



August 11th, 2016

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

Re: Water License 2AM-MEL1631 Part D, Items 1&2 - Submission of Final Design and Construction Drawings for the Chemical Treatment Unit

Madam, Sir,

To facilitate infrastructure construction and surface contact water management, Agnico Eagle will dewater pond H17 as per the Water Management Plan (June 2015) and water licence 2AM-MEL1631. It is planned that the top 0.5 to 1.0 m of freshwater in pond H17 will be pumped to a physical filtration device (geotubes) to then be discharged into Meliadine Lake based on License A and MMER discharge permissible limits. When required, water will be treated through a chemical treatment unit. Agnico Eagle is planning to start using this unit on September 10, 2016 should TSS results during dewatering exceed water licence and MMER criteria.

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 Chemical Treatment Unit.

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

Regards,

Agnico Eagle Mines Limited – Meliadine Division

A blue ink signature of Manon Turmel, consisting of a stylized 'M' and 'T' with a horizontal line extending to the right.

Manon Turmel
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819-759-3555 x8025
Sr Environmental Compliance Tech

A blue ink signature of Jamie Quesnel, featuring a stylized 'J' and 'Q' with a horizontal line extending to the right.

Jamie Quesnel
jamie.quesnel@agnicoeagle.com
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Environmental Superintendent - Nunavut

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



CHEMICAL TREATMENT FOR LAKE DEWATERING TO ENVIRONMENT MELIADINE PROJECT, NUNAVUT



PRESENTED TO
Agnico Eagle Mines Ltd.

AUGUST 2016

ISSUED FOR USE

TETRA TECH PROJECT NUMBER: 711-E14103230

ASDR PROJECT NUMBER TE-1640

AGNICO EAGLE DOCUMENT NUMBER: 6515-C-265-017-132-REP-001

[Tetra Tech Industries Inc.](#) 5100, Sherbrooke street east, suite 400 Montreal, QC H1V 3R9, CANADA [Tel](#) 514.257.1112 [Fax](#) 514.257.0717

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 Site Location and Access.....	1
1.2 Existing Site Facilities	1
1.3 Scope of Work	1
2.0 DESIGN.....	3
2.1 Water management strategy	3
2.2 Chemical treatment unit	3
2.3 Drawings and Sketches	3
3.0 LIMITATIONS OF REPORT.....	3
4.0 CLOSURE	4

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 dewatering of Lakes H17. 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.

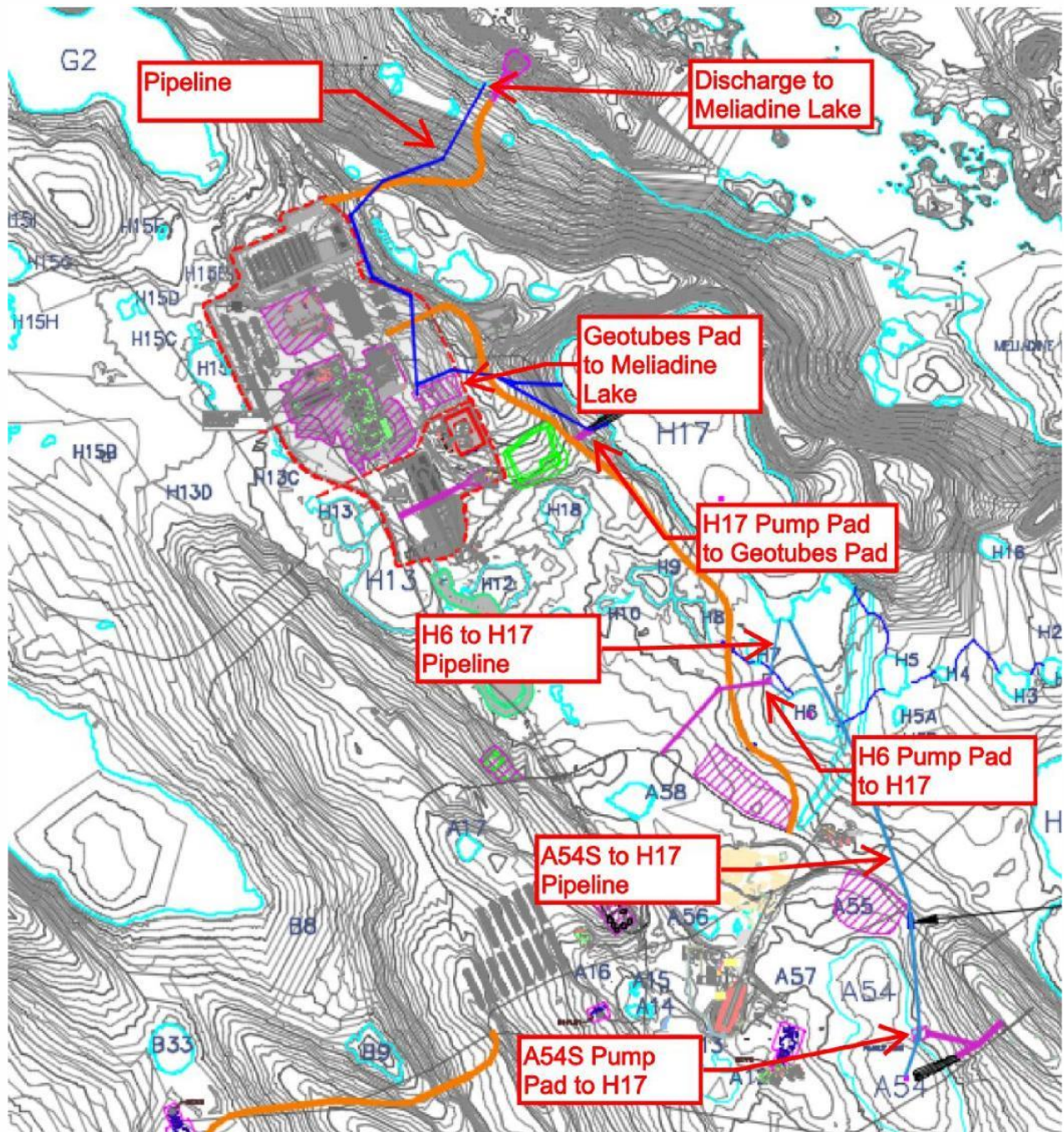
An underground portal allowing access to an exploration decline was built at the Tiriganiaq deposit in 2007 and 2008 in order to extract a bulk sample for study purposes. A waste rock and ore storage pad was built during excavation of the decline and a sampling tower was installed for processing the 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.

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 Management components of the Project. As part of the scope of work, Agnico Eagle asked ASDR to:

- Detail the chemical treatment philosophy of their technology that will be used to comply with discharge criteria; and,
- Produce a Piping and Instrumentation Diagram (P&ID) for the chemical treatment process.

Figure 1 Site Location Plan



2.0 DESIGN

2.1 Water management strategy

To facilitate infrastructure construction and surface contact water management, H17 pond will be dewatered under the water management plan. It is planned that the top 0.5 to 1.0 m of freshwater in Pond H17 will be pumped to a physical filtration device (geotubes) to then be discharged into Meliadine Lake based on License A and MMER discharge permissible limits. When required, water will be treated through a chemical treatment unit that is described in the following section.

2.2 Chemical treatment unit

Based on preliminary data, the main parameter that could require chemical treatment is Total Suspended Solids (TSS). Therefore, ASDR proposed a chemical treatment philosophy is designed to remove TSS through a coagulating / flocculation method.

The processing sequence for TSS treatment is the following: Coagulation (ferric sulfate/ $\text{Fe}_2(\text{SO}_4)_3$ 12%)-balancing pH (caustic soda/ NaOH 50%) – flocculation (cationic polymer 0.4%)-geotubes (Suspended solids catchment).

2.3 Drawings and Sketches

See attachments.

3.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Agnico Eagle Mines Ltd. and their agents. ASDR is the solely responsible for its technology, site installation, operation, quality of treated water and all hazards to the environment, equipment and manpower. 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,



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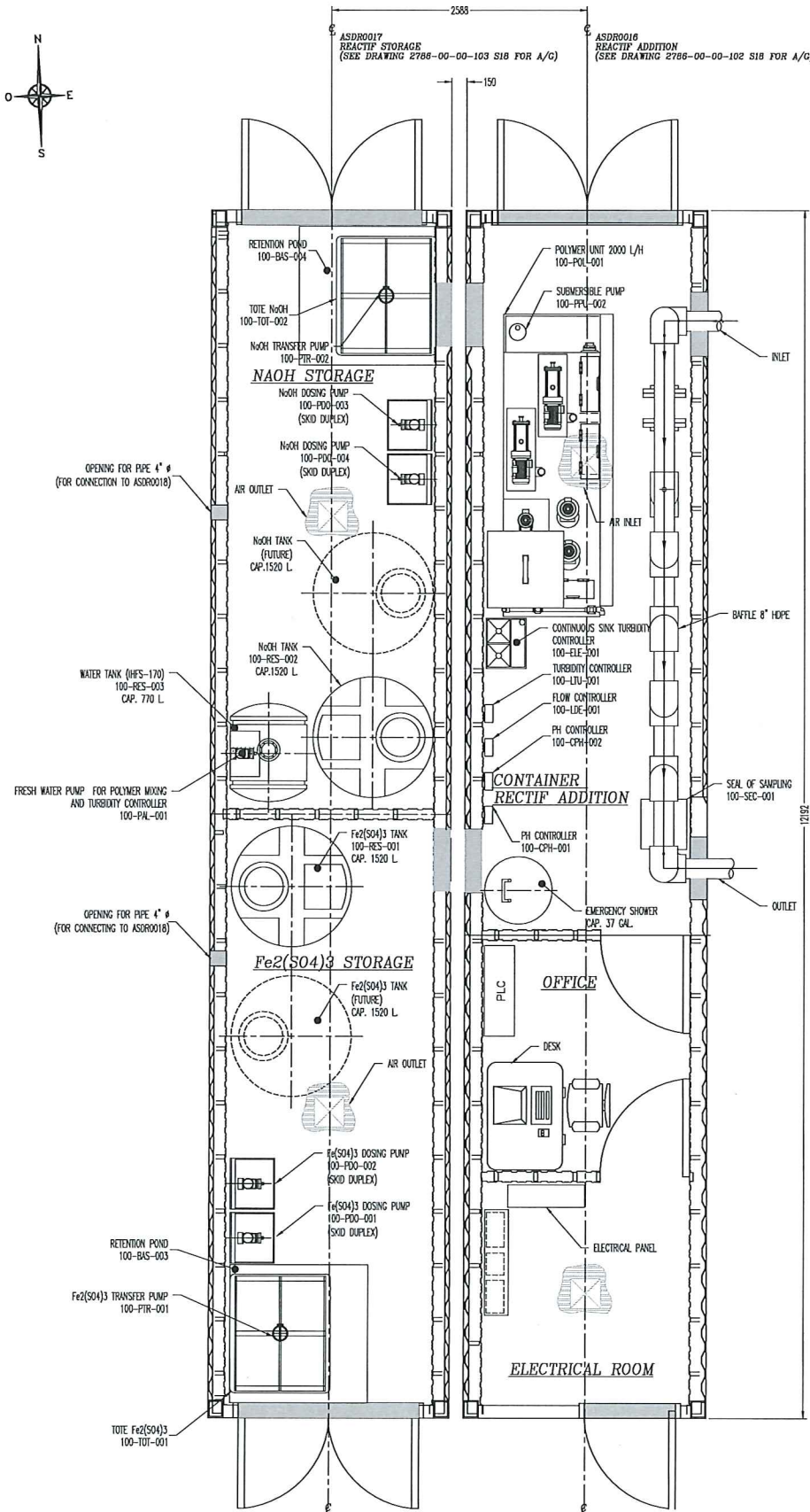
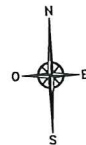


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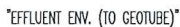
The logo for ASDR, featuring a stylized blue flame or drop icon to the left of the letters "ASDR" in a bold, sans-serif font.The logo for Tetra Tech, consisting of a blue square with the letters "Tt" in white, followed by the words "TETRA TECH" in a bold, sans-serif font.



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C	2015-08-05	FOR PERMIT	M.O	A.G	
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A	2013-02-26	#MIS POUR COMMENTAIRES	C.C.	C.B.	
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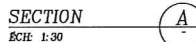
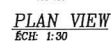


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VERDURE PAR COCHET ET	DORCEY BOISSONNEAULT, T.P.	2013-03-08
APPROUVE PAR APPROVE ET	CARL DUFOUR, INC.	2013-03-08

No. PROJET CLIENT/CLIENT PROJECT No.	ENV-1332-S18
CHARGÉ DE PROJET/PROJECT MANAGER	DAN MISIANO

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DRAWING PAR DRAFT BY	CORINA GARCÍA LA SIENNA	DATE 2013-03-06
VEHICLE PAR DESIGN BY	DORCEY BOISSONNEAULT, T.P.	DATE 2013-03-06
APPROVED PAR APPROVED BY	CARL DUFOUR, INC.	DATE 2013-03-06

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