



July 29th, 2016

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

**Re: Water License 2AM-MEL1631 Part D, Item 1 - Submission of Culverts 3 and 4 Final
Design and Construction Drawings**

Madam, Sir,

As part of its water management strategy and to minimize the potential negative impacts of mining development on the surrounding environment including habitats for fish and wildlife, and to facilitate mine operation and long-term closure and reclamation of the mine site, Agnico Eagle - Meliadine Project is planning on installing two (2) culverts (Culvert3 and Culvert4 as per the 2AM-MEL1631 Water Management Plan) along the service road to the industrial pad. The construction is planned to start August 28, 2016.

The culvert installation will be completed as per best management practices outlined in Water Licence 2AM-MEL1631, the Water Management Plan, and the Roads Management Plan.

In accordance with Water License 2AM-MEL1631, Part D, Items 1 and 2, please find enclosed with this letter, a copy of the final design and construction drawings for the planned culverts.

Should you have any questions regarding this submission, please contact me.

Regards,

Agnico Eagle Mines Limited – Meliadine Division

A handwritten signature in blue ink, appearing to read "Manon Turmel". The signature is stylized with a large, sweeping loop at the end.

Manon Turmel
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Sr Environmental Compliance Tech

cc: *David Abernethy, Indigenous and Northern Affairs Canada*
Luis Manzo, Kivalliq Inuit Association

DESIGN REPORT FOR CULVERTS MELIADINE PROJECT, NUNAVUT



PRESENTED TO
Agnico Eagle Mines Ltd.

JULY 2016
ISSUED FOR USE
TETRA TECH PROJECT NUMBER: 28920
AGNICO EAGLE DOCUMENT NUMBER: 6515-E-132-005-132-REP-002

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1.0 INTRODUCTION

1.1 Site Location and Access

Agnico Eagle Mines Limited (Agnico Eagle) is developing the Meliadine Project (the Project), a gold mine located approximately 25 km north from Rankin Inlet, and 80 km southwest from Chesterfield Inlet in the Kivalliq Region of Nunavut.

The studied area consists of the Meliadine industrial site. More specifically, this study focuses on the 2016 civil construction work zone. The area is accessible from the all-weather gravel road linking the existing exploration camp with Rankin Inlet. The site location is shown in figure 1 on the next page.

1.2 Existing Site Facilities

Current facilities at the Meliadine Project site include the exploration camp located on the shore of Meliadine Lake, approximately 2.3 km east of the Tiriganiaq deposit. The self-contained camp consists of four wings of new trailers that can accommodate up to 200 people and includes new kitchen facilities, complete with diesel generators. Power for the exploration camp is currently provided by diesel generators. Potable water for the exploration camp is pumped from Meliadine Lake.

An underground portal allowing access to an exploration decline was built at the Tiriganiaq deposit in 2007 and 2008 in order to extract a bulk sample for study purposes. A waste rock and ore storage pad was built during excavation of the decline and a sampling tower was installed for processing the bulk sample. There is a 2 km long road between the Project exploration camp and the portal site. Another underground (UG) bulk sample of 4,600 t of ore was taken from the Tiriganiaq deposit via this portal in 2011. The results confirmed the resource estimation model that has been developed for the two principal zones at Tiriganiaq.

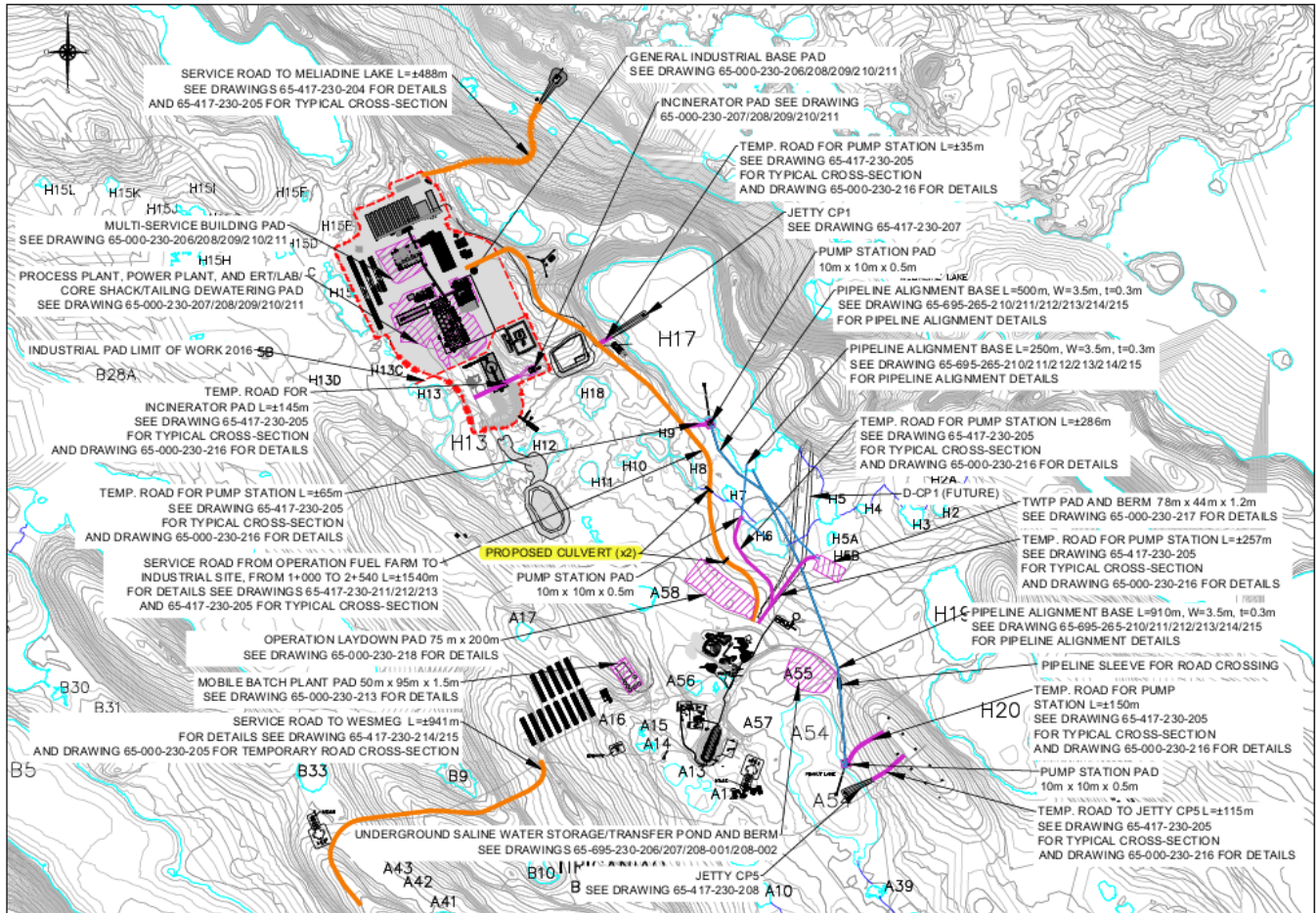
1.3 Scope of Work

Agnico Eagle retained the services of Tetra Tech to carry out the planning and design works associated with the Water and Environment and the Civil Works components of the Project. As part of the scope of work, Agnico Eagle asked Tetra Tech to:

- Conduct a detailed design for the service roads and temporary road part of the 2016 civil work construction schedule including the crossing culverts;
- Produce construction drawings and specification for the roads and culverts;
- Prepare a design report of the culverts.

This report summarizes the site conditions, design basis and considerations of the culverts.

Figure 1 Site Location Plan



2.0 DESIGN

2.1 Culvert Design Basis and water management strategy

The overall objective of the water management strategy of this project is to develop a practical and feasible site wide water management plan to minimize the potential negative impacts of mining development on the surrounding environment including habitats for fish and wildlife, and to facilitate mine operation and long-term closure and reclamation of the mine site. To attain this objective, culverts are used to control and divert runoff underneath the roads.

2.1.1 Erosion control

To control erosion, rip rap will be installed around the culvert inlet and outlet areas. For an example of a rip rap section, see attached the typical culvert cross-section presented in section 2.1.3. During the installation of the culverts, if required, silt curtains will be used in the work area to prevent total suspended solids from reaching downstream water bodies.

2.1.2 Culvert specifications

The culverts that are proposed in this study will be in service for up to 15 years. The standard galvanized, corrugated steel pipe culvert is proposed. It is understood that the haul trucks to be used at the Project site will be CAT AD60 for underground truck and Komatsu HD465 model or equivalent for open pit truck. The culvert pipe originally proposed to handle the runoff calculated were of a diameter of 600 mm with a corrugation profile of 68X13 mm and a minimum specified thickness of 1.3 mm. As a safety measure against possible blockage from frost or ice, these culverts are oversized to a diameter of 900 mm. A minimum of 1 m fill cover will be placed over the culverts.

The location of the proposed culverts are shown in figure 1. A typical culvert cross-section is presented in figure 2.

The table below shows the characteristics of each culvert proposed. Note that some culverts are proposed to be installed in a group of culverts to increase the possible flow at critical points.

Table 1 Culvert specifications

	Culvert	
	North – Service road to industrial pad (Culvert3)	South – Service road to industrial pad (Culvert4)
Number of culverts in group	3	1
Length of each culvert (m)	27.3	23.2
Diameter of each culvert (mm)	900	900

2.1.3 Drawings and Sketches

Figures 2 and 3 in Appendix A present typical sections and details for Culvert3 and Culvert4.

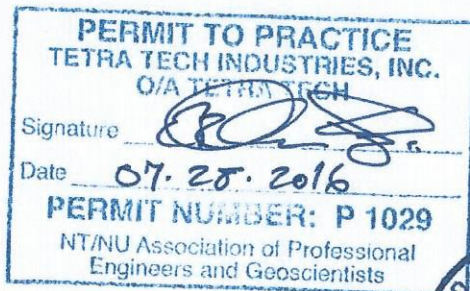
3.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Agnico Eagle Mines Ltd. and their agents. Tetra Tech Inc. (Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Agnico Eagle Mines Ltd., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in Tetra Tech's Services Agreement.

4.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech Industries Inc.



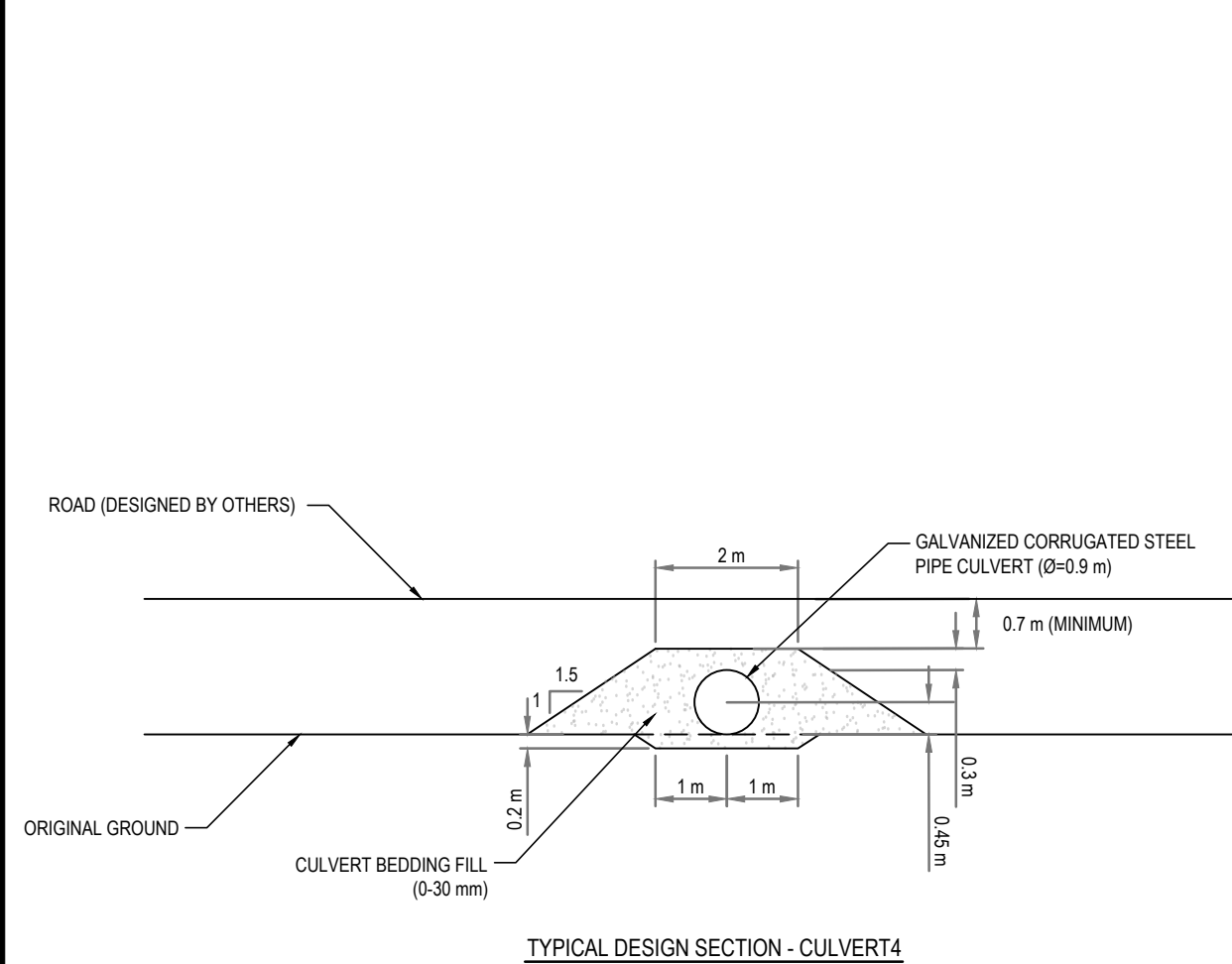
2016/07/28



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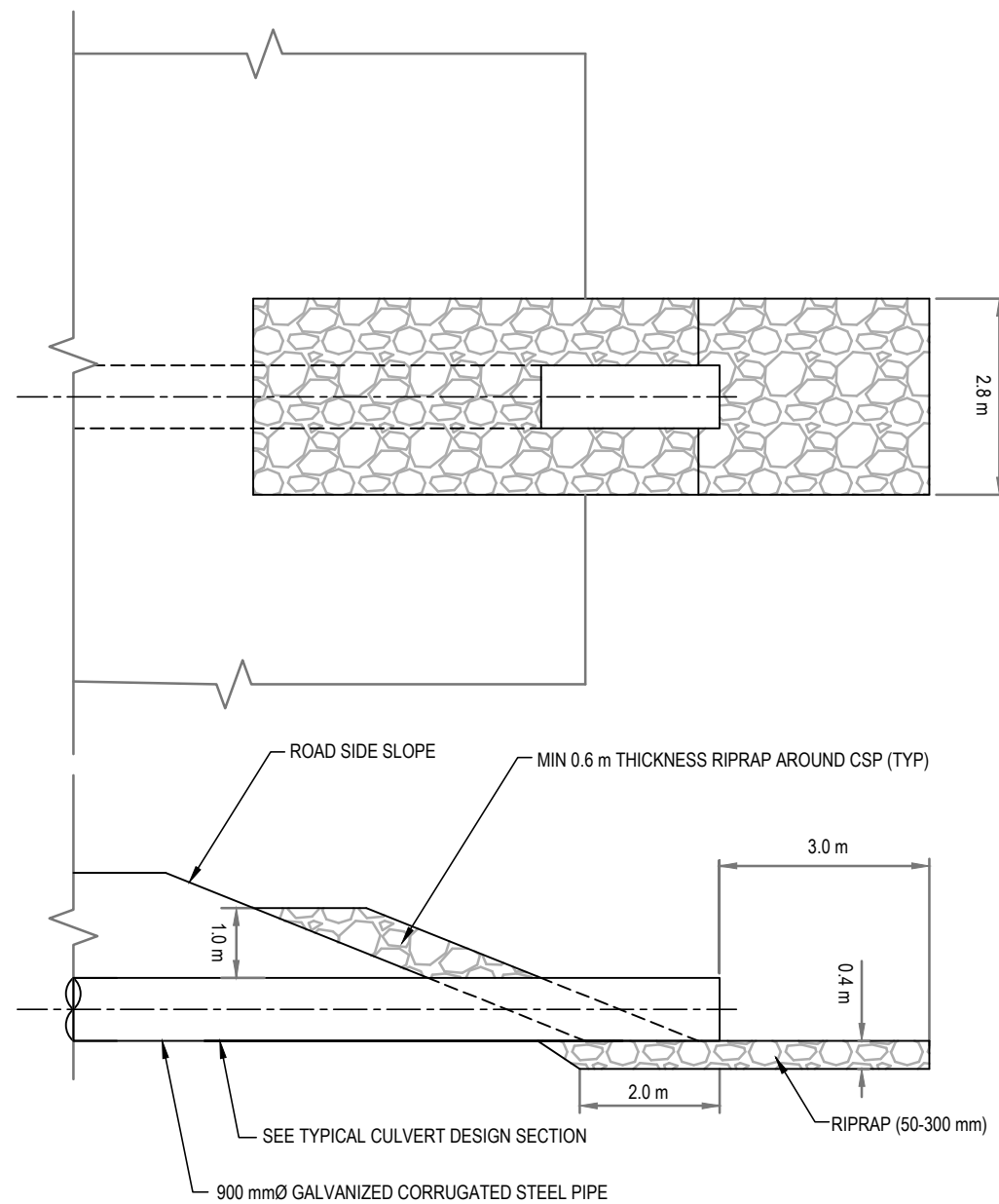
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Appendix A



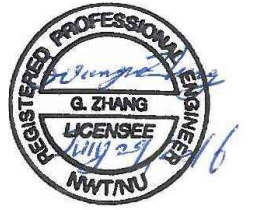
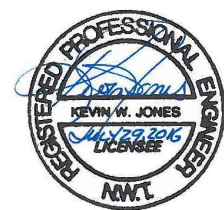
GALVANIZED CORRUGATED STEEL PIPE SPECIFICATIONS

NOTE: Ø=0.9 m WITH A CORRIGATED PROFILE OF 68 X 13 mm AND A MINIMUM SPECIFIED THICKNESS OF 1.3 mm.



TYPICAL CULVERT RIP RAP DETAIL FOR BOTH INLET AND OUTLET

NOTES:



PERMIT TO PRACTICE
TETRA TECH EBA INC.

Signature _____

Date _____

PERMIT NUMBER: P 018

NT/NU Association of Professional
Engineers and Geoscientists

**AGNICO EAGLE**

TETRA TECH EBA

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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

0	ISSUED FOR CONSTRUCTION	07-29-2016	KJ
REV	DESCRIPTION	DATE	PAR RY

REVISIONS

DESSINÉ PAR DRAWN BY	EP	DATE	07-29-2016
VÉRIFIÉ PAR CHECKED BY	GZ		07-29-2016
APPROUVÉ PAR APPROVED BY			

No. PROJCT
PROJECT NO. 6515

DATE _____

TITRE / TITLE	AGNICO EAGLE – MELIADINE GOLD PROJECT
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FIGURE 3
TYPICAL SECTION AND DETAILS FOR CULVERT4

ÉCHELLE/ SCALE		FICHER FILE .DWG	
No. DESSIN/ DRAWING NO.		REVISION 0	FEUILLE/SHT 2 / 2