials, U/G labor		hrs		SCOOP	\$170.00	\$0	\$0	\$0
Remove/decontam. stationary & elect. equip		mandays		#N/A	\$0.00	\$0	\$0	\$0
Remove/decontam. mobile equipment		each		#N/A	\$0.00	\$0	\$0	\$0
Remove misc. haz. mat & explosives		kg		#N/A	\$0.00	\$0	\$0	\$0
Other				#N/A	\$0.00	\$0	\$0	\$0
INSTALL BULKHEADS								
Bulkheads to control water flow		each		#N/A	\$0.00	\$0	\$0	\$0
Grout bulkhead		m3		#N/A	\$0.00	\$0	\$0	\$0
FLOOD MINE								
Supply/install pump		each		#N/A	\$0.00	\$0	\$0	\$0
Supply/install piping system		each		#N/A	\$0.00	\$0	\$0	\$0
Operate pumps to flood workings		m3		#N/A	\$0.00	\$0	\$0	\$0
Other				#N/A	\$0.00	\$0	\$0	\$0
INSTALL GROUNDWATER COLLECTION SYSTEM								
Excavate/install sumps		m2		#N/A	\$0.00	\$0	\$0	\$0
Install pumping wells		m3		#N/A	\$0.00	\$0	\$0	\$0
Install pumps/pipelines/power supply		LS		#N/A	\$0.00	\$0	\$0	\$0
SPECIALIZED ITEMS								
Install water quality monitoring pipes		each		#N/A	\$0.00	\$0	\$0	\$0
Install permanent pumping system		each		#N/A	\$0.00	\$0	\$0	\$0
Other				#N/A	\$0.00	\$0	\$0	\$0
Total						\$120,122	\$0	\$120,122
% of Total							0%	100%

Chemicals/Soil Area Name:

Note: The procedures, equipment and packaging for clean up and removal of chemicals or contaminated soils are highly dependent on the nature of the chemicals and their existing state of containment. Government guidelines should be consulted on an individual chemical basis. Any estimate made here should be considered very rough unless specific evaluations have been conducted.

ACTIVITY/MATERIAL	Notes	Units	Quantity	Cost Code	Unit Cost	% Cost Land	Land Cost	Water Cost
HAZARDOUS MATERIALS AUDIT								
Hazardous materials audit		mandays		#N/A	\$0.00	\$0	\$0	\$0
Phase 1 audit		each	0	MBK	\$7,500.00	\$0	\$0	\$0
Phase 2 audit		each	0	MBK	\$50,000.00	\$0	\$0	\$0
BUILDING DECONTAMINATION & CONSOLIDATION OF HAZARDOUS MATERIALS								
Environmental technician/coordinator		mandays		#N/A	\$0.00	\$0	\$0	\$0
Decontaminate: oil, fuel		mandays		#N/A	\$0.00	\$0	\$0	\$0
Decontaminate maintenance shop		mandays		#N/A	\$0.00	\$0	\$0	\$0
Decontaminate power plant		mandays		#N/A	\$0.00	\$0	\$0	\$0
Decontaminate bulk fuel storage		mandays		#N/A	\$0.00	\$0	\$0	\$0
Decontaminate ANFO plant		mandays		#N/A	\$0.00	\$0	\$0	\$0
Decontaminate offices/warehouse/accom		mandays		#N/A	\$0.00	\$0	\$0	\$0
Removal of asbestos siding on buildings		m2		#N/A	\$0.00	\$0	\$0	\$0
Removal of friable asbestos on equipment		m2		#N/A	\$0.00	\$0	\$0	\$0
Other				#N/A	\$0.00	\$0	\$0	\$0
HAZARDOUS MATERIALS REMOVAL								
Waste oils		litre		ORL	\$0.43	\$0	\$0	\$0
Waste fuel (Type 1, e.g. diesel dregs)		litre		ORL	\$0.43	\$0	\$0	\$0
Waste batteries		quatrex		EXPLO	\$75.00	\$0	\$0	\$0
mill and water treatment reagents		kg		PCRH	\$2.50	\$0	\$0	\$0
Assay & environmental lab reagents		pallet		LCRH	\$2,606.83	\$0	\$0	\$0
Machine shop paints, solvents etc		litre		EXPLO	\$1.50	\$0	\$0	\$0
Glycol		kg		PCRH	\$2.50	\$0	\$0	\$0
Process reagents		kg		#N/A	\$0.00	\$0	\$0	\$0
Nuclear sources		allow		#N/A	\$0.00	\$0	\$0	\$0
Other hazardous materials		allow		#N/A	\$0.00	\$0	\$0	\$0
HAZARDOUS MATERIALS								
Transportation to disposal facility		allow		#N/A	\$0.00	\$0	\$0	\$0
Disposal fees		allow		#N/A	\$0.00	\$0	\$0	\$0
Other				#N/A	\$0.00	\$0	\$0	\$0
CONTAMINATED SOILS								
Contam. soil investigation - Phase 1		each		#N/A	\$0.00	\$0	\$0	\$0
Contam. soil investigation - Phase 2		each		#N/A	\$0.00	\$0	\$0	\$0
CONTAMINATED SOIL REMOVAL								
Excavate, load, haul to biopile or: Excavate and transport to onsite facility		m3		SC4L	\$9.30	\$0	\$0	\$0
Remediate on-site at biopile or: Manage hydrocarbon remediation at facility		m3		CSRL	\$47.00	\$0	\$0	\$0
Reagents/stabilizing agent		m2		#N/A	\$0.00	\$0	\$0	\$0
Excavate and transport to offsite facility		m3		#N/A	\$0.00	\$0	\$0	\$0
Contour decontaminated area		m3		#N/A	\$0.00	\$0	\$0	\$0
CONTAMINATED SOIL VERY LOW PERMEABILITY COVER								
Supply geomembrane, HDPE, ES3, GCL		m2		#N/A	\$0.00	\$0	\$0	\$0
Upper and lower bedding layers		m3		#N/A	\$0.00	\$0	\$0	\$0
Install geomembrane, HDPE, ES3, GCL		m2		#N/A	\$0.00	\$0	\$0	\$0
Erosion protection layer		m3		#N/A	\$0.00	\$0	\$0	\$0
Vegetate		m2		#N/A	\$0.00	\$0	\$0	\$0
Install infiltration/seepage instrumentation		allow		#N/A	\$0.00	\$0	\$0	\$0
Other				#N/A	\$0.00	\$0	\$0	\$0
OTHER								
				#N/A	\$0.00	\$0	\$0	\$0
Total						\$0	\$0	\$0
% of Total							0%	0%

Building / Equip Name:				Bldg / Equip #: 1					
ACTIVITY/MATERIAL	Notes	Units	Quantity	Cost Code	Unit Cost	% Cost	Land Cost	Water Cost	
DISPOSE MOBILE EQUIPMENT									
Decontaminate and ship off-site		tonne		AEM	\$383.12	\$0	\$0	\$0	
Decontaminate and dispose on-site		tonne		AEM	\$5.00	\$0	\$0	\$0	
Salvage Value		tonne		AEM	-\$383.12	\$0	\$0	\$0	
Other				#N/A	\$0.00	\$0	\$0	\$0	
REMOVE BUILDINGS - see note below									
Accommodation Complex (incl dorms, corridors, kitchen, laundry, dry, rec hall, ERT)		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Exploration camp - existing does not include fuel storage area		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Process Facilities - assumes 5000 TPD plant (including crushing building and crushed ore storage)		m2		BRS1H	\$65.00	\$0	\$0	\$0	
Assay Lab		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Maintenance Shop		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Mine surface general (existing and future office and megadome, and explosive plant)		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Offices, Repair, Lab, Warehouse		m2		#N/A	\$0.00	\$0	\$0	\$0	
Storage Facilities		m2		#N/A	\$0.00	\$0	\$0	\$0	
Water and Wastewater Treatment Facilities		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Power Plant		m2		BRS1H	\$65.00	\$0	\$0	\$0	
U/G Heating Plant		m2		#N/A	\$0.00	\$0	\$0	\$0	
Emulsion Plant		m2		BRS1H	\$65.00	\$0	\$0	\$0	
AN Storage Facility		m2		#N/A	\$0.00	\$0	\$0	\$0	
Warehouse, Shops and Other		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Paste plant		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Storage Facility at Laydown/Airstrip		m2		#N/A	\$0.00	\$0	\$0	\$0	
Incinerator building		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Fuel tanks-on site		m2		BRS1H	\$65.00	\$0	\$0	\$0	
Fuel tanks - Itivia Harbour		m2		BRS1H	\$65.00	\$0	\$0	\$0	
Freshwater intake		m2		#N/A	\$0.00	\$0	\$0	\$0	
Reclaim pumps		m2		#N/A	\$0.00	\$0	\$0	\$0	
Outfall & Diffuser		m2		#N/A	\$0.00	\$0	\$0	\$0	
Airstrip lighting, navigation, electrician		mandays		#N/A	\$0.00	\$0	\$0	\$0	
Airstrip lighting, navigation, mechanical		mandays		#N/A	\$0.00	\$0	\$0	\$0	
Break foundation slabs	total of all buildings	m2		#N/A	\$0.00	\$0	\$0	\$0	
Consolidate & dump boneyard debris		m3		#N/A	\$0.00	\$0	\$0	\$0	
Guard house		m2		BRS1L	\$45.00	\$0	\$0	\$0	
Other				#N/A	\$0.00	\$0	\$0	\$0	
LANDFILL FOR DEMOLITION WASTE									
Place rock cover over operation landfill		m3		AEM	\$8.47	\$0	\$0	\$0	
Place soil cover		m3		#N/A	\$0.00	\$0	\$0	\$0	
Vegetate		ha		#N/A	\$0.00	\$0	\$0	\$0	
Base, sides and cover of closure landfill (for demolition rubbish)		m3			\$29.41	\$0	\$0	\$0	
GRADE AND CONTOUR PADS - see note below									
Accommodation Complex (incl dorms, corridors, kitchen, laundry, offices, dry, rec hall, ERT)		m3	6,146	AEM	\$8.47	\$52,053	\$0	\$52,053	
Exploration camp - existing		m3		AEM	\$8.47	\$0	\$0	\$0	
Process Facilities - assumes 3000 TPD plant (including crushing building and crushed ore storage)		m3	3,573	AEM	\$8.47	\$30,259	\$0	\$30,259	
Assay Lab		m3		AEM	\$8.47	\$0	\$0	\$0	
Maintenance Shop		m3		AEM	\$8.47	\$0	\$0	\$0	
Mine surface general (office and megadome, and explosive plant)		m3		AEM	\$8.47	\$0	\$0	\$0	
Offices, Repair, Lab, Warehouse		ha		#N/A	\$0.00	\$0	\$0	\$0	
Storage Facilities		ha		#N/A	\$0.00	\$0	\$0	\$0	
Water and Wastewater Treatment Facilities		m3		AEM	\$8.47	\$0	\$0	\$0	
Power Plant		m3		AEM	\$8.47	\$0	\$0	\$0	
U/G Heating Plant		ha		#N/A	\$0.00	\$0	\$0	\$0	
Emulsion Plant		m3		AEM	\$8.47	\$0	\$0	\$0	
Warehouse, Shops and Other		m3		AEM	\$8.47	\$0	\$0	\$0	
Paste plant		m3	217	AEM	\$8.47	\$1,835	\$0	\$1,835	
Storage Facilities (Laydown areas)		m3	33,400	MBK	\$5.31	\$177,354	\$0	\$177,354	
Incinerator building		m3		AEM	\$8.47	\$0	\$0	\$0	
Fuel tanks-on site		m3		AEM	\$8.47	\$0	\$0	\$0	
Fuel tanks - Itivia Harbour		m3		AEM	\$8.47	\$0	\$0	\$0	
Guard house		m3		AEM	\$8.47	\$0	\$0	\$0	
Place rock cover		ha		#N/A	\$0.00	\$0	\$0	\$0	
Vegetate		ha		#N/A	\$0.00	\$0	\$0	\$0	
Other				#N/A	\$0.00	\$0	\$0	\$0	
PUNCTURE LINED SUMPS									
Puncture liner and place soil cover		m3		#N/A	\$0.00	\$0	\$0	\$0	
RECLAIM ROADS									
Remove culverts		each	1	MBK	\$10,000.00	\$10,000	\$0	\$10,000	
Remove bridges		each		AEM	\$50,000.00	\$0	\$0	\$0	
Scarify and install water breaks		ha		SCFYH	\$6,030.00	\$0	\$0	\$0	
scarify roads (15m x 40km)		ha	60	SCFYL	\$4,300.00	\$258,000	\$0	\$258,000	
Scarify airstrip		ha		#N/A	\$0.00	\$0	\$0	\$0	
Scarify laydown areas		ha		#N/A	\$0.00	\$0	\$0	\$0	
Vegetate		ha		#N/A	\$0.00	\$0	\$0	\$0	
Other				#N/A	\$0.00	\$0	\$0	\$0	
OBJECTIVE: BUILDING DECONTAMINATION & HAZ. MATERIAL REMOVAL									
Decontaminate, oil, fuel and glycol systems		mandays		AEM	\$1,000.00	\$0	\$0	\$0	
Electrical		mandays		AEM	\$1,000.00	\$0	\$0	\$0	
SPECIALIZED ITEMS									
Dispose of misc. debris and laydown area refuse				#N/A	\$0.00	\$0	\$0	\$0	
Total						\$529,501	\$0	\$529,501	
% of Total							0%	100%	

Note: Unit costs are based on 3m high, single storey building. Scale larger building areas accordingly. E.g. 10m high building multiply area by 3.3 (10/3)

1 Post-Closure Monitoring & Maintenance:

ACTIVITY/MATERIAL	Notes	Units	Quantity	Cost Code	Unit Cost	Cost
MONITORING & INSPECTIONS						
Annual geotechnical inspection		each		VIH	\$7,977.79	\$0
Surface water sampling		each	0.1	WSH	\$10,000.00	\$1,000
Groundwater Sampling		each	0.1	WSH	\$10,000.00	\$1,000
Receiving/downstream water sampling		each	0.1	WSH	\$10,000.00	\$1,000
Monitoring program as per plan		each	0.1	AEM	\$100,000	\$10,000
Survey inspection		each		#N/A	\$0.00	\$0
Regulatory costs*		each		#N/A	\$0.00	\$0
Site water monitoring (AEMP and SNP)		each		#N/A	\$0.00	\$0
- Active closure and flooding		each		#N/A	\$0.00	\$0
- Post pit flooding		each		#N/A	\$0.00	\$0
Air Quality Monitoring Program (AQMP)		each		#N/A	\$0.00	\$0
Wildlife Effects Monitoring Program (WEMP)		each		#N/A	\$0.00	\$0
Vegetation Monitoring		each		#N/A	\$0.00	\$0
Other				#N/A	\$0.00	\$0
COVER MAINTENANCE						
Repair erosion - infill gullies		allow		#N/A	\$0.00	\$0
Repair erosion - upgrade diversion ditches		allow		#N/A	\$0.00	\$0
Remove problem vegetation		allow		#N/A	\$0.00	\$0
Repair animal damage		allow		#N/A	\$0.00	\$0
Repair/upgrade access controls		allow		#N/A	\$0.00	\$0
Other				#N/A	\$0.00	\$0
SPILLWAY MAINTENANCE						
Repair erosion		m3		#N/A	\$0.00	\$0
Clear spillway		each		#N/A	\$0.00	\$0
CWTS MAINTENANCE						
Maintain flow, restore vegetation		allow		#N/A	\$0.00	\$0
POST-CLOSURE WATER TREATMENT						
Subtotal, Annual post-closure costs						\$13,000
Discount rate for calculation of net present value of post-closure cost, %				0.00%		
Number of years of post-closure activity				3 years		
Present Value of payment stream						\$39,000

*Regulatory costs - annual reporting, management plans, progress reports etc.

Mobilization/Demobilization:

ACTIVITY/MATERIAL	Notes	Units	Quantity	Cost Code	Unit Cost	Cost
MOBILIZE HEAVY EQUIPMENT						
Excavators		each		#N/A	0	\$0
Dump trucks		each		#N/A	0	\$0
Dozers		each		#N/A	0	\$0
Demolition shears		each		AEM	\$1,000,000	\$0
Crane		each		#N/A	0	\$0
Loader		each		#N/A	0	\$0
Compactor		each		#N/A	0	\$0
Light duty vehicles		each		#N/A	0	\$0
MOBILIZE MISC. EQUIPMENT						
Pump shipping		each		#N/A	0	\$0
Pipe shipping		m		#N/A	0	\$0
Minor tools and equipment		allow		#N/A	0	\$0
Truck tires		allow		#N/A	0	\$0
Other				#N/A	0	\$0
MOBILIZE CAMP						
Reclamation activities		allow		#N/A	0	\$0
Long term reclamation activities (eg pump flooding)		allow		#N/A	0	\$0
MOBILIZE WORKERS						
rotations over reclamation period		manhours	1,800	AEM	\$75.00	\$135,000
crew transportation		each	6	AEM	\$1,386.00	\$8,316
Reclamation activities - transport		each		#N/A	0	\$0
Reclamation activities - travel time		manhours		#N/A	0	\$0
Long term reclamation activities (eg pump flooding) - transport		each		#N/A	0	\$0
Long term reclamation activities (eg pump flooding) - travel time		each		#N/A	0	\$0
Monitoring Airfare		each		#N/A	0	\$0
WORKER ACCOMODATIONS						
Reclamation activities		manmonths	5.00	ACCM	\$2,580.00	\$12,900
Long term reclamation activities (eg pump flooding)		manmonths		#N/A	\$0.00	\$0
MOBILIZE FUEL						
Fuel freight - reclamation activities		litre		#N/A	0	\$0
Fuel freight - long term reclamation activities		litre		#N/A	0	\$0
Fuel freight accomodations		litre		#N/A	0	\$0
WINTER ROAD						
Construction and operation		km		#N/A	0	\$0
Limited winter use		km		#N/A	0	\$0
Winter road tariff		km		#N/A	0	\$0
DEMOBILIZE HEAVY EQUIPMENT						
Excavators		km		#N/A	0	\$0
Dump trucks		km		#N/A	0	\$0
Dozers		km		#N/A	0	\$0
Demolition shears		km		#N/A	0	\$0
Crane		km		#N/A	0	\$0
Loader		km		#N/A	0	\$0
Compactor		each		#N/A	0	\$0
Light duty vehicles		km		#N/A	0	\$0
Other		km		#N/A	0	\$0
DEMOBILIZE CAMP						
		allow		#N/A	0	\$0
DEMOBILIZE WORKERS						
crew travel time		mandays		#N/A	0	\$0
crew transportation		each		#N/A	0	\$0
WINTER ROAD						
Construction and operation		km		#N/A	0	\$0
Limited winter use		km		#N/A	0	\$0
Winter road tariff		km		#N/A	0	\$0
Total						\$156,216