MELIADINE GOLD PROJECT

Water Management Plan

JUNE 2016

VERSION 2

6513-MPS-11

EXECUTIVE SUMMARY (INUKTITUT)

ᐊᓃᑯᒃᑯᑦ ᑕᓯᕐᔪᐊᕐᒥᑦ ᒨᓗᒧᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᓕᕆᕙᓪᓕᐊᔪᑦ (ᐱᓕᕆᐊᖅ), 25 ᑭᓛᒥᑕᒥᒃ ᐅᐊᖕᓇᖕᒐᓂᑦ ᐅᖕᒐᓯᒃᑎᒋᔪᖅ ᑲᖏᕐᓱᓂᕐᒥᑦ, ᐊᒻᒪ 80 ᑭᓛᒥᑕᒥᒃ ᓂᒋᖅᐸᓯᐊᓂᑦ ᐱᖕᒐᖕᓇᖅᐸᓯᐊᓂᑦ ᐅᖕᒐᓯᒃᑎᒋᔪᖅ ᐃᒡᓗᓕᒫᕐᔪᐊᖕᒥᑦ ᑭᕙᓪᓕᕐᒥᑦ ᓄᓇᕗᒻᒥᑦ. ᐅᔭᕋᓐᓂᐊᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᐅᒃᑯᐃᖕᒐᓗᒍ ᒪᓂᖅᑲᒥᑦ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᓐᓂᐊᕐᓂᖅᑲᕐᓂᐊᖅᑐᑦ ᐱᕙᓪᓕᐊᓂᕐᒧᑦ ᑎᕆᒐᓂᐊᖅ-ᒥᑦ ᒨᓗ, ᒪᕐᕉᒃ ᐅᒃᑯᐃᖕᒐᔪᑦ (ᑎᕆᒐᓂᐊᖅ Pit 1 ᐊᒻᒪ ᑎᕆᒐᓂᐊᖅ Pit 2) ᐊᒻᒪ ᐊᑕᐅᓯᖅ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᓐᓂᐊᕐᓂᖅ.

ᓯᑕᒪᐅᓕᖕᒐᔪᖅ ᐱᕙᓪᓕᐊᓂᖕᒐ ᑎᕆᒐᓂᐊᑉ: ᓯᑕᒪᐃᑦ ᐅᑭᐅᑦ ᐅᖕᒐᑎᐊᕐᔪᐊᓄᑦ ᓴᓇᔭᐅᓂᖕᒐ (Q4 ᐅᑭᐅᖅ -5-ᒥᑦ ᐅᑭᐅᖅ -1-ᒧᑦ), 8-ᓄᑦ ᐅᑭᐅᓄᑦ ᐅᔭᕋᓐᓂᐊᕐᕕᒃ ᐊᐅᓛᕐᓗᓂ (ᐅᑭᐅᖅ 1-ᒥᑦ ᐅᑭᐅᖅ 8-ᒧᑦ), ᐱᖕᒐᓱᑦ ᐅᑭᐅᓂᒃ ᐅᒃᑯᐊᖅᐸᓪᓕᐊᓗᒍ (ᐅᑭᐅᖅ 9-ᒥᑦ ᐅᑭᐅᖅ 11-ᒧᑦ), ᐊᒻᒪ ᐅᒃᑯᐊᖅᓯᒪᓕᖅᑎᓪᓗᒍ (ᐅᑭᐅᖅ 11-ᒥᑦ ᐅᖕᒐᑖᓄᑦ). 12.1 ᒥᓕᔭᓐ ᑕᓐᓂᒃ ᐅᔭᖅᑲᓂᒃ ᐱᓂᐊᖅᑐᑦ. ᐅᔭᖅᑲᐃᑦ ᐱᔭᐅᔪᑦ ᓯᖃᓪᓕᖅᑎᖅᑕᐅᓂᐊᖅᑐᑦ 8-ᓄᑦ ᐅᑭᐅᓪᓗᐊᓄᑦ ᐅᔭᕋᓐᓂᐊᕐᓂᐅᑉ ᐊᐅᓛᕐᓂᕆᔭᖕᒐᓂᑦ 3,000 ᑕᓐᓂᒃ ᐅᑉᓗᑕᒦᑦ (tpd) ᐅᑭᐅᖅ 1-ᒥᑦ ᐅᑭᐅᖅ 3-ᒧᑦ ᐊᒻᒪ 5,000 tpd-ᓂᒃ ᐅᑭᐅᖅ 4-ᒥᑦ ᐅᑭᐅᖅ 8-ᒧᑦ.

ᐃᒪᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐱᓕᕆᐊᖑᔪᒪᔪᑦ ᒥᒃᓴᒋᐊᖅᑎᓐᓂᕐᒧᑦ ᐊᒃᑐᖅᓯᓂᐅᔪᖕᓇᖅᑐᑦ ᖃᑉᓯᐅᓂᖏᓐᓄᑦ ᐊᒻᒪ ᖃᓄᐃᓂᕆᔭᖕᒐᓄᑦ ᐃᒪᐅᑉ ᐅᔭᕋᓐᓂᐊᕐᕕᐅᑉ ᐃᓂᖕᒐᓂᑦ. ᐃᒪᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑐᑦ (ᐃᒪᕐᒥᒃ ᐸᐸᑎᓂᕐᒧᑦ ᓱᐸᓗᐃᑦ ᐊᒻᒪ ᓴᖑᑎᑦᑎᔾᔪᑏᑦ ᓱᐸᓗᐃᑦ) ᓴᓇᔭᐅᓂᐊᖅᑐᑦ ᓄᖅᑲᖓᑎᓐᓂᕐᒧᑦ ᐊᒻᒪ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐃᒪᕐᒥᒃ ᐱᔭᐅᔪᒥᒃ ᐊᒃᑐᖅᑕᐅᓯᒪᔪᓂᑦ ᐅᔭᕋᓐᓂᐊᕐᓂᕐᒧᑦ. ᐊᖏᓛᖑᔪᖅ ᐃᒪᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑐᖅ ᐃᓚᐅᔪᑦ: ᐊᕐᕕᓂᓛᑦ ᐃᒪᕐᒥᒃ ᑲᑎᑦᑎᕖᑦ, ᑕᓪᓕᒪᐃᑦ ᐃᒪᕐᒥᒃ ᐸᐸᑦᑎᕖᑦ, ᐱᖕᒐᓱᑦ ᐃᒪᕐᒥᒃ ᓴᖑᑎᑎᔪᑦ, 8 ᐃᒪᕐᒥᒃ ᓴᖑᑎᑦᑎᓂᕐᒧᑦ ᓱᐸᓗᐃᑦ, ᐃᒪᓕᕆᕕᒃ (WTP), ᐊᒻᒪ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᓯᑎᔪᑦ ᐱᔭᐅᔪᑦ (TSS) ᐲᔭᐃᕕᒃ.

ᐅᔭᕋᓐᓂᐊᕐᕕᒃ ᓴᓇᔭᐅᑎᓪᓗᒍ ᐊᒻᒪ ᐊᐅᓛᖅᑎᓪᓗᒍ, ᐃᒪᖅ ᐊᑐᖅᑕᐅᔪᖅ ᓄᓇᐅᑉ ᖄᖕᒐᓂᙶᖅᑐᑦ ᓄᖅᑲᖅᑎᑕᐅᓂᐊᖅᑐᑦ, ᓴᖑᑎᑕᐅᓗᑎᒃ ᐊᒻᒪ ᑲᑎᑕᐅᓗᑎᒃ ᖃᐸᓯᐊᕐᔪᖕᓂᑦ ᑲᑎᑦᑎᕕᖕᓂᑦ. ᑲᑎᑕᐅᔪᑦ ᐃᒪᖅ ᐅᔭᕋᓐᓂᐊᕐᕕᐅᑉ ᐃᓂᐊᓂᑦ ᑯᕕᑎᑕᐅᕋᑕᓕᕐᓂᐊᖅᑐᖅ ᐊᒻᒪ ᑐᖅᑯᖅᑕᐅᓗᓂ ᑲᑎᖅᓯᐃᕕᖕᒧᑦ (CP1), ᐃᒪᖅ ᐊᑐᖅᑕᐅᔪᖅ ᐱᓕᕆᐊᖑᓗᓂ WTP-ᒧᑦ ᑯᕕᑎᑕᐆᖅᑎᓐᓇᒍ ᓯᓚᒧᑦ ᐅᕙᓘᓃᑦ ᐊᑐᖅᑕᐅᖅᑎᓐᓇᒍ ᐃᒪᓕᕆᕕᖕᒥᑦ. ᐃᒪᖅ ᐊᑐᖅᑕᐅᔪᖅ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐅᔭᕋᓐᓂᐊᖅᑐᓕᕆᓂᕐᒧᑦ ᑲᑎᑕᐅᓂᐊᖅᑐᖅ ᐱᓕᕆᐊᖑᓗᓂᓗ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ TSS-ᓂᒃ ᐲᔭᐃᕕᖕᒥᑦ. ᐃᓚᖏᑦ ᐱᓕᕆᐊᖑᓯᒪᔪᑦ ᐃᒪᖅ ᓄᓇᐅᑉ ᐃᓗᐊᓂᙶᖅᑐᖅ ᐊᑐᖅᑕᐅᑲᓐᓂᕐᓗᓂ ᓄᓇᐅᑉ ᐃᓗᐊᓂᑦ ᐊᐅᓛᕐᓂᕐᒧᑦ.

ᐅᔭᕋᓐᓂᐊᖅᑐᓕᕆᓂᖅ ᐱᐊᓂᒃᐸᑦ, ᐅᒃᑯᐃᖕᒐᔪᑦ ᓄᓇ ᐃᒻᒥᖅᑕᐅᓂᐊᖅᑐᑦ ᑕᓯᕐᔪᐊᕐᒥᑦ ᐅᑭᐅᓄᑦ ᐱᖕᒐᓱᓄᑦ ᑯᕕᕙᓪᓕᐊᓂᖅᑲᕐᓗᓂ 0.44 m^3/s-ᒥᑦ. ᐊᑯᓂᐅᔪᖅ ᑕᑭᓂᖕᒐᑕ, ᐅᒃᑯᐊᖅᓯᒪᓕᖅᑎᓪᓗᒋᑦ ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᕆᔭᖕᒐ ᑲᑎᖅᓯᐃᕕᖕᓂᑦ ᐊᒻᒪ ᐃᒥᖅᑐᖅᑕᐅᓯᒪᔪᓂᑦ ᐅᒃᑯᐃᖕᒐᔪᓂᑦ ᓄᓇᒥᑦ ᑕᓯᕐᓂᑦ ᓂᕆᐅᒋᔭᐅᔪᖅ ᓈᒻᒪᖕᓂᐊᕐᓂᖕᒐ ᓴᑉᑯᑕᐅᓂᖕᒐᓄᑦ ᓯᓚᒧᑦ.

ᐅᔭᕋᓐᓂᐊᕐᕕᒃ ᐅᒃᑯᐊᖅᐸᓪᓕᐊᑎᓪᓗᒍ, ᐃᒪᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᑦ ᐃᓂᐅᔪᒥᑦ ᐃᓂᖏᓐᓃᓐᓂᐊᖅᑐᑦ ᑭᓯᐊᓂ ᐅᒃᑯᐊᖅᐸᓪᓕᐊᓂᖅ ᐱᐊᓂᒃᐸᑦ ᐊᒻᒪ ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᖅ ᓇᓗᓇᐃᖅᓯᒃᐸᑦ ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᖕᒐ ᓈᒻᒪᖕᓂᖕᒐᓂᒃ ᐱᓕᕆᐊᖑᙱᓪᓗᓂ ᑯᕕᔭᐅᓂᕐᒧᑦ ᓯᓚᒧᑦ.

EXECUTIVE SUMMARY

Agnico Eagle Mines Limited (Agnico Eagle) is developing the Meliadine Gold Project (the Project), located approximately 25 kilometres (km) north of Rankin Inlet, and 80 km southwest of Chesterfield Inlet in the Kivalliq Region of Nunavut. The mine plan proposes open pit and underground mining methods for the development of the Tiriganiaq gold deposit, with two open pits (Tiriganiaq Pit 1 and Tiriganiaq Pit 2) and one underground mine.

There are four phases to the development of Tiriganiaq: just over 4 years construction (Q4 Year -5 to Year -1), 8 years mine operation (Year 1 to Year 8), 3 years closure (Year 9 to Year 11), and post-closure (Year 11 forwards). Approximately 12.1 million tonnes (Mt) of ore will be produced. The produced ore will be milled over approximately 8 years of mine life at a rate of 3,000 tonnes per day (tpd) in Year 1 to Year 3 and 5,000 tpd in Year 4 to Year 8.

The water management objectives are to minimize potential impacts to the quantity and quality of surface water at the mine site. 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 major water management infrastructure includes: six water collection ponds, five water retention dikes, three water diversion berms, eight water diversion channels, a Water Treatment Plant (WTP), and an underground total suspended solid (TSS) removal plant.

During mine construction and operation, contact water originating from affected areas on surface will be intercepted, diverted and collected within the various collection ponds. The collected water on the mine site will be eventually pumped and stored in the Collection Pond (CP1), where the contact water will be treated by the WTP prior to discharge to the outside environment or used as make-up water by the process plant. Contact water from underground mine will be collected in the sumps and treated by the underground TSS removal plant. Some of treated water from underground will be reused for underground operation.

The long-term, post-closure water quality in the ponds and in the flooded open pit lakes will meet Metal Mining Effluent Regulations limits and Canadian Council of Ministers of the Environment water quality guidelines for the protection of aquatic life (CCME-WQG) or the Site Specific Water Quality Objectives developed for the mine site for aluminum, fluoride, and iron. Arsenic concentrations in the collection ponds (CP4) could slightly exceed the Site Specific Water Quality Objectives post-closure, a criteria which is conservatively protective of the receiving aquatic environment. However, the exceedances are much less than the mixing capacity in the receiving environment. These arsenic concentrations (Golder, 2013) are within the tolerance levels that have been deemed non deleterious by Environment Canada for the Project.

During mine closure, the water management infrastructure on site will remain in place until mine closure activities are completed and monitoring demonstrates that the water quality is acceptable for the discharge to the outside environment without treatment.

TABLE OF CONTENTS

List of Tables in Text

Appendix A • FIGURES

Document Control

Version	Date	Section	Page	Revision	Author
1	April 2015			The Water Management Plan as Supporting Document for Type A Water Licence Application, submitted to Nunavut Water Board for review and approval	Tetra Tech EBA Inc. and Golder Associates Ltd.
2	June 2016	1.1, 1.2, 1.5, 4.4.7 1.3 4.3, 4.5, 6.1, 7.2, 8.4, 9.1, 9.2 Figures 9.1, 9.2, 9.3 Appendices	1-2 3-4, 27-29 20-21, 31-32 41, 43 46, 47-51 52	Update to reflect issuance of the Type A Water Licence. Removal of original Section 1.3 as was specifically linked to the application. Update to comply with Part B Section 13, and Part E Section 10 of the Type A Water Licence 2AM-MEL1631 Update to align with Schedule I, Table 2 Appendices strictly supporting the Water Licence application and unchanged from that submission have been removed from this iteration.	Golder Associates Ltd.

ACRONYMS

Agnico Eagle	Agnico Eagle Mines Limited
CCME	Canadian Council of Ministers of the Environment
CP	Collection Pond
DFO	Department of Fisheries and Oceans Canada
FEIS	Final Environmental Impact Statement
IDF	Inflow Design Flood
IQ	Inuit Qaujimajatuqangit
LSA	Local Study Area
MMER	Metal Mining Effluent Regulations
NLCA	Nunavut Land Claims Agreement
NWB	Nunavut Water Board
NWR	Nunavut Water Regulations
NWNSRTA	Nunavut Waters and Nunavut Surface Rights Tribunal Act
PGA	Peak Ground Acceleration
Project	Meliadine Gold Project
SD	Support Document
SSWQO	Site Specific Water Quality Objectives
STP	Sewage Treatment Plant
TSF	Tailings Storage Facility
TSS	Total Suspended Solids
WRSF	Waste Rock Storage Facility
WSER	Wastewater System Effluent Regulations
WTP	Water Treatment Plant

UNITS

%	percent
°C	degrees Celsius
°C/m	degrees Celsius per metre
ha	hectare
mg/L	milligram per litre
km	kilometer(s)
km^2	kilo square meter(s)
m	metre
m/day	metre per day
mm	millimetre
m^3	cubic metre(s)
m^3/day	cubic metre per day
m^3/s	cubic metre per second
m^3/hour	cubic metre per hour
m^3/year	cubic metre per year
Mm^3/year	million cubic metre (s) per year
Mm^3	million cubic metre(s)
t	tonne
tpd	tonnes per day
Mt	million tonne(s)

SECTION 1 • INTRODUCTION

Agnico Eagle Mines Limited (Agnico Eagle) is developing the Meliadine Gold Project (Project), located approximately 25 kilometres (km) north of Rankin Inlet, and 80 km southwest 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 Lands. The Project is located within the Meliadine Lake watershed of the Wilson Water Management Area (Nunavut Water Regulations Schedule 4).

The mine plan proposes open pit and underground mining methods for the development of the Tiriganiaq gold deposit, with two open pits (Tiriganiaq Pit 1 and Tiriganiaq Pit 2) and one underground mine. The mine will produce approximately 12.1 million tonnes (Mt) of ore, 31.8 Mt of waste rock, 7.4 Mt of overburden waste, and 12.1 Mt of tailings. There are four phases to the development of Tiriganiaq: just over 4 years construction (Q4 Year -5 to Year -1), 8 years mine operation (Year 1 to Year 8), 3 years closure (Year 9 to Year 11), and post-closure (Year 11 forwards).

Mining facilities include a plant site and accommodation buildings, three ore stockpiles, a temporary overburden stockpile, a tailings storage facility (TSF), three waste rock storage facilities (WRSFs), a water management system that includes collection ponds, water diversion channels, and retention dikes/berms, and a Water Treatment Plant (WTP). The general mine site location for the Project and a site layout plan are shown in Figures 1.1 and 1.2, respectively, as attached in Appendix A.

1.1 Concordance

The Project is subject to the land and resource management processes established by the Nunavut Land Claims Agreement (NLCA) and other Federal laws and regulations. Agnico Eagle submitted a Type A Water Licence Application for a Mining and Milling Undertaking (Application) required to use water and to deposit waste in development of the Project, in accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and Nunavut Water Regulations (NWR).

The Type A Water Licence 2AM-MEL1631 was issued on April 1, 2016 and signed by the Minister on May 19, 2016. The Water Management Plan reflects the commitments made with respect to submissions provided during the technical review of the Application, as well as final submissions and issues raised during the Public Hearing Process, where applicable, to comply with Part B Section 13, and Part E Section 10 of the Type A Water Licence 2AM-MEL1631.

1.2 Water Management Plan Summary

This document presents the Water Management Plan (Plan) in compliance with the Type A Water Licence 2AM-MEL1631. The purpose of the Plan is to provide consolidated information on water management, water management infrastructure required, water balance model, water quality predictions, and water quality monitoring plan. The Plan is divided into the following components:

- Introductory section (Section 1);
- A brief summary of the physical setting at the mine site (Section 2);
- A description of the mine development plan (Section 3);
- A description of water management at the mine site during construction and operation (Section 4);
- A summary of the sizing of major water management infrastructure (Section 5);
- A description of water management at the mine site during mine closure (Section 6);
- A presentation of the mine site water balance model and its results (Section 7);
- A presentation of the mine site water quality model and its results (Section 8); and
- A description of the water quality monitoring program (Section 9).

This plan will be updated as required to reflect any changes in operation or economic feasibility occurs, and to incorporate new information and latest technology, where appropriate, to comply with Part B Section 15 of the Type A Water Licence 2AM-MEL1631.

1.3 Overall Schedule and General Activities

The pre-development phase is anticipated to start in the last quarter of Year -5 and construction will take just over 4 years to complete (Q4 Year-5 to Year -1). The mine construction period will primarily focus on site preparation and the construction of infrastructure, with some mining activities (advancement of underground mine ramp) of the Tiriganiaq underground mine. The first year of operation (Year 1) will commence after commissioning is completed in the last quarter of construction (Year -1). The operation phase will span approximately 8 years (Year 1 to Year 8). Mining activities are expected to end in Year 7 and ore processing is expected to end in Year 8. Closure will occur within three years (Year 9 to Year 11) after the completion of mining and will include removal of the non-essential site infrastructure and flooding of the mined-out open pits. Post-closure phase will commence as closure is completed in Year 11 and will continue until it is shown that the site and water quality meets the regulatory closure objectives. Table 1.1 summarizes the overview of the timeline and general activities.

Table 1.1 Overview of Timeline and General Activities

Phase	Year	General Activities
Construction	Last Quarter (Q4) of Yr -5 to Yr -2	• Constructing site infrastructure • Developing ramp to underground mine
	Yr -1	• Constructing site infrastructure • Developing ramp to underground mine • Process commissioning begins in the last quarter of Year -1
Operations	Yr 1	• Mining Tiriganiaq underground • Ore processing (3,000 tonne per day (tpd))
	Yr 2 to Yr 3*	• Mining Tiriganiaq underground/ Tiriganiaq Pit 1 • Ore processing (3,000 tpd)
	Yr 4 to Yr 7	• Mining Tiriganiaq underground/ Tiriganiaq Pit 1/ Tiriganiaq Pit 2

		• Ore processing (5,000 tpd)
	Yr 8	• Ore processing (5,000 tpd) • Mined-out open pits flooding
Closure	Yr 9 to Yr 11	• Removal non-essential site infrastructure • Mined-out open pits flooding
Post-Closure	Yr 11 forwards	• Site and surrounding environment monitoring

* Process plant will be expanded in Year 3 to reach the processing capacity of 5,000 tpd

1.4 Use of Inuit Qaujimajatuqangit in the Water Management Planning

Inuit Qaujimajatuqangit (IQ) is the most successful and oldest monitoring practice in Nunavut, where the resource users do the observing or monitoring. Information collected through IQ can contribute to mine design and planning, as well as monitoring activities. Agnico Eagle is committed to including IQ and public concerns raised through IQ in the design of management and monitoring plans for the Project, where practical. Agnico Eagle will continue active engagement with communities and Inuit organizations as the Project proceeds through permitting, and if approved, construction, operations and closure. Additional IQ collected through consultation and engagement will be included in updates to the design and implementation of environmental programs.

Section 1.5 of the Main Application Document developed for the Type A Water Licence Application (Agnico Eagle 2015a) summarizes IQ and public concerns. A list of public concerns can also be found in the Public Engagement and Consultation Baseline Report, submitted in compliance with the Type A Water Licence 2AM-MEL1631.

This Plan considered IQ (including traditional ecological knowledge, traditional land use) and concerns regarding Project effects on traditional resources and traditional land use sites through the following Project design and mitigation measures:

- The importance of clean water and the health of vegetation, fish, birds, caribou and other wildlife was emphasized by the Elders and other people in the communities who rely on these resources for traditional use. Accordingly, the water management objectives and design were developed to minimize potential impacts to the quantity and quality of water at the mine site and on the aquatic ecosystem as follows:
    - surface contact water, underground water, and non-contact water will be kept separate;
    - the water management design was developed to limited the amount of contact water, where practicable;
    - non-contact water will be diverted away from the mine site; and
    - all contact water originating from affected areas will be diverted, collected, monitored, and treated prior to discharge to the outside environment; and
    - water quality objectives will be met at the edge of the mixing zone in Meliadine Lake to avoid a significant adverse effect on opportunities for traditional and non-traditional use of fish, and health of aquatic life, and human health.

- IQ indicated that the rivers and Meliadine Lake are important fish harvesting sites, and Elders expressed concerns regarding potential adverse effects from the Project on fish populations in waterbodies of the Meliadine watershed. Accordingly, the freshwater intake pipe will be fitted with a stainless steel screen and rockfill causeway to prevent fish from becoming entrained. In addition, dikes and berms will be constructed to protect contact water from potentially contaminating fish habitat and to divert natural water away from possible sources of contamination. Water quality monitoring will be conducted during construction, operation and decommissioning phases to ensure that water quality trends are similar to baseline conditions and so that adaptive management can be conducted should differing trends be observed.

SECTION 2 • PHYSICAL SETTING

2.1 Site Conditions

The Project is located in lowlands near the northwest coast of Hudson Bay. The dominant terrain in the Project area comprises glacial landforms such as drumlins (glacial till), eskers (gravel and sand), and small lakes. The topography is gently rolling with a mean elevation of 65 metres above sea level and a maximum relief of 20 m.

In general, the local overburden stratigraphy in the project area consists of a thin layer of topsoil overlying a layer of silty gravelly sand. Cobbles and boulders are present throughout the entire site and at various depths. Bedrock at the mine site area consists of a stratigraphic sequence of clastic sediments, oxide iron formation, siltstones, graphitic argillite, and mafic volcanic flows (Snowden, 2008; Golder, 2009).

Low-lying areas are poorly drained as a result of a low slope in the landscape, and intermittent streams connect numerous shallow ponds and lakes. The following subsections summarized the physical setting at the mine site.

2.2 Climate

The Project is located in the Kivalliq Region of Nunavut, near the northern border of the southern Arctic terrestrial ecozone, and within the Arctic tundra climate region. Within this region daylight reaches a minimum of 4 hours per day during the winter to a maximum of 20 hours per day during the summer. The climate is extreme with long cold winters and short cool summers. Temperatures are cool, with a mean temperature of 12°C in July and -31°C in January. The mean annual air temperature at the Project site is approximately -10.4 °C (Golder, 2012a).

The recorded prevailing winds are from north and north-northwest. The wind blows from the north and north-northwest direction more than 30% of the time, and the least frequent wind direction is west-southwest, with a frequency of 2.1%. The calm frequency is 2.8% of the time. The mean values for wind speed show that the north-northwest together with north and northwest winds have the highest speeds and tend to be the strongest.

Mean annual precipitation at the mine site, based on the hydrological year from 1 October to 30 September, is estimated to be 411.7 mm after accounting for rainfall and snowfall undercatch. Approximately 51% of precipitation occurs as rain (207.1 mm) and 49% occurs as snow (199.1 mm).

Table 2.1 presents the annual precipitation, evaporation, and temperature characteristics. Detailed climate characteristics at the mine site are described in the FEIS of Support Document (SD) 7-1 Aquatic Baseline Synthesis Report. Table 2.2 presents the estimated extreme values of annual precipitation for various return periods at the mine site based on the frequency analysis of annual precipitation data. Table 2.3 summarizes the extreme 24-hour rainfall events derived for the mine site based on intensity-duration-frequency curves established from the regional Rankin Inlet rainfall observations.

Table 2.1 Estimated Mine Site Monthly Climate Characteristics

Month[a]	Monthly Air Temperature (°C)			Monthly Precipitation (mm)			Lake Evaporation (mm)
	Minimum	Average	Maximum	Rainfall[b]	Snowfall[c]	Total[d]	
January	-37.2	-30.9	-19.8	0.0	12.9	11.1	0
February	-35.3	-30.1	-24	0.0	13.1	11.1	0
March	-30.8	-25.1	-18.8	0.0	18.6	16.1	0
April	-20.2	-15.7	-10.4	1.4	28.8	26.4	0
May	-10.8	-5.9	-1.2	7.7	19.2	25.2	0
June	0.1	4.1	6.7	26.4	7.1	37.0	60.4
July	6.9	10.5	14.9	43.7	0.2	51.2	124.4
August	7.7	9.7	11.2	63.7	0.3	74.6	95.6
September	1.3	3.8	6.8	45.2	5.7	57.8	42.7
October	-9.9	-4.6	1.7	15.5	36.9	50.0	0
November	-23.6	-17.2	-10.2	0.3	33.3	28.5	0
December	-33.3	-25.9	-19.4	0.0	18.9	15.8	0
Annual	-37.2	-10.4	14.9	203.9	195.0	404.8	323.1

[a] Climate characteristics obtained from SD-7-1 Aquatics Synthesis Baseline of the FEIS.
[b] Rainfall was adjusted to account for under catch by 13%.
[c] Snowfall was adjusted to account for under catch by 50%.
[d] Total precipitation was adjusted to account for under catch by 32%.

Table 2.2 Estimated Mine Site Extreme Annual Precipitation

Type of Year[a]	Return Period (years)	Annual Rainfall (mm)[b]	Annual Snowfall (mm)[c]	Annual Total Precipitation (mm)[d]
Wet	100	324	489	594
	50	310	414	573
	25	289	331	541
	10	271	278	513
	5	249	233	479
Median	2	207	179	412
Dry	5	165	151	345
	10	144	143	310
	25	126	138	280
	50	106	134	247
	100	93	133	225

[a] Precipitation extreme obtained from SD 7-1 Aquatics Synthesis Baseline of the FEIS .
[b] Rainfall was adjusted to account for under catch by 13%.
[c] Snowfall was adjusted to account for under catch by 50%.
[d] Total precipitation was adjusted to account for under catch by 32%.

Table 2.3 Estimated Mine Site Extreme 24-hour Rainfall Events

Return Period (Years)	24-hour Precipitation (mm)
2	33
5	44
10	50
25	57
50	61
100	65

2.3 Permafrost

The mine site is located in an area of continuous permafrost, as shown on Figure 2.1 as attached in Appendix A.

Late-winter ice thicknesses on freshwater lakes in the mine site area were recorded from 1998 to 2000. The measured data indicated that ice thickness ranges from 1.0 to 2.3 m with an average thickness of 1.7 m. Ice covers usually appear by the end of October and are completely formed in early November. The spring ice melt typically begins in mid-June and is complete by early July (Golder, 2012b).

Published data regarding permafrost were used to recreate the permafrost map of Canada shown in Figure 2.1. Based on thermal studies and measurements of ground temperatures, the depth of permafrost at the mine site is estimated to be in the order of 360 to 495 m. The depth of the active layer ranges from about 1 m in areas with shallow overburden, up to about 3 m adjacent to the lakes. The depth of the permafrost and active layer will vary based on proximity to the lakes, overburden thickness, vegetation, climate conditions, and slope direction (Golder, 2012b). The typical permafrost ground temperatures at the depths of zero annual amplitude (typically at the depth of below 15 m) are in the range of -5.0 to -7.5 °C in the areas away from lakes and streams. The geothermal gradient ranges from 0.012 to 0.02 °C/m (Golder, 2012c).

2.4 Taliks

Taliks (areas of unfrozen ground) are to be expected where lake depths are greater than about 1.0 to 2.3 m. Formation of an open-talik, which penetrates through the permafrost, would be expected for lakes that exceed a critical depth and size. It is anticipated that an open-talik exists below Lake B7 based on the depth and geometry of this lake (Golder, 2012b). The salinity of groundwater also influences the temperature at which the groundwater will freeze. The test results on two deep groundwater samples collected below the base of the permafrost for baseline study indicated salinity level leads to a freezing point depression of about 3.2 °C (Agnico Eagle 2014,Volume 7, Appendix 7.2-A).

2.5 Climate Change

Long-term climate trends were assessed as part of the Project based on two selected stations (Baker Lake and Rankin Inlet stations), and the assessment included estimating changes in air temperature and precipitation from observed historical values for two typical time horizons: 2041 to 2070 (the 2050s) and 2071 to 2100 (the 2080s) (FEIS Volume 5, Section 5.4). The average projected climate trend deviations from the observed historical values from Baker Lake station are provided in Table 2.4. Conclusions on trend deviation for air temperature and precipitations are as follows:

- The climate in the Project region is projected to be warmer for the 2050s and 2080s time horizons when compared to the observed historical values.
- Precipitation shows a larger amount compared to historical values; however, the majority of projections are within the annual recorded precipitation values.

The climate change assessment for the Project indicates that a warming climate can increase the thickness of the active layer. Overall, warming could cause thawing of ice-rich permafrost, potentially resulting in thaw lakes and subsidence of the land surface (FEIS Volume 5, Section 5.4).

Table 2.4 Average Projected Climate Trend Deviations from Observed Historical Values

Station and Period			Air Temperature (°C)	Precipitation (mm equiv.)
Baker Lake	**2050s**	Annual	+3 to 3.5	+30 to 50
		Spring	+3 to 3.5	+5 to 10
		Summer	+2 to 2.5	+10 to 15
		Fall	+3 to 3.5	+15 to 20
		Winter	+4.5 to 5	+0 to 5
	2080s	Annual	+4.5 to 5	+35 to 55
		Spring	+4 to 4.5	+5 to 10
		Summer	+2 to 2.5	+10 to 15
		Fall	+5 to 5.5	+15 to 20
		Winter	+7 to 7.5	+5 to 10

Data in this table obtained from FEIS Volume 5, Section 5.4.

2.6 Hydrology

Hydrology characteristics near the mine site are detailed in FEIS Volume 7, Section 7.3, and are summarized herein.

2.6.1 General Settings

The mine site of the Project is located within the Meliadine Lake watershed. Meliadine Lake has a water surface area of approximately 107 square kilometres (km^2), a maximum length of 31 km, features a highly convoluted shoreline of 465 km in length, and has over 200 islands. Unlike most lakes, it has 2 outflows that drain into Hudson Bay through 2 separate river systems. It has a drainage area of 560 km^2 upstream of its 2 outflows. Most drainage occurs via the Meliadine River, which originates at the south west end of the lake. The Meliadine River flows for a total stream distance of 39 km. The Meliadine River flows through a series of waterbodies, until it reaches Little Meliadine Lake and then continues into Hudson Bay. A second, smaller outflow from the west basin of Meliadine Lake drains into Peter Lake, which discharges into Hudson Bay through the Diana River system (a stream distance of 70 km). At its mouth, the Diana River has a drainage area of 1460 km^2.

Watersheds near the mine site comprise an extensive network of waterbodies, and interconnecting streams. The hydrology of these watersheds is dominated by lake storage and evaporation.

Based on bathymetric surveys, the lakes on the peninsula of Meliadine Lake range from 1.3 ha to 90.5 ha in surface area and are shallow. Only four lakes have maximum depths of 4.0 m or greater. The surveyed ponds on the peninsula ranged from 0.1 to 18.8 ha in surface area. They are shallow, with maximum depths of less than 1.0 m in 62% of the surveyed ponds.

2.6.2 Stream Geomorphology

Waterbodies comprise more than 30% of the landscape within the Local Study Area (LSA) and are typically connected by short outlet channels, which have low slopes at the headwaters, but are steep relative to land slopes at the lower end of the watershed. Channels are typically only slightly entrenched, have high bankfull width-to-depth ratios (greater than 12) and moderate sinuosity (S) (greater than 1.2). Most lake outlet channels in the LSA could be described predominantly as C2 channels by the Rosgen Level II classification system (Rosgen 1994).

The beds of larger channels are typically armoured with inerodible boulder and cobble layers. Channels may include flat and steep reaches as governed by the local topography. Channel banks typically consist of vegetated mats of organic material, below which are found organics and fine soils within a matrix of cobble and boulders similar to the bed materials. Mid-channel islands were observed to also consist of a veneer of vegetated organic material resting on a bouldery substrate. Erosion resistance of channel banks is also likely enhanced by frozen conditions during spring snowmelt peak discharges, as has been observed in other northern areas (Scott 1978). However, during unfrozen conditions after spring runoff, these banks may be sensitive to changes in flow regime.

2.6.3 Ice and Winter Flows

Observed ice thicknesses near the mine site have been observer to vary between 1.0 m and 2.3 m prior to the spring melt. With the exception of the main outlet of Meliadine Lake, all lake outlets examined have been completely frozen over the winter, with no measurable flow.

2.6.4 Spring Melt and Freeze-up Conditions

With the exception of the main outlet of Meliadine Lake, which has been observed to flow continuously throughout the year, outlets of waterbodies near the mine site typically start flowing late May or early June, followed by freshet flows in mid- to late-June. Flows steadily decrease in July and low flows are ongoing from August to the end of October, prior to freeze-up.

2.6.5 Mean Water Balance

A mean annual water balance for natural conditions a typical watershed in the near the mine site (Lake B7) was developed based on a hydrological year basis to provide a basic characterization for mean conditions (Table 2.5). The total evaporative loss from lake and land surface (lake evaporation and land evapotranspiration) equals 106.4 mm, or 34%, of the net precipitation input. When combined with sublimation (61.1 mm), the total loss equals 167.5 mm or 41% of the total precipitation. The surface runoff amount represents 51% of the total precipitation, or 66% of the net precipitation, which is the precipitation remaining after snow sublimation loss.

Table 2.5 Representative Watershed (Lake B7) Mean Annual Water Balance for Natural Conditions

Component	Magnitude (mm)	Comment
Total Precipitation	411.7	Mean annual value, adjusted for undercatch
Rainfall	207.1	Mean annual value, adjusted for undercatch
Snowfall as SWE	204.6	Mean annual value
Spring SWE	107.4	Mean annual value, accounting for 47.5% loss due to sublimation (97.2 mm)
Net Precipitation Input	314.5	Rainfall + spring SWE
Surface Runoff (at Lake B7)	208.1	Mean annual value
Lake Evaporation at 323 mm	78.8	24.4% of Watershed B7 is lake surface
Evapotranspiration at 36.5 mm	27.6	75.6 % of Watershed B7 is land surface
Net Watershed Output	314.5	Surface runoff + lake evaporation + evapotranspiration

Note: SWE = snow water equivalent.

2.7 Groundwater

Groundwater characteristics at the mine site are detailed in FEIS Volume 7, Section 7.2 Hydrogeology and Groundwater, and are briefly summarized herein.

Two groundwater flow regimes in areas of continuous permafrost are generally present:

- a deep groundwater flow regime beneath the base of the permafrost; and
- a shallow flow regime located in an active (seasonally thawed) layer near the ground surface.

From late spring to early autumn, when temperatures are above 0˚C, the active layer thaws out. Within the active layer, the water table is expected to be a subdued replica of topography, and is expected to parallel the topographic surface. Project area groundwater in the active layer flows to local depressions and ponds that drain to larger lakes at velocities estimated to range from about 0.0025 m to 0.02 m/day.

Taliks exist beneath waterbodies that have sufficient depth such that they do not freeze to the bottom over the winter. Beneath small waterbodies that do not freeze to the bottom over the winter, a talik bulb that is not connected to the deep groundwater flow regime will form (a closed talik). When the size of a waterbody is above a critical value, the talik beneath the waterbody will be an open talik, which connects to the deep groundwater flow regime beneath the permafrost. Elongated waterbodies with terraces (where the depth is within the range of winter ice thickness), a central pool(s) (where the depth is greater than the range of winter ice thickness), and a width of 340 to 460 m or greater are expected to have open taliks extending to the deep groundwater flow regime at the Project site. A review of bathymetric data, ice thickness data, and results of thermal modelling suggests that near the Tiriganiaq deposit, Meliadine Lake, Lake B7 is likely to have open taliks connected to the deep groundwater flow regime (Golder, 2012a). However, no impact is expected to Lake B7 by mine activities.

Tiriganiaq underground mine is planned to extend to approximately 625 below the ground surface and therefore, part of the underground mine will be operated below the base of the continuous permafrost. The underground excavations will act as a sink for groundwater flow during operation, with water induced to flow through the bedrock to the underground mine workings once the mine has advanced below the base of the permafrost. The adopted assumptions on groundwater contribution of underground mine water management is described in Section 4 of this Plan.

Both Tiriganiaq Pit 1 and Tiriganiaq Pit 2 will be mined within the permafrost, therefore, groundwater inflow to the open pits is expected to be negligible and were not considered in the water management plan.

2.7 Seismic Zone

The mine site is situated in an area of low seismic risk. The peak ground acceleration (PGA) for the area was estimated using seismic hazard calculator from the 2010 National Building Code of Canada website (http://www.earthquakescanada.nrcan.gc.ca/hazard-alea/interpolat/index_2010-eng.php). The estimated PGA is 0.019 g for a 5% in 50-year probability of exceedance (0.001 per annum or 1 in 1,000 year return) and 0.036 g for a 2% in 50-year probability of exceedance (0.000404 per annum or 1 in 2,475 year return) for the area.

SECTION 3 • MINING PLAN

This section describes a summary of the mine development plan and key mine development activities, including mine waste management. The water management during construction and operation is described in Section 4. Section 5 details the infrastructure required for mine site water management and Section 6 summarizes the water management plan during mine closure.

3.1 Mine Development Plan

Tiriganiaq deposits will be mined using traditional open pit and underground mining methods. Two open pits (Tiriganiaq Pit 1 and Tiriganiaq Pit 2) and one underground mine (Tiriganiaq Underground) will be developed. The following mining development sequence and schedule are planned:

- Tiriganiaq underground mine will be developed and operated from Year -5 to Year 7;
- Tiriganiaq Pit 1 will be mined from Year 2 to Year 7; and
- Tiriganiaq Pit 2 will be mined from Year 4 to Year 7.

Three mine waste streams will be produced at the mine site, including waste rock, tailings, and overburden material. Approximately 31.8 Mt of waste rock and 7.4 Mt of overburden will be generated on site. About 12.1 Mt of tailings will be produced during the 8 years of mill operations.

The mine development will include the following major infrastructure;

- industrial area (camp and process plant);
- ore stockpiles (OP1 to OP3);
- waste rock storage facilities (WRSF1 to WRSF3);
- a tailings storage facility;
- landfarm and landfill;
- haul and access roads; and
- open pits and underground mine workings.

In addition, the mine development will include construction of the following water management facilities;

- six water collection ponds (CP1 to CP6);
- eight water diversion channels (Channels 1 to 8);
- five water retention dikes (D-CP1, D-CP3 to DCP6);
- three water retention berms (Berms 1 to 3);
- a freshwater intake causeway and pump system;
- a Water Treatment Plant (WTP) and associated intake causeway;
- an underground total suspended solids (TSS) removal plant;
- a Sewage Treatment Plant (STP);
- pipeline and associated pump system;
- a potable water treatment plant; and

- a discharge diffuser located in Meliadine Lake.

3.2 Mine Development Sequence and Key Activities

The development sequence for the mine infrastructure and water management infrastructure is summarized in Table 3.1 and presented in Figures 3.1 to 3.15, as attached in Appendix A.

Table 3.1 Mine Development Sequence and Key Activities

Mine Year	Figure	Mine Development Sequence and Key Activities
Last Quarter (Q4) of Yr -5	3.1	• Start to construct the industrial pad • Develop the ramp to Tiriganiaq underground mine • Construct portion of rock pad for OP1 and OP2 stockpiles to store the ore from Tiriganiaq underground ramp development • Install Culvert2 • Construct Channel2
Yr -4	3.2	• Continue construction of the industrial pad and start to construct the associated buildings
Yr -3	3.3	• Construct D-CP1 to impound CP1 and start to collect contact water within CP1 • Complete the industrial pad • Construct D-CP5 to impound CP5 and start to collect contact water • Construct and operate the landfill and landfarm
Yr -2	3.4	• Expand the pad footprint of OP1 and OP2 to increase the storage capacity • Construct freshwater intake causeway in Meliadine Lake • Start to place waste rock in WRSF1 • Construct Berm1, Channel1, Channel6, Channel7, and Channel8 • Install Culvert3 to Culvert6 • Build WTP and water intake causeway and start to treat the contact water in CP1 • Construct discharge diffuser in Meliadine Lake • Construct Berm3 and Channel5 • Install Culvert1
Yr -1	3.5	• Complete the construction of the buildings over the industrial pad • Start process commissioning in Q4 of Year -1 • Start to place dry stack tailings into Cell 1 of TSF in Q4 of Year -1
Yr 1	3.6	• Start full capacity of ore processing • Construct Berm2, Channel3, and Channel4 • Construct D-CP3 to form CP3 and start to collect contact water • Construct D-CP4 to form CP4 and start to collect contact water
Yr 2	3.7	• Start to mine Tiriganiaq Pit 1 • Start to place overburden and waste rock from Tiriganiaq Pit 1 in WRSF1
Yr 3	3.8	• Expand process plant to reach the processing capacity of 5,000 tpd • Construct temporary overburden stockpile to store the selected ice-poor overburden that will be used for progressive reclamation of TSF

Table 3.1 Mine Development Sequence and Key Activities

Mine Year	Figure	Mine Development Sequence and Key Activities
Yr 4	3.9	• Increased mill productions to 5,000 tpd • Start to mine Tiriganiaq Pit 2 • Start to place overburden and waste rock form Tiriganiaq Pit 2 in WRSF3 • Construct D-CP6 to form CP6 and start to collect contact water • Start to place dry stack tailings in Cell 2 of TSF • Start to place the low grade ore from the open pits in OP1 stockpile • Construct rock pad for OP3 to store marginal grade ore from the open pits • Stop placing rock and overburden in WRSF1 when WRSF1 reaches design capacity
Yr 5	3.10	• Start to place waste rock form Tiriganiaq Pit 1 in WRSF2 • Place final closure cover on top of tailings surface in Cell 1 of TSF (waste rock cover over final Cell 1 perimeter slope to be placed as progressive reclamation as soon as slope reaches final grade)
Yr 6	3.11	• Start to place dry stack tailings in Cell 3 of TSF • Stop placing overburden waste in WRSF3
Yr 7	3.12	• Place final closure cover on top of tailings surface in Cell 2 of TSF (waste rock cover over final Cell 2 perimeter slope to be placed as for progressive reclamation as soon as slope reaches final grade) • Stop mining of Tiriganiaq Pit 1 and Tiriganiaq Pit 2 when the open pits reach design elevation • Stop Tiriganiaq underground operation when underground mine reaches design elevation • Stop placing waste rock and overburden in WRSF2 when WRSF2 reaches design capacity • Stop placing waste rock in WRSF3 when WRSF3 reaches design capacity
Yr 8	3.13	• Process the ore from the OP1, OP2, and OP3 until all stored ore were processed • Decommission of underground mine surface openings as needed
Closure (Yr 9 to Yr 11)	3.14	• Place final closure cover on top of tailing surface in Cell 3 of TSF in Year 9 (waste rock cover over final Cell 3 perimeter slope to be placed as progressive reclamation - as soon as slope reaches final grade) • Decommission non-essential mine infrastructure and support buildings in Years 9 and 10 • Continue to fill the mined-out open pits with active pumping water from Meliadine Lake until Year 10 • Start monitoring and maintenance in Year 9 (start in Year 8, if possible)
Post-Closure	3.15	• Continue monitoring and maintenance until Year 18

3.3 Summary of Mine Waste Management

This section describes a summary of the mine waste management plan. More detailed information on mine waste management is presented in the Ore Storage Management Plan (Agnico Eagle 2015b) and Mine Waste Management Plan (Agnico Eagle 2016). The water management associated with the mine waste management is described in Section 4 of this document. Table 3.2 presents a summary of the total tonnage of mine waste materials and their usage or destination.

Table 3.2 Summary of Mine Waste Tonnage and Destination

Mine Waste Stream	Estimated Quantities		Waste Destination
Overburden	7.4 Mt		Temporary storage in the Overburden Stockpile ~ 0.1 Mt for reclamation of the TSF
			Closure and site reclamation for the TSF
			Co-disposed with waste rock within WRSFs
Waste Rock	31.8 Mt		Dike and road construction
			WRSFs
			Closure and site reclamation for the TSF
Tailings	12.1 Mt	9.7 Mt	As dry stack tailings placed in the TSF
		2.4 Mt	Backfilled to underground mine as cemented paste backfill

3.3.1 Waste Rock Management

Three areas were identified as the WRSFs to store waste rock and overburden material, as shown in Figure 1.2 attached in Appendix A. These selected areas can be described as follows:

- WRSF1: located north of Tiriganiaq Pit 1 with an approximate footprint of 41.4 hectare (ha) and design capacity of 9.4 Mm^3.
- WRSF2: located south of Pond H17 (CP1) with an approximate footprint of 20.2 ha and design capacity of 3.6 Mm^3.
- WRSF3: located north of Tiriganiaq Pit 2, covered Pond H20 basin with an approximate footprint of 22.7 ha and design capacity of 5.0 Mm^3.

A brief summary of each WRSF is presented in the following subsection. Further details on the management of the WRSFs can be found in the Mine Waste Management Plan.

3.3.1.1 Waste Rock Storage Facility 1

The WRSF1 will occupy an area of approximately 41.4 ha and will be located to the north of Tiriganiaq Pit 1. Two small shallow ponds (Ponds A17 and B9) are located within the footprint of WRSF1 and will be covered by the facility as shown in Figure 4.1. The ponds are less than 2 m deep and freeze to the bottom annually during the winter season. They are considered as non-commercial, recreational, or aboriginal fishery.

The WRSF1 will accommodate waste rock produced from Tiriganiaq underground mining and Tiriganiaq Pit 1 and the overburden produced from Tiriganiaq Pit 1. It is anticipated that approximately 10.2 Mt (5.42 Mm^3) of waste rock and 6.5 Mt (4.02 Mm^3) of overburden will be placed in WRSF1. WRSF1 is expected to reach its design capacity by end of Year 4.

3.3.1.2 Waste Rock Storage Facility 2

The WRSF2 is located to the south of Pond H17 (CP1) with an approximate footprint of 20.2 ha. Five small ponds (Ponds A58, H8, H9, H10, and H11) are located within the footprint of WRSF2 as shown in Figure 4.1. Pond A58 will be fully covered and the other four ponds will be partially covered by waste rock. All five ponds are less than 2.0 m deep and freeze to the bottom during the winter. Of the five ponds impacted by WRSF2, only nine spine stickleback were caught in Ponds A58 and H10. These five ponds are not considered as commercial, recreational, or aboriginal fishery.

The WRSF2 will accommodate the majority of waste rock produced from Tiriganiaq Pit 1 from Year 5 to Year 7. The WRSF2 is expected to reach its design capacity by the end of Year 7.

3.3.1.3 Waste Rock Storage Facility 3

The WRSF3 is located to the north of Tiriganiaq Pit 2, covered basin of Pond H20 with an approximate footprint of 22.7 ha as shown in Figure 4.1. The runoff water from WRSF3 will be collected within Pond H19. Maximum water depths for Ponds H19 and H20 are 1.4 m and 1.6 m respectively. No fish species were found in these two ponds.

The WRSF3 will accommodate overburden from pre-stripping of Tiriganiaq Pit 2 and all waste rock produced from Tiriganiaq Pit 2 with some portions of waste rock from Tiriganiaq Pit 1 in Year 4 and Year 5. The WRSF3 is expected to reach its design capacity by end of Year 7.

3.3.2 Tailings Management

An area, located on high ground west of the mill and east of Lake B7 as shown in Figure 1.2, has been identified as the TSF for dry stack tailings. The direct distance from the mill to the TSF ranges from 300 to 900 m. The minimum setback distance from the nearest dry stack tailings pile to the edge of Lake B7 is approximately 200 m. The dry stacked tailings will be dewatered to a solid content of 85% by mass in the mill. Thereafter the tailings will be hauled from the mill to the TSF by truck; end dumped, spread, and compacted.

Approximately 12.1 Mt of tailings will be produced over an eight year period. Approximately 9.7 Mt or 80% of the tailings will be deposited within the TSF and the remaining 2.4 Mt or 20% will be used as underground paste backfill.

The dry stack tailings will be managed using a three cell system within the TSF to limit dust generation, control tailings surface erosion, and to facilitate the progressive reclamation and closure of the TSF. As the tailings reach final elevation, it is proposed that the tailings are progressively encapsulated or capped with either waste rock or a layered combination of waste rock and overburden. Further details on tailing management plan are described in the Mine Waste Management Plan.

3.3.3 Overburden Management

Approximately 7.4 Mt of overburden material will be removed from the surface footprint of the two open pits over the mine life. The produced overburden material will be mainly stored in the WRSFs together with waste rock. An estimated 26,000 tonnes of overburden will be used for site infrastructure construction. About 0.1 Mt of selected ice-poor overburden will be stored in a temporary overburden stockpile for later use as closure cover material for the TSF. The temporary overburden stockpile is located at the east side of the TSF with a footprint of 1.12 ha, as shown in Figure 1.2. Further details on the management of the overburden are described in the Mine Waste Management Plan.

3.3.4 Ore Stockpile Management

Approximately 12.1 Mt of ore will be mined; this will comprise approximately 3.6 Mt from the open pits and approximately 8.5 Mt from underground operations. Three grades of ore (high grade, low grade, and marginal grade) will be produced. The ore will be milled in the process plant during eight years mine operation at a feed rate of 3,000 tpd from Year 1 to Year 3 and 5,000 tpd from Year 4 to Year 8.

Three areas have been identified for ore storage, as shown in Figure 1.2, and can be described as follows:

- Ore Stockpile 1 - near the crusher, will be used to store the high grade ore from the underground mine between Year -5 and Year 3, and the storage of low grade ore from the open pits between Year 4 and Year 7;
- Ore Stockpile 2 - adjacent to Ore Stockpile 1, will be used to store the marginal ore from the underground mine between Year -5 and Year 6; and
- Ore Stockpile 3 - north of Ore Stockpiles 1 and 2, will be used to store the marginal ore from the open pits between Year 4 and Year 7.

Further details on the management of the ore stockpiles are described in the Ore Storage Management Plan (Agnico Eagle 2015b).

SECTION 4 • WATER MANAGEMENT DURING CONSTRUCTION AND OPERATION

Water management on site plays a key role in minimizing the impact of the mine activities on the surrounding environment. Five types of water were identified on site listed as follows:

- Contact water: Water that has been in contact with any infrastructure and facilities on site;
- Process water: Water used for processing ore and water in the tailings;
- Underground mine water: water pumped from the underground mine (including groundwater inflow and water used for underground mine operation);
- Non-contact water: Runoff water that has not been in contact with mining infrastructure and facilities on site; and
- Fresh water: Water pumped from Meliadine Lake.

This section describes how the water will be managed on site during construction and operation phases. Section 5 described the design of infrastructure required for water management. Water management strategy during mine closure is described in Section 6.

4.1 Water Management Objectives and Strategies

The goal of water management is to minimize the impact of the mine activities on the aquatic ecosystem surrounding the mining area. The key objectives for water management are:

- Keep the different water types separated as much as possible;
- Reduce contact water (i.e., water in contact with mine development) for management, monitoring, and treatment (if required) to the extent practical;
- Divert non-contact water from undisturbed lands away from the mine site infrastructure to the extent practical; and
- Minimize fresh water usage by recycling and reusing the contact and process water to the extent practical.

To achieve the above water management objectives, the following key strategies were implemented to develop the water management plan:

- Two levels of catchment disturbance have been defined for the area, namely undisturbed and disturbed. Areas that have been disturbed as part of the mine development are considered disturbed catchments, while the areas left unaffected are considered undisturbed catchments.
- For the purpose of mine water management, runoff from undisturbed areas is considered non-contact water, while runoff from disturbed catchment areas is considered contact water. Surface water that is diverted around the mine facilities or groundwater that does not emerge into a mine facility is considered non-contact water. Any non-contact water that mixes with contact water becomes contact water.

- Conveyance and storage of contact water will be controlled by channels and containment structures (i.e., sumps and ponds). Contact water will be diverted and collected in various water collection ponds.
- The collected water will be treated if the water quality does not meet the discharge criteria established in the water licence.
- The treated water will be reused as much as possible to minimize the freshwater requirements. The excess treated water will be discharged into Meliadine Lake through a submerged diffuser.
- Non-contact water will be intercepted and directed away from disturbed areas by means of natural catchment boundaries or man-made diversion structures and will be allowed to flow to the neighbouring waterbodies.

4.2 Water Management Systems

The water management systems, as shown in Figure 1.2, for the water management plan include the following components:

- six water collection ponds (CP1 to CP6);
- five water retention dikes (D-CP1, D-CP3, D-CP4, D-CP5, and D-CP6);
- three water diversion/collection berms (Berm1 to Berm3);
- eight water diversion channels (Channel1 to Channel8);
- six water passage culverts to convey water through a pad and various haul roads (Culvert1 to Culvert6);
- a water treatment plant (WTP) and associated intake causeway;
- an underground TSS removal plant;
- a sewage treatment plant (STP);
- network of surface pumps and pipelines;
- a freshwater intake causeway;
- a potable water treatment plant; and
- a discharge diffuser located in Meliadine Lake

4.3 Waterbody Inventory

Four watersheds (Watershed A, Watershed B, Watershed H, and Watershed G) will be impacted by mining activities. Table 4.1 presents the waterbodies that are impacted by mining activities within the four watersheds. Watersheds and waterbodies in proximity to the mine site location and waterbodies affected by site infrastructure are shown in Figure 4.1.

Within the water management footprint, bathymetrical data from baseline study of FEIS is available for Ponds H17, H20, A54, B9, and B10. No bathymetrical data for the rest of the ponds presented in Table 4.1 is available, but these ponds are small and shallow (with water depth approximately 1.4 m or less). It was assumed that only Ponds A54, H17, H19, and H20 will be dewatered to facilitate infrastructure construction and mine waste management. Ponds H10, H11, H12, and H13 will be drained due to construction of Channel1. Ponds A12 and A13 will be drained due to the construction of Channel5. The rest of the ponds listed in the Table 4.1 may be dewatered as required, or the water will be displaced by placing fill material or the ice will be removed and deposited to CP1 during winter season. More information on the pond dewatering or draining is presented in Section 4.4.

Table 4.1 Inventory of Waterbodies Impacted by Mining Activities

Watershed	Waterbody	Maximum Lake Water Depth, m	Total Area (ha)	Water Volume (m^3)	Notes
A	A9	N/A	0.18	-	Flow regimes impacted by the development of Tiriganiaq Pit 1
	A10	0.67	0.26	-	Ponds removed by development of Tiriganiaq Pit 1
	A11	0.45	0.40	-	
	A12	0.87	0.47	-	Pond drained due to construction of Channel 5
	A13	0.30	0.26	-	
	A17	0.30	0.16	-	Covered by WRSF 1
	A38	N/A	0.05	-	Flow regimes impacted by the development of Tiriganiaq Pit 2
	A39	0.48	0.12	-	Ponds removed by development of Tiriganiaq Pit 2
	A54	1.3	5.99	34,545	Dewatered for CP5
	A58	0.50	0.43	-	Covered by WRSF 2
B	B8	0.8	1.43	-	As part of CP4/D-CP4
	B9	1.40	0.64	-	Covered by WRSF1
	B10	0.8	0.33	-	Ponds removed by development of Tiriganiaq Pit 1
	B28	N/A	0.45	-	As part of CP3/D-CP3
H	H6	0.58	0.75	-	As part of CP1
	H7	0.67	0.11	-	
	H8	0.59	0.38	-	Partially covered by WRSF2 and haul road
	H9	0.40	0.42	-	Partially covered by WRSF2 and OP2
	H10	0.11	0.10	-	Partially covered by WRSF2 and OP2, drained due to construction of Channel1
	H11	0.27	0.28	-	
	H12	0.81	0.97	-	Drained due to construction of Channel1 and partially covered by OP1
	H13	1.04	3.49	-	Drained due to construction of Channel1 and partially covered by industrial pad
	H14A	0.37	0.15	-	Covered by industrial pad
	H15D	0.30	0.15	-	Partially covered by TSF
	H15G	0.40	0.38	-	

Table 4.1 Inventory of Waterbodies Impacted by Mining Activities

Watershed	Waterbody	Maximum Lake Water Depth, m	Total Area (ha)	Water Volume (m^3)	Notes
	H17	1.70	15.8	195,700	Dewatered for CP1
	H18	0.67	0.74	-	Covered by OP2
	H19	1.40	2.91	16,431	Dewatered for CP6
	H20	1.60	9.58	90,307	Covered by WRSF3
G	-	-	-	-	Runoff diverted by Channel2. No pond will be impacted
"-" indicates that data not available or not applicable		Ponds to be drained		Ponds to be dewatered	

4.4 Water Management Plan during Construction and Operation

4.4.1 Pond Dewatering and Draining

To facilitate infrastructure construction and mine waste management, four ponds (A54, H17, H20, and H19) will be dewatered under the water management plan. Pond H17 will be dewatered in Year -4 to facilitate Dike D-CP1 construction in the open water season. It is planned that the top 0.5 to 1.0 m of freshwater in Pond H17 will be pumped to Pond H5 (which drains to Meliadine Lake) if it meets discharge criteria. Pond A54 will be dewatered during open water season of Year -4 to facilitate Dike D-CP5 construction. Ponds H19 and H20 will be dewatered in the open water season of Year 3 to form CP6 and facilitate placing waste rock in WRSF3. Table 4.2 summarizes the dewatering plan and estimated volume of water to be dewatered. For the dewatering Ponds A54, H19, and H20, it is assumed that approximately half volume of water in these ponds will be pumped to Meliadine Lake if it meets discharge criteria, and the remaining half volume of water will be pumped to CP1 for treatment.

Table 4.2 Pond Dewatering under Water Management Plan

Pond	A54	H17	H20	H19
Maximum Pond Water Depth (m)	1.3	1.7	1.6	1.4
Existing Pond Surface Area (ha)	5.99	15.4	9.58	2.91
Dewatering Schedule	Sept. to Oct. of Year -4	August to September of Year -4	Sept. to Oct. of Year 3	Sept. to Oct. of Year 3
Estimated Total Volume of Water to be Dewatered (m^3)	34,545	82,400	90,307	16,431
*Once obtaining the Type A Water License, Pond H17 will be dewatered if the pond is in open water condition, otherwise, Pond H17 will not be dewatered.				

Channel1 will be constructed through and will drain Ponds H10, H11, H12, and H13. The water in these ponds will flow into CP1 via Channel1.

Channel5 will be constructed through and will drain Ponds A12 and A13. The water in these ponds will flow into CP5 via Channel5

The balance of the water ponds (i.e. excluding the ponds to be dewatered or to be drained by construction of channels) listed in Table 4.1 may be dewatered during the open water season or the pond water may be displaced by the placement of fills. If dewatering is required, the water will be pumped to CP1. The water displaced by the placement of fill material will be diverted to and collected in the adjacent water collection ponds. During winter season, the ice within the ponds will be removed and deposited into CP1 before the construction of site infrastructure.

4.4.1 Key Water Management Activities during Construction and Operation

The construction activities required for the water management plan is presented in Table 3.1 and Table 4.1 provide an inventory of waterbodies impacted by mining activities. These tables should be read in conjunction with the below Table 4.3 which presents the yearly major water management activities during construction and operation. Water management activities during closure are described in Section 6.

Table 4.3 Major Water Management Activities during Construction and Operation

Mine Year	Figure	Major Water Management Activities and Sequence
Q4 of Yr -5	3.1	• Start to re-use the underground water
Yr -4	3.2	• Dewatering top 0.5 to 1.0 m of fresh water in Pond H17 for discharge downstream to Pond H5; the remainder of the water pumped to a temporary mobile TSS treatment plant prior to discharge to Pond H5. • Dewater Pond A54 in Q3 of Year -4 and pump the water to CP1. • Start to store the excess groundwater from the underground mine at surface.
Yr -3	3.3	• Start to pump the water from CP1 to WTP for treatment prior to discharge to the outside environment via the diffuser in Meliadine Lake • Pump the underflow sludge water from the WTP to CP1. To limit recirculation of the sludge within CP1, the discharge will be located away from the WTP intake • Start to treat sewage water and pump the treated sewage water from sewage treatment plant to CP1 • Start to pump the contact water from CP5 to CP1 for treatment • Start to pump the water from the landfarm to CP1 after pre-treatment for oil
Yr -2	3.4	• Start to divert the contact water from industrial pad to CP1 via Channel1
Yr -1	3.5	• Start to pump the treated water from WTP to mill as make-up water • Start to pump the underflow sludge water from WTP to the mill • During the open water season, the mill will be supplemented as much as possible with water from the WTP. For the balance of the year, fresh water will be used

Table 4.3 Major Water Management Activities during Construction and Operation

Mine Year	Figure	Major Water Management Activities and Sequence
		for ore processing • Start to pump the excess truck wash water from the wash bay into CP1
Yr 1	3.6	• Start to pump the contact water in CP3 to the partially drained Pond H13 where the water will flow through Channel1 into CP1 • Start to pump the contact water in CP4 to the partially drained Pond H13 where the water will flow though Channel1 into CP1
Yr 2	3.7	• Start to pump the contact water collected in Tiriganiaq Pit 1 to CP5
Yr 3	3.8	• Dewater Ponds H19 and H20 in Q3 of Year 3 and pump the water to CP1
Yr 4	3.9	• Start to pump the contact water collected in Tiriganiaq Pit 2 to CP5 • Start to pump the contact water in CP6 to CP1
Yr 5	3.10	• Water management plan similar to Year 4
Yr 6	3.11	• Water management plan similar to Year 4
Yr 7	3.12	• Water management plan similar to Year 4 • Stop pumping water from opens pits when the pits are mined-out at end of year • Stop pumping excess water from underground when underground mine is completed
Yr 8	3.13	• Start to fill the mined-out Tiriganiaq Pit 1 and Tiriganiaq Pit 2 with active pumping water from Meliadine Lake • Start natural flooding of Tiriganiaq Underground mine with groundwater seepage • Stop pumping water to process plant when the processing is completed

A brief summary of the water management plan during construction and operation is presented as follows:

- Contact water from the major mine infrastructure will be diverted and/or collected in the collection ponds (CP1 to CP6).
- Runoff water in the open pits will be collected by the sumps and then pumped to the designated water collection ponds.
- The collected water in CP3 to CP6 will eventually be pumped to CP1. Water collected in CP1 will be reused by the process plant and the excess water will be treated by the WTP prior to discharge to the outside environment via the diffuser into Meliadine Lake.
- Contact water from underground mine will be collected in underground sumps and reused for mining operations. The excess volumes will be pumped to be stored on surface.
- Freshwater usage on site will be supplied from Meliadine Lake.
- Natural flooding to the open pits at end of mining will be supplemented by using freshwater from Meliadine Lake.
- Upon the completion of underground mining, the underground mine working will be allowed to naturally flood by groundwater seepage.

Table 4.4 summarizes the overall contact water management plan for the major mine infrastructure with the initial water collection location and final water destination. The detailed water management plan for major mine infrastructure areas is described in the following subsections.

Table 4.4 Overall Site Surface Contact Water Management Plan

<table>
<tr><th>Contact Water Source</th><th>Initial Contact Water Collection Location</th><th>Final Contact Water Collection Location</th></tr>
<tr><td>Industrial Area (camp/process plant area)</td><td>CP1</td><td rowspan="7">CP1</td></tr>
<tr><td>WRSF1 Area</td><td>CP1, CP4 and CP5</td></tr>
<tr><td>WRSF2 Area</td><td>CP1 and CP5</td></tr>
<tr><td>WRSF3 Area</td><td>CP6</td></tr>
<tr><td>Dry Stack TSF Area</td><td>CP1 and CP3</td></tr>
<tr><td>Ore Stockpiles OP1 to OP3</td><td>CP1</td></tr>
<tr><td>Landfill</td><td>CP1</td></tr>
<tr><td>Landfarm (biopile)</td><td>Sump within landfarm</td><td>To CP1 after pre-treatment of oil</td></tr>
<tr><td>Tiriganiaq Pit 1

Tiriganiaq Pit 2</td><td>Open pit sumps</td><td>First to CP5 and then to CP1</td></tr>
<tr><td>Tiriganiaq underground</td><td>Sump in underground mine</td><td>Mainly within underground mine with excess water to be pumped to the ground surface and stored on surface</td></tr>
</table>

4.4.2 Water Management for Industrial Area

Pond H14A and a small portion of Pond H13 are within the footprint of the plant site area. During construction and operation, the contact water from the plant site area will naturally flow or be diverted via Channel 2 into ponds H15E, H15, H14, H13, and H12, and eventually collected in CP1, as shown in Figure 3.4. The collected runoff within Pond H15E will naturally flow to Pond H15, then to Pond H14 and eventually into partially drained Pond H13. The water within partially drained Pond H13 will flow (before Year -2) or be diverted via diversion Channel 1 (after Year -2) into Pond H9, where the contact water will flow into CP1. A small portion of the industrial pad for the camp is within Watershed G. The runoff water from this portion of industrial pad will be diverted via Channel 2 to Pond H15E. No contact water will flow into lakes/ponds within Watershed G.

4.4.3 Water Management for Tailings Storage Facility Area

The TSF is located within the catchment of Lake B7 with a small portion straddling the catchment of Pond H17 as shown in Figure 4.1. Seepage and runoff water from the TSF during construction and operation phases will be managed via water diversion channels, water retention dikes and berms, and water collection ponds. Portion of Ponds H15G and H15D are within the footprint of TSF. Water sources from the TSF during construction and operation will be managed as follows:

- Seepage water and runoff from the TSF within the catchment of Pond H17 will be diverted to CP1 via Channel 1 (Figure 3.5);
- The seepage water and runoff from the TSF within the catchment of Lake B7 will be diverted and collected in CP3 via Channel 3 (Figure 3.6); and
- The collected water in CP3 will be pumped to the area of the partially drained Pond H13, and then be diverted to CP1 via Channel1, where the contact water will be treated by the WTP prior to discharging to outside environment.

4.4.4 Water Management for Waste Rock Storage Facilities

Three WRSFs will be used to permanently store all waste rock and overburden from mining activities. As shown in Figure 4.1, WRSF1 will straddle three catchment areas (catchment of Pond H17, catchment of Pond A54, and catchment of Lake B7), WRSF2 will straddle two catchment areas (catchment of Pond H17 and catchment of Pond A54), and WRSF3 will be located within the basin of Pond H20. Ponds A17, A58, B9, H20 and portion of Ponds H8, H9, H10, and H11 are within in the footprint of the WRSFs.

Seepage and runoff from the WRSFs during construction and operation phases will be managed via the water management system as described below:

- Seepage water and runoff from WRSF1 within the catchment of Pond H17 will be diverted to CP1 via Channel1 and Channel8 (Figure 3.6);
- Seepage water and runoff from WRSF1 within the catchment of Pond A54 will be diverted to CP5 via Channel5 and Channel6 (Figure 3.7);
- Seepage water and runoff from WRSF1 within the catchment of Lake B7 will be diverted and collected in CP4 via Channel4 (Figure 3.7);
- Seepage water and runoff from WRSF2 within the catchment of Pond H17 will be diverted to CP1 via Channel1 and Channel7 or directly flow into CP1 (Figure 3.10);
- Seepage water and runoff from WRSF2 within the catchment of Pond A54 will be diverted to CP5 via Channel6 (Figure 3.10);
- Seepage water and runoff from WRSF3 will directly report to CP6 (Pond H19) (Figure 3.10); and
- The collected water in CP4, CP5, and CP6 will be pumped to CP1, where the contact water will be treated by the WTP prior to discharging to outside environment.

4.4.5 Water Management for Ore Stockpile Areas

The ore stockpiles (OP1, OP2, and OP3) are located within the catchment of Pond H17 (CP1), as shown in Figure 4.1. Portion of Pond H12 is within the footprint of OP1. Pond H18 and portions of Ponds H9, H10, and H11 are within the footprint of OP2. No pond is within the footprint of OP3.

Based on the topographic information, contact water from OP1 will flow into drained Pond H12 and then diverted by Channel 1 to CP1. Contact water from OP2 will flow into Pond H9, drained Ponds H10, and H11. The water collected within the drained Ponds H10 and H11 will be diverted via Channel1 into Pond H9, where the water will flow into CP1. Majority of contact water from OP3 will flow into drained Pond H11, then diverted via Channel1 to Pond 9, and then flow into CP1.

4.4.6 Water Management for Overburden Stockpile Area

The temporary overburden stockpile is located within the catchment of Pond H17 (CP1), as shown in Figure 4.1. No pond is within the footprint of the temporary overburden stockpile. Site contact water from the stockpile will flow into Pond H15, and then diverted to CP1 via Channel1.

4.4.7 Water Management for Tiriganiaq Mining Area

The two open pits will affect five ponds (Ponds A10, A11, B10, A39, and A54). Ponds A10, A11, B10, and A39 will be removed by pit excavation. A portion of Pond A54 will form CP5 after construction of D-CP5. The remaining portion of Pond A54 downstream of D-CP5 (approximately 18% of the total pond area) will be drained during Tiriganiaq Pit 2 excavation. No ponds will be affected by the underground mine.

4.4.7.1 Open Pit Water Management

Table 4.4 summarizes the catchment areas for the open pits and proposed depth of the pits below existing ground level. Based on these pit depths, Tiriganiaq pits 1 and 2 are expected to remain within the permafrost regime (the depth of permafrost at the mine site is estimated to be in the order of 360 to 495 m). Therefore, the groundwater inflow into open pits is expected to be negligible and not considered in the water management plan. The major contribution to the pit water will be the precipitation runoff and snow melt.

Table 4.4 Maximum Catchment Area for Open Pits

Pit	Maximum Catchment Area (ha)	Maximum Pit Depth (m)
Tiriganiaq Pit 1	32	145
Tiriganiaq Pit 2	16	95

During mine operation, the contact water for the open pits will be collected within the sumps located at the bottom of the pits. The pumps will be designed and moved as needed to effectively collect and manage pit runoff as pit development occurs. The collected pit runoff within the sump will be pumped to CP5 and then CP1. Water retention dike D-CP5 and Berm3 will be constructed to prevent the flooding of the open pits.

4.4.7.2 Underground Water Management

Groundwater characteristics at the mine site are summarized in Section 2.7. Two groundwater flow regimes are generally present at the mine site:

1) a shallow flow regime located in an active (seasonally thawed) layer near the ground surface. The water table in the active layer is expected to parallel the topographic surface. The flow regime has little to no hydraulic connection with the groundwater regime located below the permafrost; and
2) a deep groundwater flow regime beneath the base of permafrost.

Both Tiriganiaq Open Pits 1 and 2 will be mined within permafrost. Therefore, groundwater inflow to the open pits is anticipated to be negligible, and a groundwater management strategy for the open pits is not required.

The Tiriganiaq underground mine will extend approximately 625 m below the ground surface, and therefore, part of the underground mine will be operated below the base of continuous permafrost. The underground excavations will act as a sink for groundwater flow during mining, with water induced to flow through the bedrock to the underground mine workings once the mine has advanced below the base of the permafrost. Table 4.5 presents the estimated rates of passive groundwater inflow to the underground mine based on the studies presented in the FEIS for the Project (Agnico Eagle 2014). A hydrogeological investigation program is planned for 2015 and 2016, which will provide additional information on potential volumes and quality of the saline groundwater to be managed.

Table 4.5 Estimated Rates of Passive Groundwater Inflow to Underground Mine

Year	Estimated Passive Inflow (m^3/day)*
Yr -5 to First Quarter of Yr -3	0
Second Quarter of Yr-3 to End of Yr-3	420
Yr -2 to Yr 7	526

*based on data provided in Agnico Eagle (2014); to be reassessed based on results from the planned 2015 and 2016 hydrogeological investigation program

Contact water in the underground mine will be collected within underground sumps and treated to remove TSS by the underground TSS removal plant. A proportion of the treated water will be recirculated as make-up water for underground drilling. Underground drilling water requirements are estimated to range from approximately 300 m^3/day in Year -5, to a maximum of 1,500 m^3/day in Year 1. The drilling water will report to the underground sumps for recirculation; however, the need for up to 3% treated water make-up has been assumed to compensate for losses of drilling water due to evaporation or capture within the mined materials.

Excess treated underground water (treated water less make-up to underground drilling) will be pumped to surface for management. The estimated volume of water to be managed is expected to range from a minimum of about 0.11 Mm^3/year to a maximum of 0.18 Mm^3/year depending on the year of mine life. Details of the underground dewatering system are provided in Section 2.3.2 of the Mine Plan (Agnico Eagle 2015c), submitted in compliance with the Type A Water Licence 2AM-MEL1631.

Agnico Eagle is considering several options for the long-term management of groundwater reporting to the underground workings at the Project. During Year -5 and Year -4 of construction, a hydrogeological investigation program will be completed to improve estimates of the amount and quality of groundwater that may potentially report to the underground mine. In Year -3 (i.e., 2017), following the completion of the investigation, the long-term groundwater management strategy for the Project will be finalized and submitted to the NWB for approval.

An interim Groundwater Management Plan is required for the first two to three years of groundwater inflows to allow for implementation of the long-term groundwater management strategy. The Groundwater Management Plan will be provided to the Nunavut Water Board, as stated in Section E, Item 14. Excess water from the underground mine will be pumped to the surface for storage for Years -3 and -2. Based on the estimated groundwater inflow rates (Table 4.5) and underground drilling water make-up requirements, up to approximately 0.25 Mm^3 of groundwater will require storage on surface. The surface storage option selected will be dependent on the results of the hydrogeological study and the amount of groundwater encountered.

4.4.8 Water Management for Haul Road

A network of haul roads will connect the ore bodies to the WRSFs and the plant site. The majority of the roadways servicing the mining area will be located so that drainage will be directed towards the contact water management infrastructure. Detailed information on road is described in the Roads Management Plan

The approach to water management for these sections of haul road will involve the implementation of local best management practices during construction, operation, and closure. The road will be constructed of non-potential for acid generating and low leachable waste rock from mining operations to minimize potential effects on the quality of receiving water bodies. Other best management practices will strive to minimize the amount of runoff originating from the roadways and to prevent the migration of surfacing material from the roadway and crossings. Any areas identified as point sources of runoff originating from the roadway or crossings can be managed locally with silt fences, turbidity curtains, interceptor channels, rock check dams, and/or small sedimentation ponds.

4.4.9 Water Management for Landfarm and Landfill

The Landfarm is located within the catchment of Pond H17, as shown in Figure 4.1. The landfarm will be designed using a liner system to contain any leachate. The runoff water and snow melt within the footprint of the landfarm will be collected in a sump on the southwest side of the facility. The collected water from the sump will be pumped to an oil pre-treatment plant, and then discharged into CP1, where the water will be further treated by the WTP prior to discharge to the outside environment.

The landfill is located at north of WRSF1, within the catchment of Pond H17, as shown in Figure 4.1. Based on the topographical information, runoff and any seepage from the landfill will naturally flow to the partially drained Pond H13, and then diverted to CP1 via Channel1.

Further information on the management of these facilities are described in the Landfarm Management Plan and the Landfill and Waste Management Plan, respectively.

4.4.10 Sludge Management from Water Treatment Plant

Prior to the commissioning of the process plant in the last quarter of Year-1, the underflow sludge water (typically with 2% to 3% of solid content) from the WTP will be discharged into CP1. After commissioning, the sludge water from the WTP will be pumped to the process plant and combined with the tailings stream before dewatering and dry stacking. The maximum predicted annual volume of sludge water from the WTP is approximately 20,000 m^3.

4.4.11 Sludge Management from Surface TSS Removal Plant

The underflow sludge water from surface TSS removal plant will be stored in underground excavation. The maximum predicted annual volume of sludge water from the underground TSS removal plant is approximately 15,000 m^3.

4.4.12 Water Management for Emulsion Plant Area

Fresh water will be trucked to the emulsion plant and used for manufacturing emulsion as well as for washing the explosive trucks. Water within the emulsion plant will be re-used when feasible, and excess used water will be collected and disposed in an appropriate method.

4.5 Freshwater and Sewage Water Management

4.5.1 Freshwater Management

Major freshwater usages on site include potable use, fire suppression, portion of make-up water for the mill, and other operational needs, such as drilling water if contact water from CP1 is not available and water for the truck shop. Fresh water will be sourced from Meliadine Lake through a freshwater intake and pump system. For dust suppression, water will be sourced from ponded water against the AWAR, small ponds proximal to the road and/or from the Meliadine River

The freshwater intake is housed within a rockfill causeway located north east of the industrial pad in Meliadine Lake, as shown in Figure 1.2. The intake will consist of vertical filtration wells fitted with vertical turbine pumps that supply water on demand. The intake will be connected to the pump house with piping buried under the rockfill causeway. The intake pipe will exit at the bottom of the causeway into Meliadine Lake and will be fitted with a stainless steel screen. The rockfill causeway will act as a secondary screen to prevent fish from becoming entrained. The stainless steel screens design for the water intake will be consistent the Fisheries and Oceans Canada (DFO) “Freshwater Intake End-Of-Pipe Fish Screen Guideline” (DFO 1995). As per the DFO policy intake screens will be cleaned every 2 years.

Fresh water will be pumped through an overland pipeline to an insulated main storage tank located at the plant site. The freshwater pipe will be a high density polyethylene pipe and insulated and heat traced. The water storage tank will have a dimension of 10 m diameter and 10 m height, with a total capacity of 739 m^3. Approximately 62,000 m^3/year of freshwater will be required during construction phase, and approximately 318,000 m^3/year of freshwater will be required during operation phase. Additional approximately 4,000,000 m^3 of freshwater will be required per year to fill the mined-out open pits. These quantities are inclusive of water needs for dust suppression.

The camp area will have a water treatment plant for potable (domestic) water. The design flow rate for the potable water for the main camp and accommodations (kitchen, laundry) is 136 m^3 per day (based on a 680-people camp capacity and a nominal consumption of 200 L/day/person). In the portable water treatment plant, the freshwater will first go through sand filters and then be pumped through ultraviolet units, and finally be treated with chlorine. The treated water will be stored within a potable water tank. Potable water will be monitored according to the Nunavut health regulations for total and residual chlorine and microbiological parameters. Treated potable water will be piped to areas in the process plant, service complex, and other facilities requiring potable water.

It should be noted that Agnico Eagle is not planning to use any water at the Itivia facilities and fuel storage facility in Rankin Inlet. There will be no warehousing or office facility at this site hence no freshwater facilities are planned for Rankin Inlet facilities.

4.5.2 Sewage Water Management

Sewage will be collected from the camp and change-room facilities and pumped to a sewage treatment plant (STP). The objective of the STP is to treat sewage to an acceptable level for discharge to CP1 via a sewage water discharge pipeline. The STP will be housed in a prefabricated (modular) structure, located at south-east of the service complex, as shown in Figure 1.2. The sewage treatment system will be designed based on a flow rate of 200 L per day per worker for a peak load of 680 people, for an average daily flow rate of 136 m^3 (5.67 m^3/h). Biological reactors like Bionest Kodiak units are envisioned to treat camp waste water.

The STP for the camp facilities will be designed to meet appropriate guidelines for wastewater discharge (for example, NWT Water Board 1992). Wastewater System Effluent Regulations (WSER) criteria are not currently applicable to systems located in Nunavut, and is unlikely to apply to the Meliadine effluent quality. Table 4.7 provides the anticipated performance of the system compared to the WSER criteria.

Table 4.7 Anticipated STP Treatment Performance

Parameter	WSER[1] (average concentration in the effluent)	STP Treatment Performance
Carbonaceous Biochemical Oxygen Demand	25 mg/L	10 mg/L
Total Suspended Solid	25 mg/L	10 mg/L
Total Residual Chlorine	0.02 mg/L (if chlorine used in treatment of waste water)	No chlorine to be used in treatment
Un-ionized ammonia	1.25 mg/L (expressed as nitrogen at 15 ^{o}C ± 1^{o}C	<10 mg/L NH4-N, which represents ~<0.03 mg/L un-ionized ammonia (at 15 ^{o}C, pH 7)

[1] Waste Water System Effluent Regulations

4.6 Process Water Management

Process water will be required in the process plant for ore processing. Both treated water and sludge water from the WTP and freshwater from Meliadine Lake will be used as process water. When possible, water from the WTP will be the main source of water for the ore process. Additional water needs will be supplied by fresh water. Approximately 460 m^3/day of process water will be required in Year 1 to Year 3 operation and approximately 770 m^3/day of process water will be required in Year 4 to Year 8.

SECTION 5 • INFRASTRUCTURE REQUIRED FOR MINE SITE WATER MANAGEMENT

During the mine construction, operation and closure phases, a network of collection and interceptor channels and sumps will be constructed and maintained to facilitate mine site water management. The following sections provide preliminary infrastructure sizing requirements for each of the mine areas.

5.1 Water Management Control Structures

A list of the water management control structures are presented in Table 5.1, together with the construction schedule. Figures 3.1 to 3.13 show the location of the respective structures at the different development stages of the mine life. Final design details of these structures will be provided to the regulators for approval at least 60 days prior to construction.

Table 5.1: Water Management Control Structures and Construction Schedule

	Infrastructure Name	Approximate Construction Year
Pre-Production Construction	Culvert 2	Year -5 when access road to OP1 is constructed
	Channel 2	
	Channel 2	Late Year -5 and early Year -4 (before spring freshet of Year -4)
	D-CP1	Late Year -4 and early Year -3 (before spring freshet of Year -3)
	D-CP5	
	Freshwater Intake Causeway	Late Year -3 and early Year -2 (before spring freshet of Year -2)
	Channel 1	
	Berm 3	
	Channel 5	
	Berm 1	
	Channel 6	
	Channel 7	
	Channel 8	
	Culvert 3	
	Culvert 4	
	Culvert 5	
	Culvert 6	
	Submerged Diffuser	
	WTP Intake Causeway	
	Culvert 1	
Sustaining	CP3	Late Year -1 and early Year 1 (before spring freshet

Construction during Mine Operation	CP4	of Year 1)
	Berm 2	
	D-CP3	
	D-CP4	
	Channel 3	
	Channel 4	
	D-CP6	Late Year 3/early Year 4 (before spring freshet Year 4)

5.2 Water Management Structure Design Criteria

The various components of the water management system will be designed to meet the following criteria:

- With the design capacity of the WTP, Dike D-CP1 and CP1 will be able to manage the surface contact water from the entire site for a 1:100 wet year spring freshet or a 1:2 mean year spring freshet, plus a 1:1000 return 24-hour extreme rainfall.
- With the design capacity of pumping from CP5 to CP1, Dike D-CP5 and CP5 will be able to manage the water from its catchment area for 3/7 of a 1:100 wet year spring freshet or a 1:1000 return 24-hour extreme rainfall.
- Each of the other water management dikes (D-CP3, D-CP4, and D-CP6) and associated ponds (CP3, CP4, and CP6), with the design pumping capacity, will be able to manage the water from its catchment area for 3/7 of a 1:100 wet year spring freshet or a 1:100 return 24-hour extreme rainfall.
- The daily pumping rate for each of the CP3 to CP6, Tiriganiaq Pit 1 sump, and Tiriganiaq Pit 2 sump will be designed to have sufficient pumping capacity to handle the runoff water, which would result from one day (24.4 mm) of a 1:100 return wet spring freshet plus a 1:2 return one-hour rainfall (9.8 mm).

Channel2 to Channel4 will be designed to pass an extreme intensity flow under a 5-minute 1:100 return rainfall of 9.2 mm. Channel1 and Channel5 to Channel8 are internal channels where any water overflowing the channels will remain within the catchment areas of various collection ponds. Hydraulic analyses indicated that very wide channels are required to pass an extreme intensity flow under a 5-minute 1:100 return rainfall of 9.2 mm. As a result, these channels were designed to have a reasonable bottom width to pass a flow with lesser intensity, but the water overflowing the channels can be safely managed by berms or temporarily stored in a lower basin nearby. For example, water overflowing Channel5 can be contained by Berm3. Water overflowing Channel7 and Channel8 can be stored in the lower basin in the drained Pond H13, and Berm1 will protect Portal No 2 from flooding. Water overflowing Channel1 will flow through the flat ground between OP1/OP2 and WRSF2 into CP1.

Hydraulic analyses indicated that many more culverts or larger culverts would be required to pass an extreme intensity flow under a 5-minute 1:100 return rainfall of 9.2 mm for Culvert1. As a result, Culvert1 was designed to pass a flow with lesser intensity, but the excess water can be safely managed by berms or temporarily stored in a lower basin nearby. The excess water that cannot pass through Culvert1 can be temporarily stored in the lower basin in the drained Pond H13, and Berm1 will protect Portal No 2 from flooding. Other culverts are less critical and the excess water that cannot pass through the culverts can be temporarily stored in a lower basin nearby within the water collection pond catchments.

5.3 Water Collection Ponds

Six water collection ponds (CP1 to CP6) will be constructed as part of the water management infrastructure. Table 5.2 presents the locations and the required operational period of the collection ponds. The locations of these water collection ponds are shown on Figures 3.2 to 3.15.

Table 5.2 Location of Collection Pond and Required Operation Periods

Collection Pond	Relative Location	Required Operation Period
CP1	Pond H17	Year -4 to mine closure
CP3	North of Lake B7 and southwest of TSF	Year 1 to mine closure
CP4	Southeast of Lake B7 and south of WRSF1	Year 1 to mine closure
CP5	North of Tiriganiaq Pit 2	Year -3 to mine closure
CP6	Pond H19 and north of WRSF3	Year 4 to mine closure

CP1, CP5, and CP6 will be established within existing shallow ponds. The key information and design parameters for CP1, CP5, and CP6 are summarized in Table 5.3.

Table 5.3 Design Parameters for CP1, CP5 and CP6

Pond	CP1	CP5	CP6
Original Pond Name	H17	A54	H19
Original Pond Elevation (m)	64.13	65.75	63.53
Pond Volume for Water Elevation at Original Pond Elevation (m^3)	144,577	26,138	16,789
Projected Maximum Pond Operating Water Elevation under Normal Operating Conditions and Mean Precipitation Years (m)	65.13	65.79	63.64
Pond Volume for Water Elevation at Projected Maximum Pond Operating Water Elevation under Normal Operating Conditions and Mean Precipitation Years (m^3)	377,058	27,221	19,154
Estimated Maximum Water Elevation during Inflow Design Flood (IDF) (m)	66.11	66.11	63.94
Pond Volume for Water Elevation at Estimated Maximum Water Elevation during IDF (m^3)	658,936	47,482	31,800
Dike for Pond	D-CP1	D-CP5	D-CP6
Design Crest Elevation of Dike Containment Element (liner system) (m)	66.50	66.30	64.30
Pond Volume for Water Elevation at Design Crest Elevation of Dike Containment Element (m^3)	778,502	66,231	49,627

CP3 and CP4 will be established through sub excavation of the original ground to increase the water storage capacity and eliminate or limit the requirement for berm construction. The key design parameters for CP3 and CP4 are provided in Table 5.4.

Table 5.4 Design Parameters for CP3 and CP4

Pond	CP3	CP4
Elevated Pond Bottom Elevation (m)	62.20	61.00
Excavated Pond Outlet Elevation (m)	64.15	63.46
Pond Volume for Water Elevation at Pond Outlet Elevation (m^3)	25,454	30,911
Projected Maximum Pond Operating Water Elevation under Normal Operating Conditions and Mean Precipitation Years (m)	63.49	62.55
Pond Volume for Water Elevation at Projected Maximum Pond Operating Water Elevation under Normal Operating Conditions and Mean Precipitation Years (m^3)	16,899	19,458
Estimated Maximum Water Elevation during IDF (m)	64.32	63.55
Pond Volume for Water Elevation at Estimated Maximum Water Elevation during IDF (m^3)	28,056	32,304
Dike for Pond	D-CP3	D-CP4
Design Crest Elevation of Dike containment Element (liner system) (m)	65.10	64.40
Pond Volume for Water Elevation at Design Crest Elevation of Dike Containment Element (m^3)	42,456	51,337

5.4 Channels

Eight water diversion channels (Channel1 to Channel8) will be constructed as part of the water management infrastructure. The water diversion channels were designed based on the design criteria described in Section 5.2. The key information and design parameters for each channel are presented in Table 5.5.

Table 5.5 Design Parameters for Channel

Item	Channel							
	1	2	3	4	5	6	7	8
Approximate Total Length (m)	463	300	619	710	429	69	214	315
Bottom Width (m)	3	1	1 or 2[a]	1 or 2[a]	3	1	1	1
Side Slopes	3(H):1(V)	3(H):1(V)	3(H):1(V)	3(H):1(V)	3(H):1(V)	3(H):1(V)	3(H):1(V)	3(H):1(V)
Rip-rap Thickness (m)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Minimum Bottom Slope Gradient (%)	0.28	0.30	0.17	0.13	0.17	0.44	0.42	0.38

[a]: 1 m bottom width for first 100 m upstream section, and 2 m bottom wide for the remaining channel section

5.5 Water Retention Dikes and Berms

Dikes and berms are constructed to protect contact water from potentially contaminating fish habitat, prevent flooding of portals and pits, and divert natural water away from possible sources of contamination. In general terms, “dikes” will retain sustained water during normal operations. “Berms” on the other hand, may retain short-term water under flooding events. At the end of mine closure when the water quality in the corresponding pond meets direct discharge criteria, except for Berm2, each of the other dikes and berms on site will be breached to restore the original natural drainage paths. Berm 2 will remain in place to prevent non-contact water from flowing into the TSF.

Permafrost is expected to exist beneath the footprint of each dike and berm on the mine site. Each of the water retention dikes (D-CP1, D-CP3, D-CP4, D-CP5, and D-CP6) has been designed as a zoned earth fill dam with a geomembrane liner keyed into the expected permafrost foundation to limit the seepage through the dike and its foundation. Preliminary thermal analysis has been conducted for D-CP1 (Tetra Tech EBA, 2014), which has the highest design water head. The results of the thermal analysis for D-CP1 indicated that the ground temperature at the key trench location of Dike D-CP1 is predicted to be approximately -2.0 to -4.0 °C at the end of the mine operation under the worst case scenario (mean air temperature condition and plus Moderate Green-house Gas Emission global warming scenario followed by two consecutive 1 in 100 return event warm years). The results from the stability analysis of D-CP1 indicated that the calculated minimum factors of safety of D-CP1 meet or exceed the acceptable factors of safety and the design intents have been achieved.

The characteristics of the dikes and berms required for the water management plan are summarized in Table 5.6.

Table 5.6 Design Parameters for Water Retention Dike/Berm

Item	D-CP1	D-CP3	D-CP4	D-CP5	D-CP6	Berm1	Berm2	Berm3
Approximate Maximum Height (m)	4.5	2.0	2.0	2.6	1.8	1.6	2.5	1.8
Maximum Elevation (m)	67.5	66.1	65.4	67.3	65.3	68.5	varies	67.5
Side Slopes	2.5(H):1(V) to 3(H):1(V)	3(H):1(V)	3(H):1(V)	2.5(H):1(V) to 3(H):1(V)	2.5(H):1(V) to 3(H):1(V)	3(H):1(V)	3(H):1(V)	3(H):1(V)
Full Top Width (m)	26	20	20	31	22	2	4	2
Approximate Total Length (m)	530	385	297	211	348	400	493	334
Maximum Head of Water Retained (m)	3.5	0.2	0.1	1.4	0.5	0	0	0

SECTION 6 • WATER MANAGEMENT DURING CLOSURE

Mine closure is integral to the mine design and will be modified during operations. Planning for permanent closure is an active and iterative process. The intent of the process is to develop a final plan using adaptive management. This begins during the mine design phase and continues through to closure implementation. Adaptive management enables the plan to evolve as new information becomes available through analysis, testing, monitoring, and progressive reclamation. The detailed mine closure and reclamation activities are provided in the Preliminary Closure and Reclamation Plan.

Water management during closure and reclamation will involve flooding the mined-out open pits using freshwater from Meliadine Lake, flooding the underground mine working with natural ground inflows (groundwater seepage), and maintaining contact water management systems on site until monitoring results demonstrate that water quality are acceptable for discharge of all contact water to the environment without further treatment. Once water quality meets the discharge criteria, the water management systems will be decommissioned to allow the water to naturally flow to the outside environment.

The key water management activities during mine closure are summarized in Table 6.1. Figures 6.1 and 6.2 shows the water management plan during mine closure.

Table 6.1 Key Water Management Activities during Mine Closure

Mine Year	Figure	Key Water Management Activities and Sequence
Yr 9 to 11	6.1	• Finish flooding the mined-out Tiriganiaq Pit 1 and Tiriganiaq Pit 2 by Q4 of Year 10 • Continue to collect and manage the contact water in CP1 to CP6 • Continue to pump the contact water in CP1 to WTP, if required, for treatment before being discharged to the outside environment • Remove non-essential site infrastructure • Pump the underflow sludge water from WTP to CP1 • Continue natural flooding of Tiriganiaq Underground mine with groundwater seepage • Remove Meliadine Lake pumping system
Post-Closure	6.2	• Treat the contact water until water quality meet direct discharge criteria and then decommission the water management system • Continue natural flooding of Tiriganiaq Underground (progressive reclamation since Year 8) • Breach water retention dikes D-CP1, D-CP3, D-CP4, D-CP5, and D- CP6 once water quality monitoring results meet discharge criteria to allow water to naturally flow to outside environment • Remove culverts and breach remaining water retention dikes/berms in Year 18

6.1 Open Pits Flooding

Following completion of mining, the open pits will be filled with natural precipitation and water pumped from Meliadine Lake. The maximum pumping rate from Meliadine Lake shall not exceed 4,000,000 m^3/year during closure of the Project, as stated in Part E of the Type Water Licence 2AM-MEL1631. The planned pumping period will occur during the open water season from mid-June to end of September for each year. Table 6-2 summarizes the pit volume and expected water elevations at the completion of flooding activities. It will take approximately 3 years to refilling the pits with an assumed pumping rate of 0.44 m^3/s (38,300 m^3/day). Meliadine Lake has a total area of 560 km^2 (including 361 km^2 of land surface area and 199 km^2 lake surface area). The average outflow rates for baseline at the outlet of Meliadine Lake are 16.1 m^3/s for June, 7.7 m^3/s for July, 3.3 m^3/s for August, and 2.5 m^3/s for September (Volume 7 of FEIS). The assumed pumping rate of 0.44 m^3/s from Meliadine Lake during closure will have negligible effect to Meliadine Lake comparing to the average outflow rate at the outlet of Meliadine Lake. The pumping rate will be further evaluated and managed to minimize effects to Meliadine Lake and will ensure the outflow rate at Meliadine Lake outlets does not drop below the 10-year dry condition. In years during which Meliadine Lake discharges are forecast to naturally fall below the 10-year dry condition, no pumping will occur.

The walls of the open pits will have been exposed for a number of years during mine operation, and some weathering may have occurred. As the pits flood, the water will contact the weathered rocks, which may affect the water quality by increasing concentrations of dissolved metals. The water quality model results indicated that water quality in the flooded pit will meet the discharge criteria and no post closure treatment required. The water quality within the flooded pits will be monitored during the filling periods to verify the prediction of the water quality model. The information would be used to develop a strategy to minimize contamination of the regional surface water system. If required, the flooding plan will be adjusted, while minimizing effects to Meliadine Lake.

Table 6.2 Pit and Underground Flooding

Pit	Volume (Mm^3)	Final Water Elevation (masl)	Water Source
Tiriganiaq Pit 1	9.20	64.14	Freshwater from Meliadine Lake
Tiriganiaq Pit 2	2.25	64.38	Freshwater from Meliadine Lake
Tiriganiaq Underground	1.4	Groundwater level	Groundwater seepage

Passive flooding of the Tiriganiaq underground mine will also occur following completion of mining. The estimated total flooding volume of the underground workings is 1,372,000 m^3. Seepage water into the underground mine will be the main water source for flooding. Under the predicted seepage rate presented in Table 4.5, it will take approximately 6 years to flood the underground mine.

6.2 Collection Ponds, Dikes and Berms

The water collection ponds, dikes and berms will remain in place to collect the surface runoff water and seepage from the mine site until the water quality meets the discharge criteria. Once the water quality meets the discharge criteria, dikes/berms will be breached to allow the water to naturally flow to the outside environment. Dikes/berms breaching will involve the removal of a portion of the dikes to a minimum depth of 1 m below average water level or back to original ground levels. Consideration will be given to breach staging, with the above water portions of the dike/berm in the breach area removed during winter periods, when there will be little surface water flow, thereby minimizing the potential release of sediments to the neighbouring waterbodies. The remainder of the breach would be completed during the open water season following freshet so as to allow for the deployment of turbidity curtains to control potential releases of sediment.

6.3 Channels and Sumps

Once monitoring results have indicated that contact water conveyed in channels and sumps meets acceptable water quality, the infrastructure will be re-contoured and/or surface treated according to site-specific conditions to minimize wind-blown dust and erosion from surface runoff, if required. This closure activity is intended to enhance site area development for re-colonization by native plants and wildlife habitat.

SECTION 7 • WATER BALANCE

A water balance model was developed to assist in the evaluation of the water management infrastructure, and estimation of the pumping requirements over the life of the mine and under closure conditions. The model includes a water balance conducted on both a monthly and yearly basis. The model focuses specifically on contact water management infrastructure and areas that have been affected by mining activities.

A monthly site-wide water balance was conducted for CP1 to CP6, Tiriganiaq Pit 1, Tiriganiaq Pit 2, water in the underground mine operation, make-up water for the mill, water for the WTP, and fresh water from the mine construction to mine closure under mean precipitation years. The following section presents the parameters and assumptions adopted in the water balance model along with a summary of the water balance results.

7.1 Water Balance Framework

The water balance framework developed for the site-wide water balance model was presented in Version 1 of the Water Management Plan (Agnico Eagle 2015e). The water balance will be updated in further iterations of the Water Management Plan, as stated in the Water Licence, prior to operations. In order to simulate a range of conditions, the model was run for the proposed mine life and closure conditions.

7.2 Water Balance Assumptions

The water balance was based on the following:

- snow accumulates throughout the months of November to May, and thaws in June during the annual spring freshet period;
- average precipitation year climate conditions;
- the open pits and water collection ponds (CP3 to CP6) are not to be used for long-term storage of water during operations;
- the water collection sumps and ponds are empty in the autumn prior to the spring freshet each year; and
- other water management assumptions described in Section 4 of this Plan.

A general water management flow sheet is presented in Appendix B.

7.2 Water Balance Results

The estimated maximum annual water input/output from each of various water management facilities under mean precipitation conditions are summarized in Table 7.1. Results were also provided for 1:100 year wet and dry conditions, with corresponding basis and assumptions, in a separate technical memorandum (Tetra Tech EBA 2015).

Table 7.1 Estimated Maximum Annual Volumes from Mine Site Water Balance

Item	Maximum Annual Water Volume (Mm^3)
Contact Water from CP1	0.800
Contact Water from CP3	0.088
Contact Water from CP4	0.087
Contact Water from CP5	0.240
Contact Water from CP6	0.076
Water Pumped from CP1 to WTP for Treatment	0.798
Fresh Water Pumped from Meliadine Lake during Construction	0.062
Fresh Water Pumped from Meliadine Lake during Operation	0.318
Treated Water from WTP to be Discharged to Outside Environment	0.730
Underground Water Pumped to Underground TSS Removal Plant	0.696
Excess Water from Underground Mine to be Stored on Surface	0.155
Fresh Water Pumped from Meliadine Lake to Fill Mined-out Tiriganiaq Pit 1	3.068
Fresh Water Pumped from Meliadine Lake to Fill Mined-out Tiriganiaq Pit 2	0.749

SECTION 8 • WATER QUALITY

Water quality predictions for the Project were generated using the GoldSim database management and simulations code (Version 11.1.2) where mine site contact water flows derived from the Meliadine water balance are combined with chemistry data from materials exposed in mine infrastructure (tailings storage facility, waste rock piles, etc.), and site baseline information. Where site specific information is not available, data collected at other mine sites in the north are used to supplement the input data.

Water quality estimates were generated for the operational and post-closure periods, for each contact water collection pond, for sumps in the two open pits and for the two fully flooded open pit lakes post-closure. The collection ponds (CP3 to CP6) are positioned to receive water from specific mine facilities: the waste rock and overburden piles, the dry stack tailings storage facility (TSF) and the mill area. Collection Pond 1 is the site's main pond to which all other ponds are pumped prior to discharge to Meliadine Lake via a diffuser.

Average monthly dissolved parameter concentrations during open water months are provided. The sensitivity of water quality to an added total suspended solids (TSS) load was evaluated outside of the GoldSim mass balance model. Total parameter concentrations were evaluated at ponds that discharge to the receiving environment (i.e., CP1 during operations, and CP1, CP3, CP4, and CP6 post-closure) based on an addition of 15 milligrams per litre TSS, the maximum monthly mean Metal Mining Effluent Regulations (MMER) value. Given the uncertainties associated with the modelling exercise (i.e., the development stage of the Project, laboratory-based input values, assumptions where data do not exist and consideration of an average climate year), the predicted concentrations are considered to be order-of-magnitude estimates. The estimates are sensitive to the assumptions and design elements considered. The water quality modelling predictions will be updated as stated in the Water Licence, in future iterations of the Water Management Plan, prior to operations.

8.1 Summary of Results

Operations period results are compared against MMER limits for all ponds, although only CP1 water will be discharged in a controlled manner to the receiving environment in Meliadine Lake. Water in all other collection ponds will be pumped to CP1; they will not discharge directly to the receiving environment. Post-closure discharge water quality is compared against CCME guidelines or the Meliadine Site Specific Water Quality Objectives (SSWQO) developed for aluminum, fluoride, and iron (Golder 2013a, 2014).

8.2 Operations

During operations, the quality of most waters including CP1 water is anticipated to meet MMER monthly mean discharge limits, with the possible exception of TSS at all ponds and arsenic, on occasion, at CP3 which receives water from the TSF. Although TSS content was not specifically modelled, experience at other mine sites suggests that TSS in site contact water is likely to require attenuation during operations to meet the MMER effluent criteria of 15 mg/L monthly average. A WTP that removes TSS is planned to be operational in Year -4 of the Project.

Collection Pond 3 arsenic concentration may exceed MMER on occasion if precipitation events generate drainage from the TSF. The main source of arsenic in CP3 is predicted to be from residual process water that is assumed to be present in the filtered tailings. Arsenic transfer from process water to CP3 water will be minimized by effective dewatering of the tailings prior to placement into the TSF, and from freezing of the tailings in the TSF which will act to limit infiltration and seepage. Water from CP3 will be pumped to CP1 where it will mix with other site waters before discharge. Dissolved arsenic concentration in CP1 is predicted to meet the MMER monthly average maximum concentration. All other chemical parameters in CP3 and all chemical parameters in CP4, CP5, and CP6 are predicted to meet MMER limits for chemical constituents.

8.3 Post-Closure

The long-term, post-closure water quality in the Project ponds and in the flooded open pit lakes are anticipated to meet MMER limits and CCME water quality guidelines for the protection of aquatic life (CCME-WQG) or the SSWQOs developed for the Meliadine site for aluminum, fluoride, and iron. Arsenic concentrations in CP4 could slightly exceed the SSWQO post-closure, a criteria that is conservatively protective of the receiving aquatic environment (Golder, 2013a). The exceedances predicted are minor, much less than the mixing capacity in the receiving environment. These arsenic concentrations (Golder, 2013a) are within the tolerance levels that have been deemed non deleterious by Environment Canada for the Project (Environment Canada 2014).

8.4 Water Treatment Plant

Based on the site wide water balance, the WTP will be required to treat and discharge 470,000 m³ of contact at Year -4. The volume of water requiring treatment and discharge will increase to a maximum of 798,000 m³ at Year 3 and then decrease to 673,000 m³ at the last year of the life of mine (Year 8).

Based on the anticipated water quality and water quantity, the WTP will be used to treat total suspended solids (TSS) in contact water. The WTP is designed to treat large volumes of water to minimize costs associated with water storage on-site. An iterative process was used to optimize the balance between the size of the collection ponds and the WTP. Based on the maximum flow rate required each year, it was determined that the WTP (Actiflo® system model ACP-600R) will have a capacity of 520 m³/h (nominal flow) at Year -4 and will be increased with a second ACP-600R to reach a capacity of 1,040 m³/h at Year 3.

At Year -3, one WTP unit (Actiflo® system model ACP-300R [Figure 2.32]) having a TSS treatment capacity of 100 m³/h will be installed underground to manage underground water including recirculated water for underground operation and excess groundwater.

SECTION 9 • WATER QUALITY MONITORING PROGRAM

Water quality monitoring is an important part of the site water management plan to verify the predicted water quality trends and conduct adaptive management should differing trends be observed. This section outlines the water quality monitoring plan, which will be further defined as the project advances.

Water quality monitoring will be initiated at the pre-development stage and will continue during construction, operations, closure, and post-closure. Monitoring will occur at three levels:

- Regulated discharge monitoring occurs at monitoring points specified in licences or regulations. It includes discharge limits that must be achieved to maintain compliance with an authorization (i.e., water licence) or regulation (i.e., Metal Mining Effluent Regulations). Enforcement action may be taken if discharge limits are exceeded for a parameter.
- Verification monitoring is carried out for operational and management purposes by Agnico Eagle. This type of monitoring provides data for decision making and builds confidence in the success of processes being used. The verification monitoring data will be collected, compiled, and managed internally. The monitoring data will not be reported to the Regulators in the annual water licence report, but can be provided upon request by the Regulators
- General monitoring is commonly included in a water licence specifying what is to be monitored according to a schedule. It covers all types of monitoring (i.e., geotechnical, lake levels, etc.). This monitoring is subject to compliance assessment to confirm sampling was carried out using established protocols, included quality assurance/quality control provisions, and addresses identified issues. General monitoring is subject to change as directed by an Inspector, or by the Licensee, subject to approval by the Water Board.

All three types of monitoring will be used at the mine site. The following section presents the conceptual water quality monitoring plan during construction, operations and closure. More detailed information on monitoring programs is described in the Environmental Management and Protection Plan (Agnico Eagle 2015d).

9.1 Water Quality Monitoring

Table 9-1 lists the water quality monitoring stations during construction, operation, closure and post-closure phases. The monitoring parameters and frequency are described in the Environmental Management and Protection Plan (Agnico Eagle 2015d) and are based on the Type A Water Licence 2AM-MEL1631 (Schedule I - Table 2). Figures 9.1 to 9.3 provide maps showing the location of the water quality monitoring stations for each phase.

Thresholds for arsenic levels in CP1 that would trigger mitigation measures such as source control or implementation of further treatment for CP1 discharges, will be included an adaptive management plan in subsequent version of the Environmental Management and Protection Plan, prior to operations.

Table 9.1 Water Quality Regulated, General Aquatic and Verification Monitoring for the Meliadine Gold Project during Construction, Operations, and Closure

Monitoring Type	Mine Development Phase	Monitoring Station Number	Station Description	Purpose of Station	Frequency
Regulated	Construction	MEL-D-1 to TBD	Dewatering: Water transferred from lakes to Meliadine Lake during dewatering of lakes		Prior to discharge and weekly during discharge Daily during periods of discharge
Regulated	Construction and Operations	MEL-SR-1-TBD	Surface Runoff – runoff downstream of Construction areas at Meliadine Site and Itivia Site, Seeps in contact with the roads, earthworks and any Runoff and/or discharge from borrow pits and quarries		Prior to construction, weekly during construction Monthly during open water or when water is present upon completion

Table 9.1 Water Quality Regulated, General Aquatic and Verification Monitoring for the Meliadine Gold Project during Construction, Operations, and Closure

Monitoring Type	Mine Development Phase	Monitoring Station Number	Station Description	Purpose of Station	Frequency
General Aquatic	Construction, Operation, and Closure	MEL_01 (MEL-04 suggested by Agnico Eagle in the Application)	Water intake from Meliadine Lake	Quality of intake water	Monthly during period of intake (Full Suite); Daily during periods of intake (Volume m^3)
Verification	Construction (prior to release), Operation, and Closure	MEL_02	Water treatment plant (pre-treatment) coming from H17 station will be off the pipe and not in the pond	Test quality of water before treatment (required to evaluate treatment efficiency	Monthly during periods of discharge
General Aquatic	Construction (prior to release), Operations, and Closure	MEL_03	Mixing zone in Meliadine Lake, station 1; and MMER exposure stations for final discharge point within mixing zone	Test mixing of effluent in the receiving environment; sample at varied distances and directions from pipe; MMER exposure for final discharge point	Monthly during periods of discharge
Regulated	Construction (upon effluent release), Operation, and Closure	MEL_04[a] (MEL-01 suggested by Agnico Eagle in the Application)	Water treatment plant (post-treatment), end of pipe (before offsite release) in the plant	Test quality of final effluent before release	Prior to discharge and weekly during discharge (Full Suite, Group 3); Daily during periods of

Table 9.1 Water Quality Regulated, General Aquatic and Verification Monitoring for the Meliadine Gold Project during Construction, Operations, and Closure

Monitoring Type	Mine Development Phase	Monitoring Station Number	Station Description	Purpose of Station	Frequency
			before release.		discharge (Volume m^3); Once prior to discharge and monthly thereafter (Acute Lethality)
Verification	Operations, Closure	MEL_05	Local Lake, E3	Confirm no leakage/runoff from Emulsion Plant	Bi-annually during open water
Verification	Construction, Operations, Closure	MEL_06	Local Lake, G2	Possible seepage or dust loadings from site infrastructure	Bi-annually during open water
Verification	Construction, Operations, Closure	MEL_07	Pond, H1	Possible seepage or dust loadings from site infrastructure	Bi-annually during open water
Verification	Construction, Operations, Closure	MEL_08	Local Lake, B5	Possible seepage or dust loadings from site infrastructure	Bi-annually during open water
Verification	Operations, Closure	MEL_10	CP3	Collection of drainage from dry stacked tailings	Monthly during open water or when water is present
Verification	Operations, Closure	MEL_11	CP4	Collection of drainage from WRSF1	Monthly during open water or when water is present
Verification	Construction, Operations,	MEL_12	CP5	Collection of drainage from	Monthly during open water or

Table 9.1 Water Quality Regulated, General Aquatic and Verification Monitoring for the Meliadine Gold Project during Construction, Operations, and Closure

Monitoring Type	Mine Development Phase	Monitoring Station Number	Station Description	Purpose of Station	Frequency
	Closure			WRSF1 and WRSF2	when water is present
Verification	Operations, Closure	MEL_13	CP6	Collection of drainage from WRSF3	Monthly during open water or when water is present
Verification	Construction, Operations, Closure	MEL_14	Landfill	Located between the landfill and Pond H3 to monitor seepage from the landfill	Monthly during open water or when water is present
Regulated	Construction, Operations, Closure	Mel-15	Secondary containment area of the tankfarm at Itivia	Test quality before discharge to land	Prior to discharge or transfer of effluent

[a] *Sampling may not occur during break-up (June)*

CP = contact pond; WRSF = waste rock storage facility;

9.2 Water Licence Type A Monitoring

It is noted that regulated monitoring is expected to start following issuance of the Type A Water Licence and when the volume of water discharged to the environment exceeds MMER regulated thresholds. Regulated monitoring will be carried out at the frequency and for the parameters specified in the MMER and Type A Water Licence for the Project.

Effluent quality limits are to be applied at the last point of control (i.e., MEL_04) prior to discharge to the receiving environment and will be regulated as part of the Type A Water Licence 2AM-MEL1631 (Part F). They represent values that will be protective of aquatic life, protective of traditional drinking water uses, and are in compliance with regulations (i.e., MMER; Government of Canada 2012). The Mine will be operated so that water quality objectives are met at the edge of the mixing zone in Meliadine Lake and the Project does not have a significant adverse effect on opportunities for traditional and non-traditional use of fish, and the health of aquatic life, and human health. In Part F of the Type A Water Licence 2AM-MEL1631, there are effluent quality limits (maximum average concentration and maximum concentration in a grab sample) for 13 parameters.

Parameters for the verification monitoring program have not been explicitly defined. However, it is anticipated that the verification monitoring program will include the following parameters for the evaluation of site-wide water quality during operations: temperature, conductivity, alkalinity, pH, suspended solids, MMER metals, total cyanide, chloride, and petroleum hydrocarbons. Monitoring parameters may vary between locations. During the closure period, parameters included in the CCME aquatic life guidelines may also be included in the verification monitoring program.

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APPENDIX A • FIGURES

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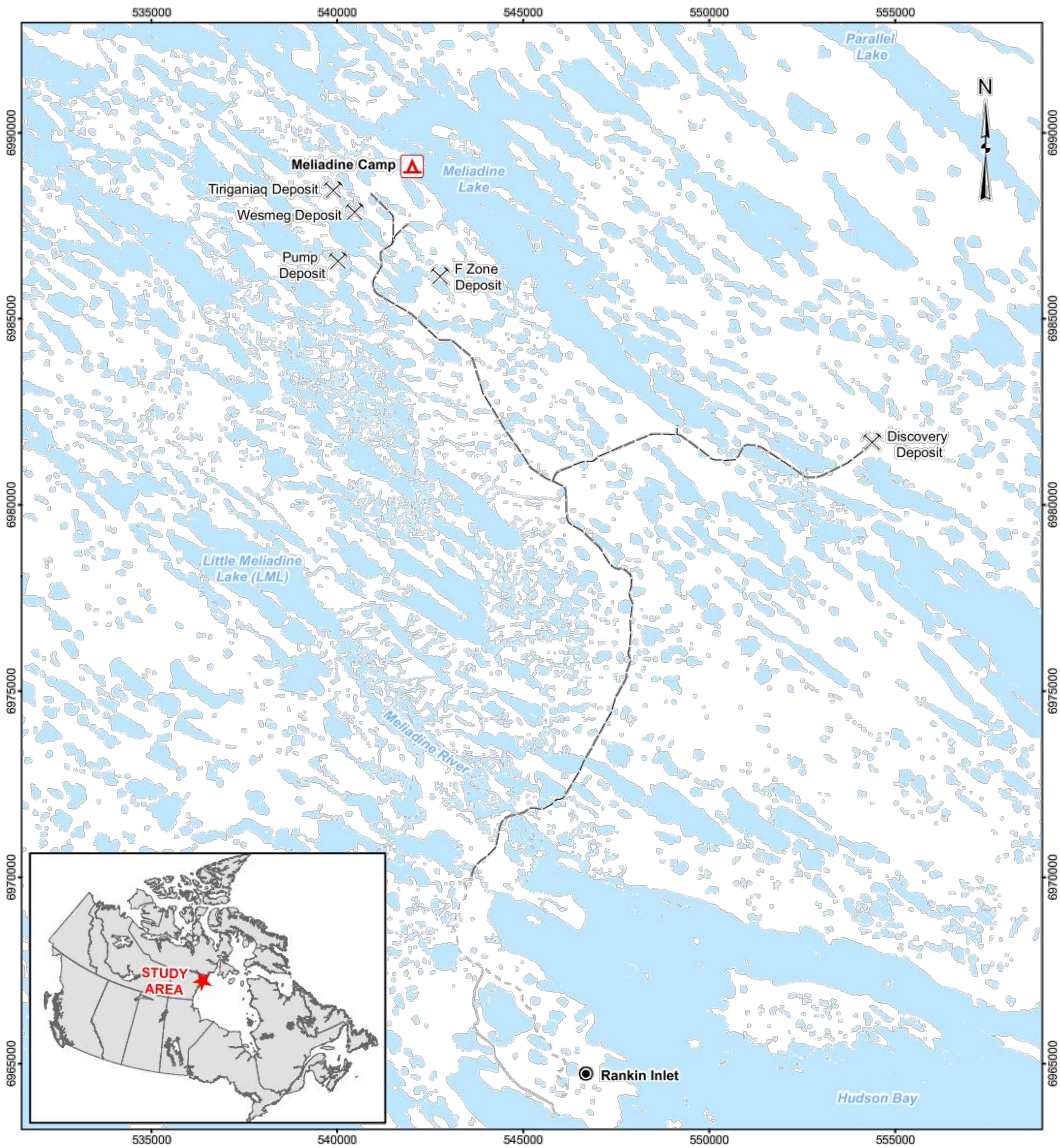

LEGEND

- Camp
- Proposed Mine Site
- All-weather Access Road (AWAR)
- Road - New
- Road - Existing
- Watercourse
- Waterbody

AGNICO EAGLE

AGNICO EAGLE – MELIADINE GOLD PROJECT

FIGURE 1.1 GENERAL PROJECT LOCATION PLAN

No. PROJET / PROJECT No.	DATE 09–23–2014	
DESSINÉ PAR / DRAWN BY CB		FEUILLE/SHT 1 / 1
APPROUVÉ PAR / APPROVED BY HX		
NO. DESSIN / DRAWING NO. 6500–680–210–200		REVISION A

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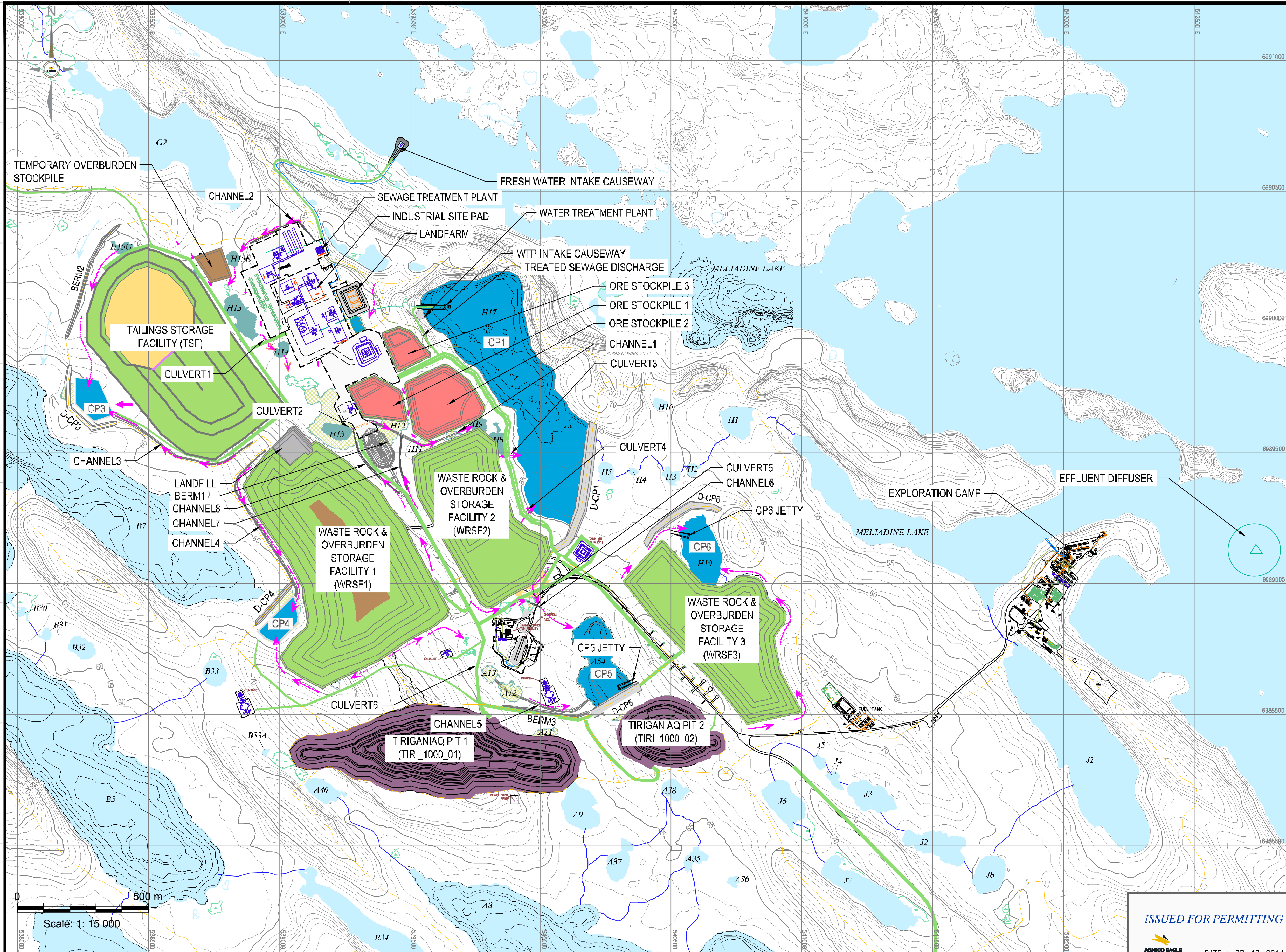

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- CONTACT WATER FLOW DIRECTION

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

REV	DESCRIPTION	DATE	PAR BY

REVISIONS

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VÉRIFIÉ PAR CHECKED BY	NG		22-12-2014
APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE
AGNICO EAGLE – MLIADINE GOLD PROJECT
FIGURE 1.2 GENERAL SITE LAYOUT PLAN
(YEAR 7 OPERATOIN)

ISSUED FOR PERMITTING
DATE : 22-12-2014

ÉCHELLE/ SCALE	1:15000	FICHIER FILE	.DWG
No. DESSIN/ DRAWING NO.	6500-680-210-200	REVISION A	FEUILLE/SHT 1 / 1

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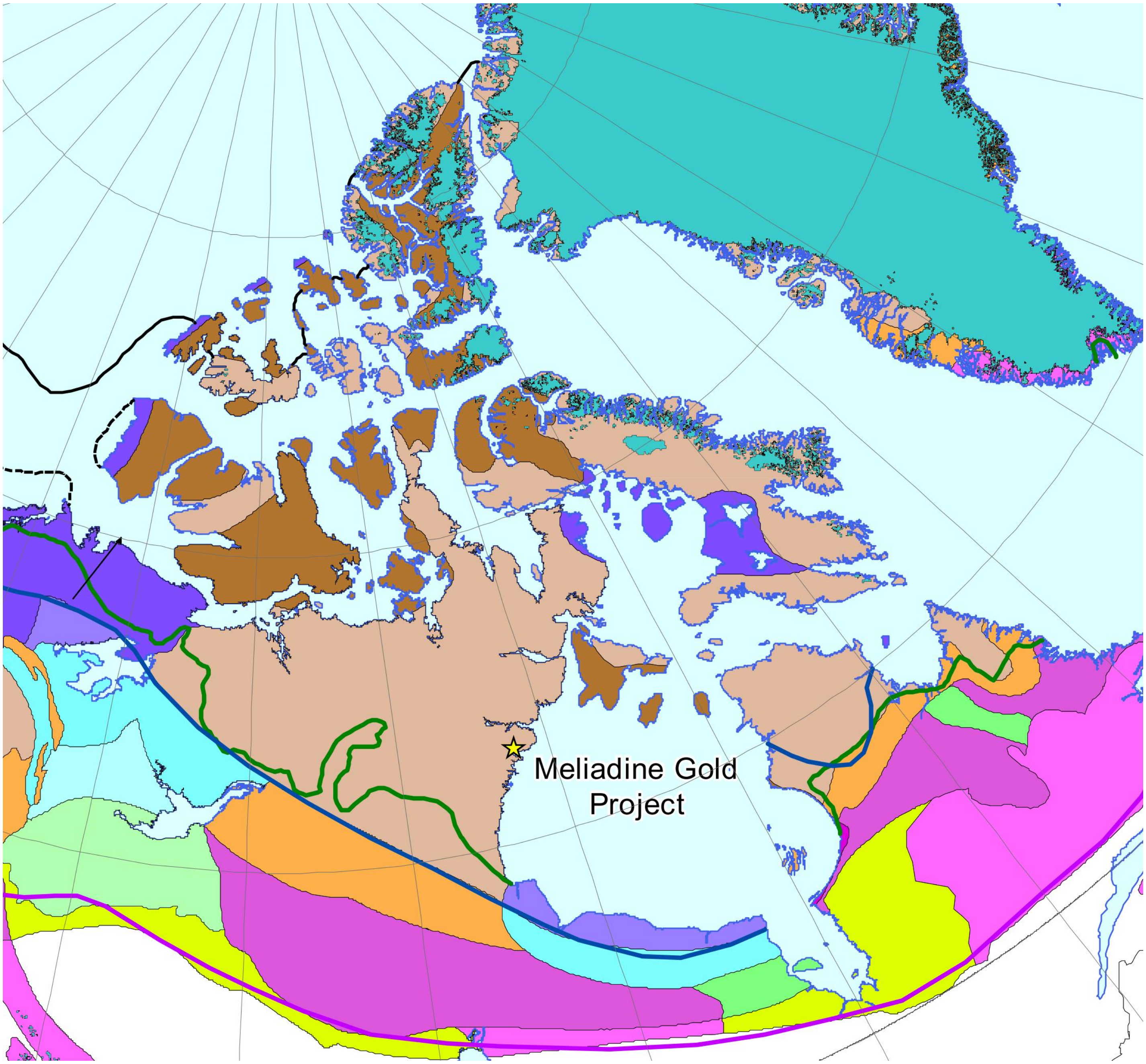

Legend for EASE-Grid Permafrost and Ground Ice Map

Permafrost Extent (percent of area)	Ground Ice Content (visible ice in the upper 10-20 m of the ground; percent by volume				
	Lowlands, highlands, and intra-and intermontane depressions characterized by thick overburden cover (>5-10m)			Mountains, highlands, ridges, and plateaus characterized by thin overburden cover (<5-10 m) and exposed bedrock)	
	High (> 20%)	Medium (10-20%)	Low (0-10%)	High to medium (>10%)	Low (0-10%)
Continuous (90-100%)	Ch	Cm	Cl	Ch	Cl
Discontinuous (50-90%)	Dh	Dm	Dl	Dh	Dl
Sporadic (10-50%)	Sh	Sm	Sl	Sh	Sl
Isolated Patches (0-10%)	Ih	Im	Il	Ih	Il

Variations in the extent of permafrost are shown by the different colors; variations in the amount of ground ice are shown by the different intensities of color. Letter codes assist in determining to which basic permafrost and ground ice class any particular unit belongs. Letter codes are defined in the documentation that accompanies the data files.

Ice caps and glaciers

LEGEND

- MELIADINE GOLD PROJECT
- SOUTHERN BOUNDARY OF CONTINUOUS PERMAFROST - PRESENT
- SOUTHERN BOUNDARY OF DISCONTINUOUS PERMAFROST - PRESENT
- TREELINE
- SEA-ICE EDGE LIMIT
- SUBSEA PERMAFROST LIMIT

REV	DATE	DESCRIPTION	PAR BY

REVISIONS

AGNICO EAGLE

AGNICO EAGLE – MELIADINE GOLD PROJECT

FIGURE 2.1 PERMAFROST MAP OF CANADA

No. PROJET PROJECT No.		DATE	09–23–2014
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APPROUVÉ PAR APPROVED BY	HX		
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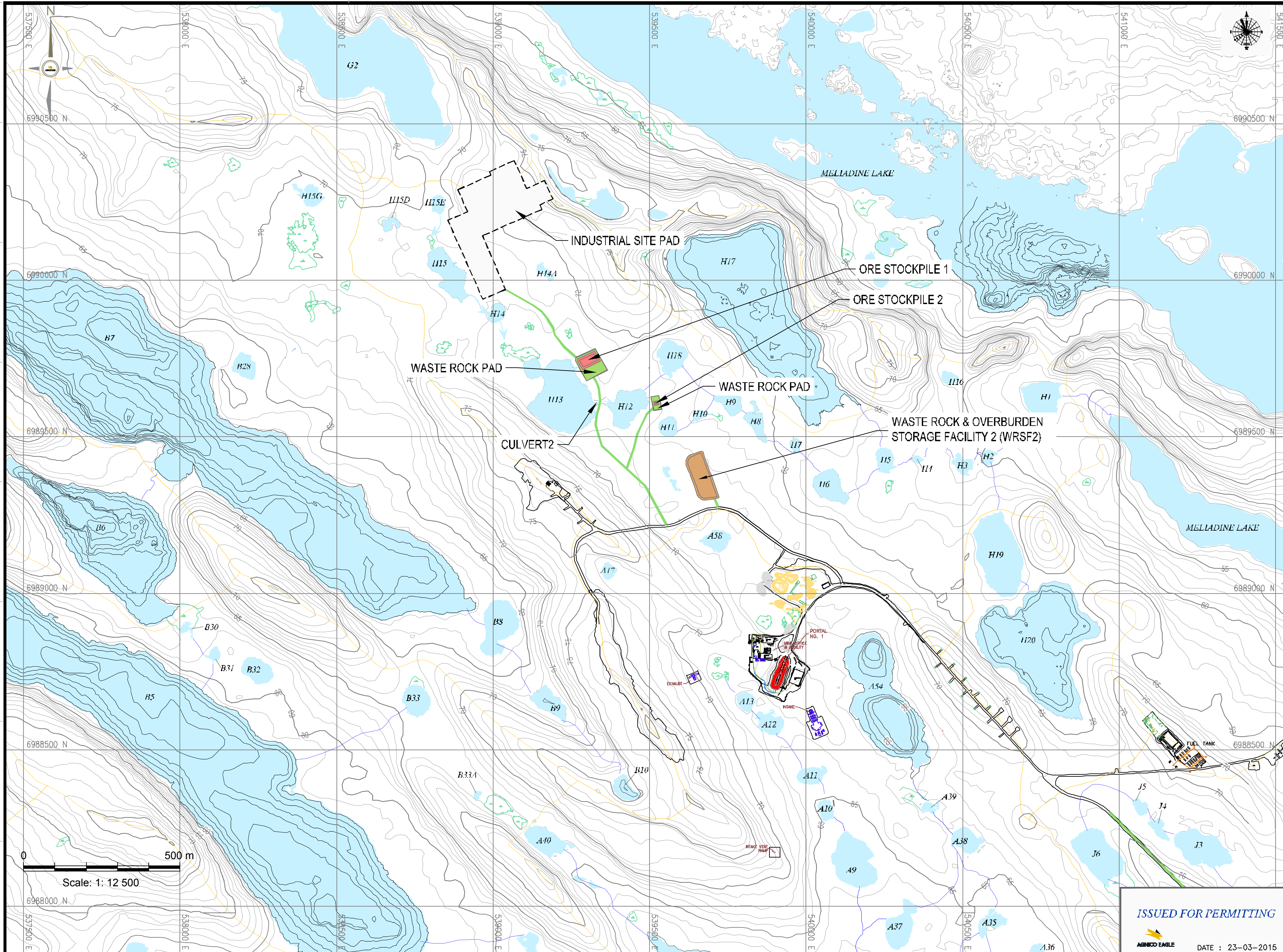

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- NON CONTACT WATERBODY
- OVERBURDEN
- WASTE ROCK
- ORE
- INDUSTRIAL SITE PAD
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

REV	DESCRIPTION	DATE	PAR BY

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DESSINÉ PAR / DRAWN BY	HX	DATE 29-03-2015
VÉRIFIÉ PAR / CHECKED BY	NG	29-03-2015
APPROUVÉ PAR / APPROVED BY		
No. PROJET / PROJECT NO.		
DATE		

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.1 YEARLY SITE LAYOUT PLAN
FOR WATER MANAGEMENT
(LAST QUARTER OF YEAR -5)

ISSUED FOR PERMITTING
AGNICO EAGLE
DATE : 23-03-2015

ÉCHELLE/SCALE	1:12500	FICHIER/FILE	.DWG
No. DESSIN/DRAWING NO.	6500-680-210-200-001	REVISION A	FEUILLE/SHT 1 / 13

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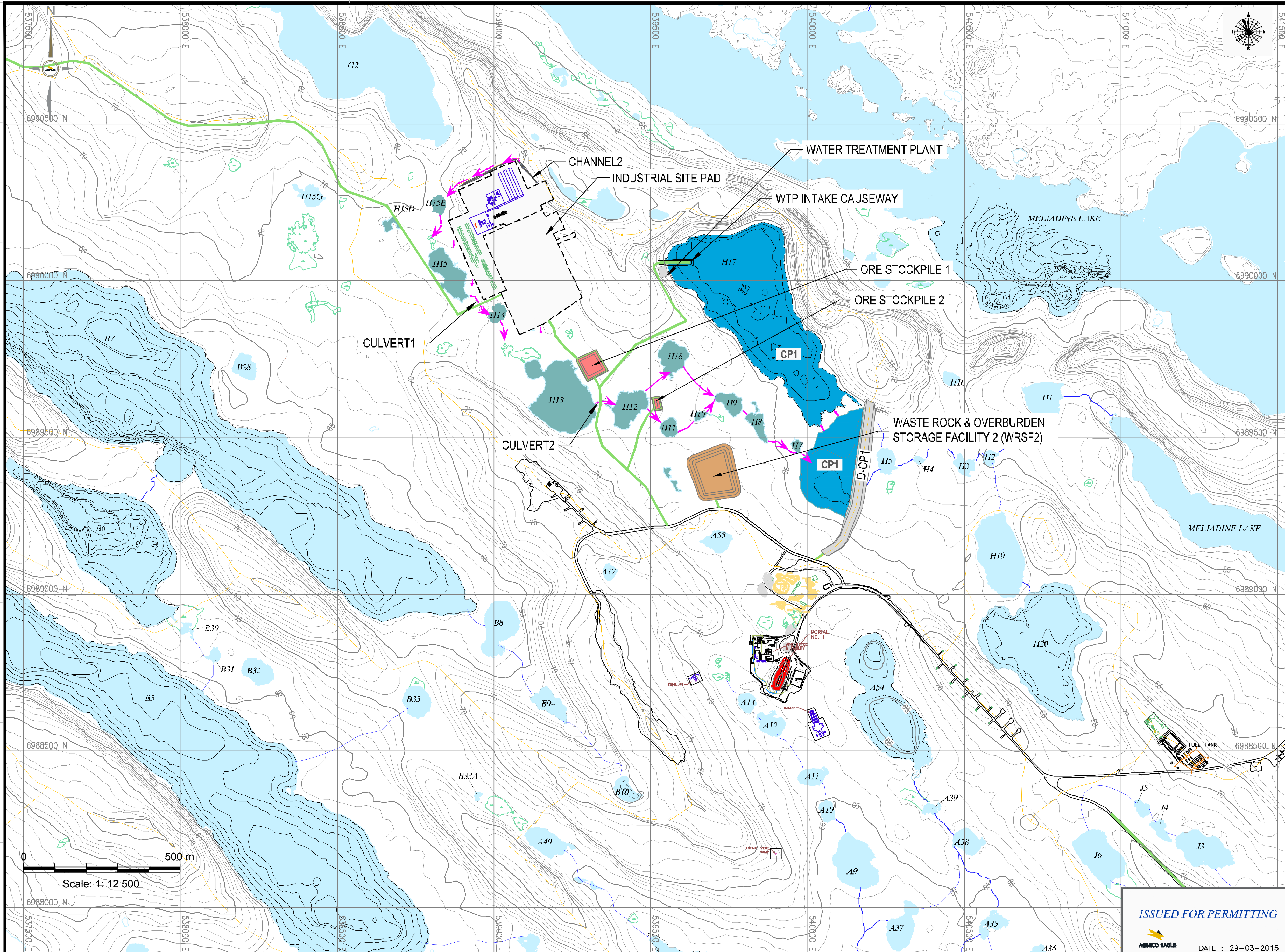

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- OVERBURDEN
- WASTE ROCK
- ORE
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

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VÉRIFIÉ PAR CHECKED BY	NG		29-03-2015
APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE

AGNICO EAGLE – MELIADINE GOLD PROJECT

FIGURE 3.2 YEARLY SITE LAYOUT PLAN FOR WATER MANAGEMENT (YEAR –4)

ISSUED FOR PERMITTING

DATE : 29-03-2015

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
No. DESSIN/ DRAWING NO.	6500-680-210-200-002	REVISION A	FEUILLE/SHT 2 / 13

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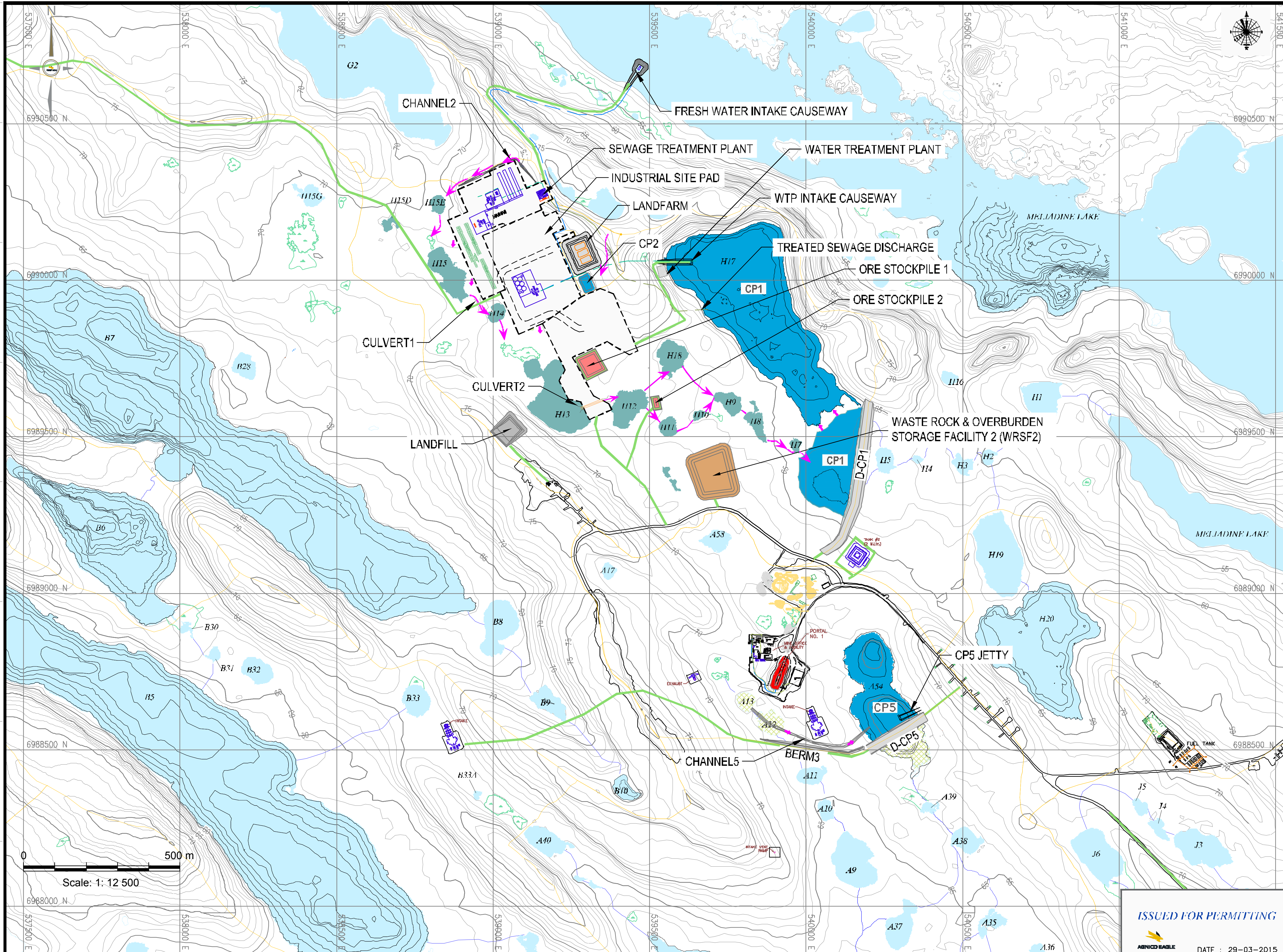

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- OVERBURDEN
- WASTE ROCK
- ORE
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.3 YEARLY SITE LAYOUT PLAN
FOR WATER MANAGEMENT
(YEAR -3)

ÉCHELLE/ SCALE	FICHIER FILE
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DRAWING NO.

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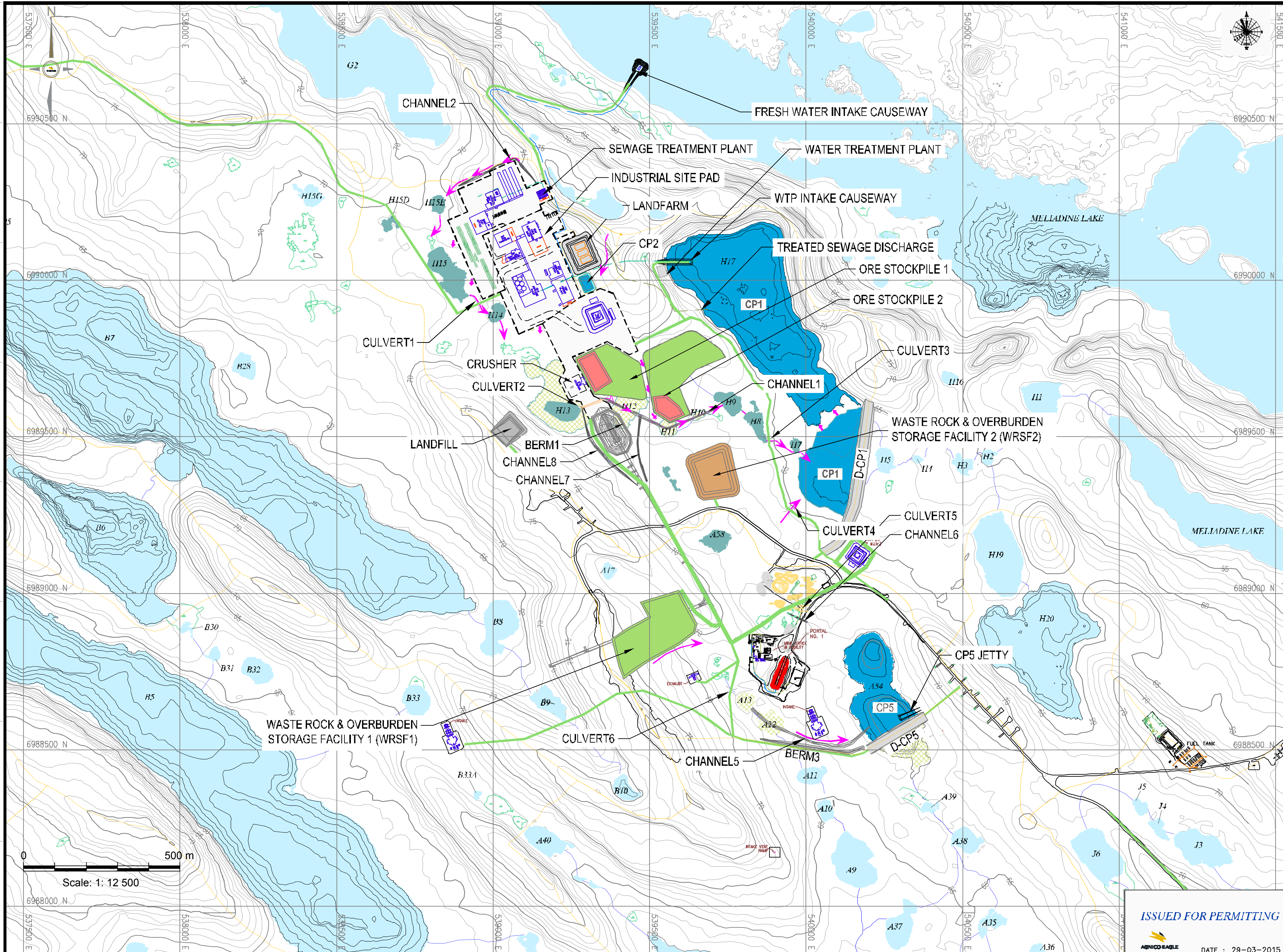

ISSUED FOR PERMITTING
AGNICO EAGLE
DATE : 29–03–2015

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OVERBURDEN
- WASTE ROCK
- ORE
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

REV	DESCRIPTION	DATE	PAR BY

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APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.4 YEARLY SITE LAYOUT PLAN FOR WATER MANAGEMENT (YEAR –2)

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
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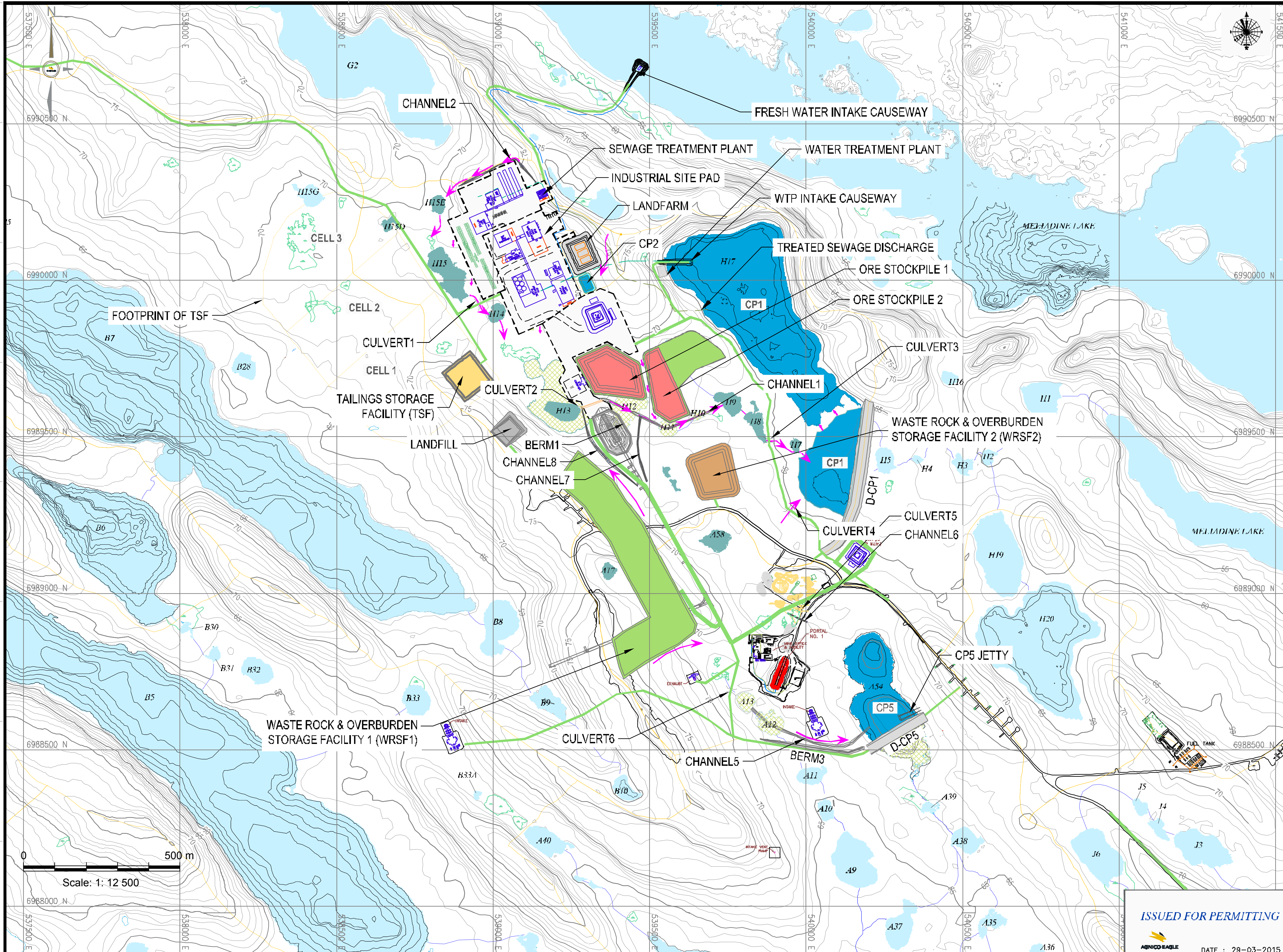

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG

DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

REV	DESCRIPTION	DATE	PAR BY

REVISIONS

DESSINÉ PAR DRAWN BY	HX	DATE	29-03-2015
VÉRIFIÉ PAR CHECKED BY	NG		29-03-2015
APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.5 YEARLY SITE LAYOUT PLAN
FOR WATER MANAGEMENT
(YEAR –1)

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG

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ISSUED FOR PERMITTING
AGNICO EAGLE
DATE : 29–03–2015

AE–CART–ANSI B

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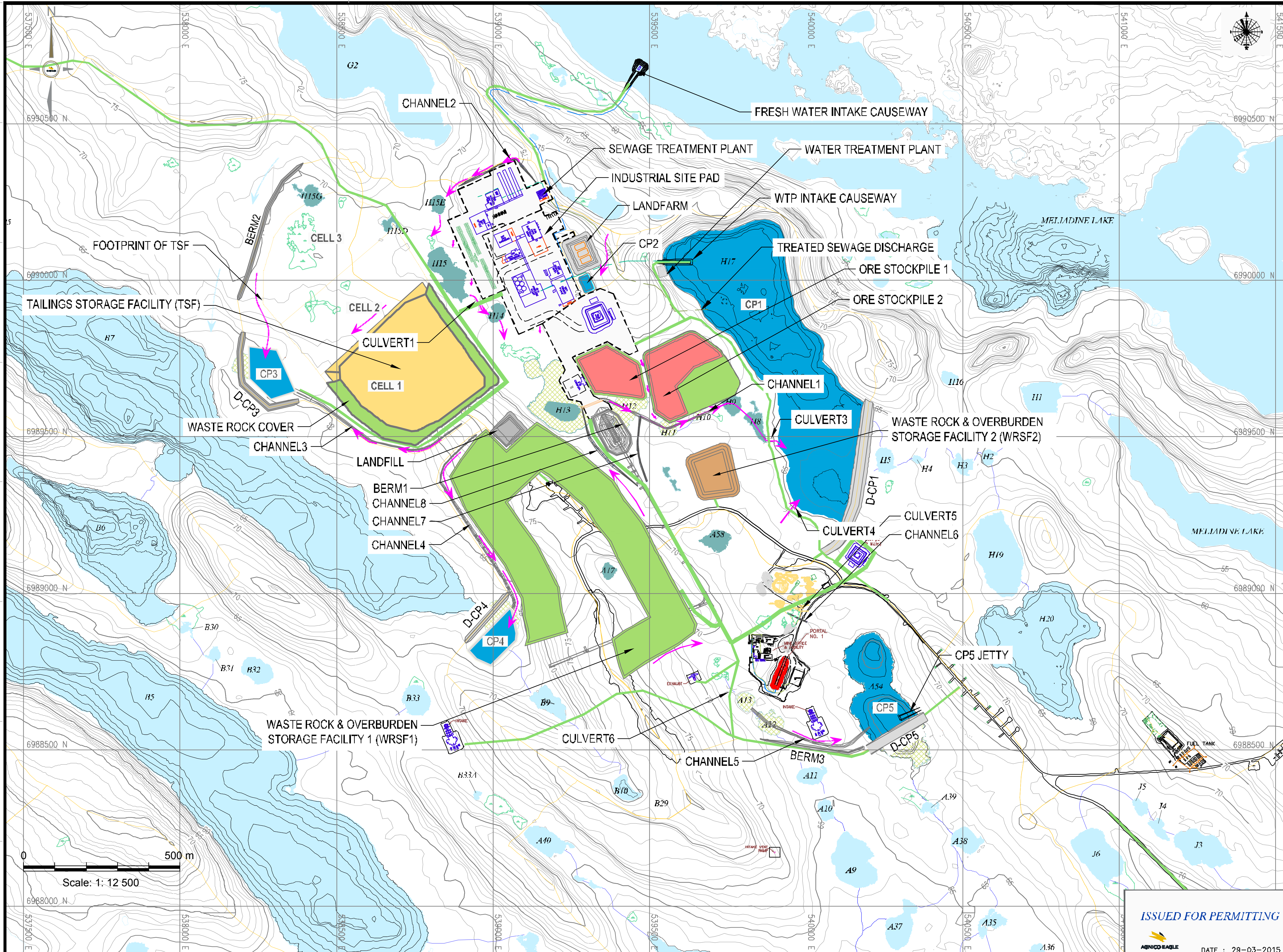

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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No. PROJET PROJECT NO.		
DATE		

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIUGRE 3.6 YEARLY SITE LAYOUT PLAN
FOR WATER MANAGEMENT
(YEAR 1)

ÉCHELLE/ SCALE 1:12500 | FICHIER FILE .DWG

No. DESSIN/ DRAWING NO. 6500–680–210–200–006 | REVISION A | FEUILLE/SHT 6 / 13

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Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 3.6.dwg

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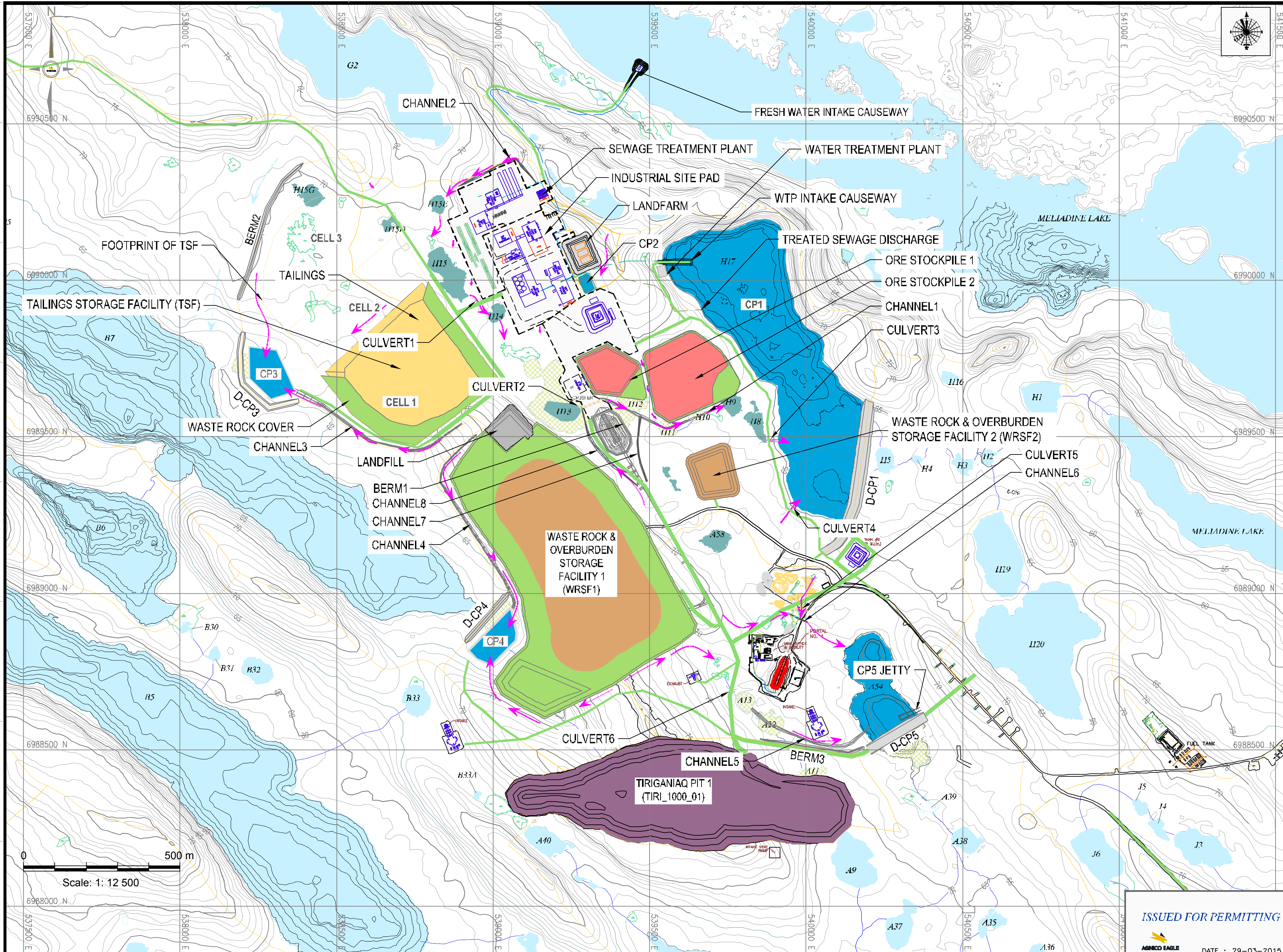

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE

AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.7 YEARLY SITE LAYOUT PLAN
FOR WATER MANAGEMENT
(YEAR 2)

ISSUED FOR PERMITTING
DATE : 29–03–2015

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
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Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 3.7.dwg

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DRAWING NO.

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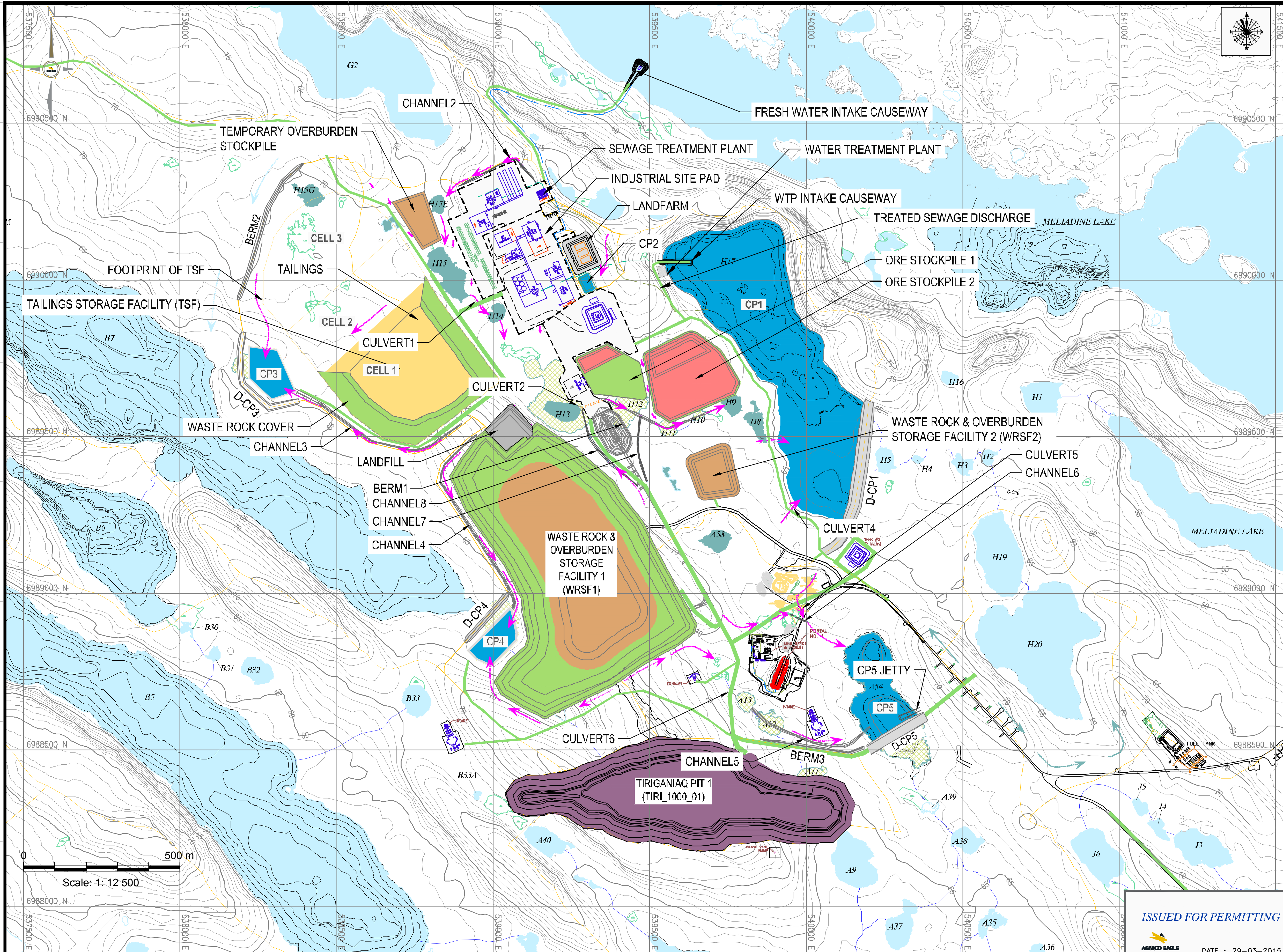

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.8 YEARLY SITE LAYOUT PLAN
FOR WATER MANAGEMENT
(YEAR 3)

ISSUED FOR PERMITTING
DATE : 29–03–2015

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
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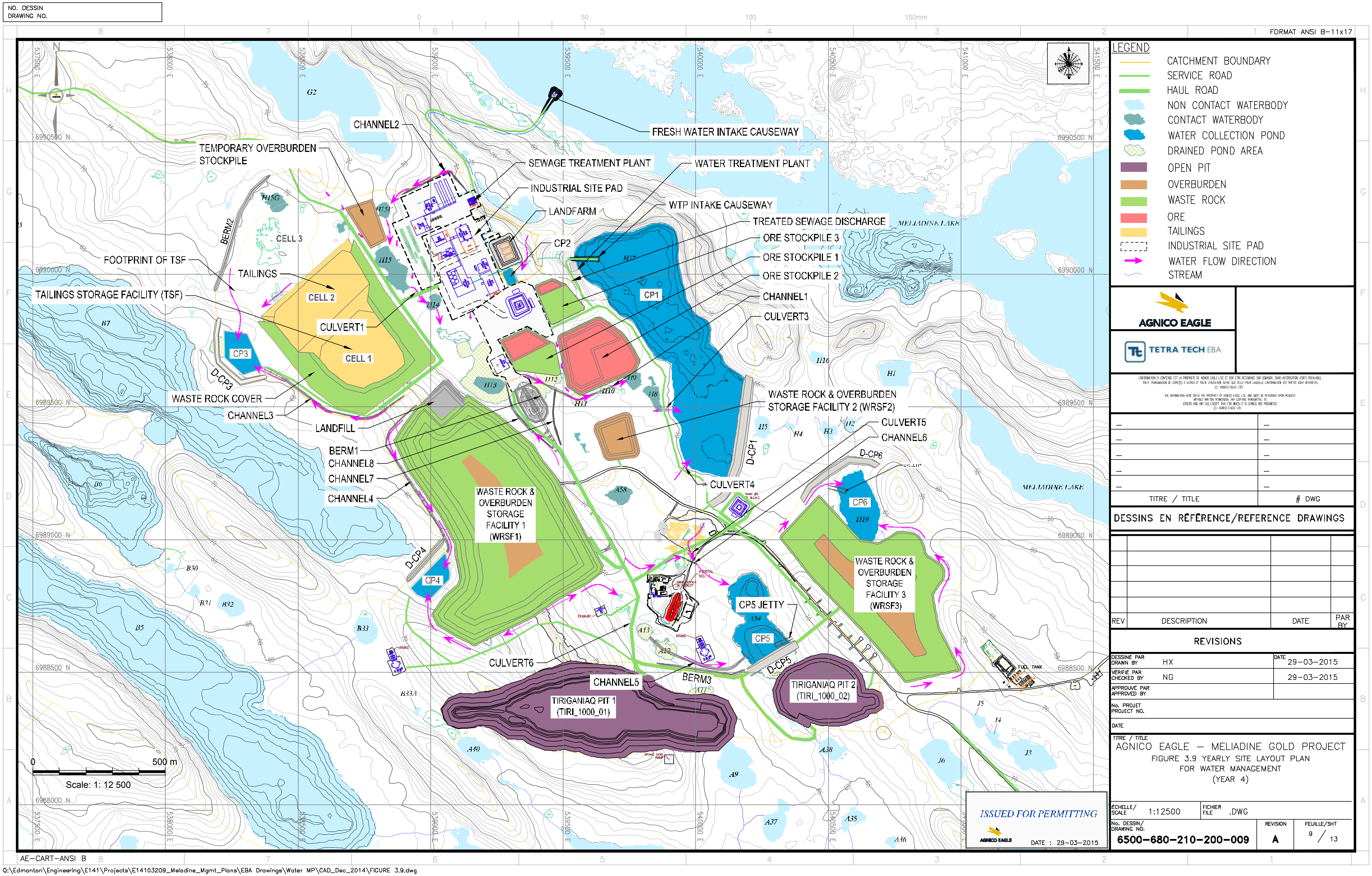
Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 3.8.dwg



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DRAWING NO.
FORMAT ANSI B–11x17
LEGEND
CATCHMENT BOUNDARY
SERVICE ROAD
HAUL ROAD
NON CONTACT WATERBODY
CONTACT WATERBODY
WATER COLLECTION POND
DRAINED POND AREA
OPEN PIT
OVERBURDEN
WASTE ROCK
ORE
TAILINGS
INDUSTRIAL SITE PAD
WATER FLOW DIRECTION
STREAM
FRESH WATER INTAKE CAUSEWAY
CHANNEL2
TEMPORARY OVERBURDEN STOCKPILE
SEWAGE TREATMENT PLANT
WATER TREATMENT PLANT
INDUSTRIAL SITE PAD
WTP INTAKE CAUSEWAY
LANDFARM
TREATED SEWAGE DISCHARGE
MELIADINE LAKE
CP2
ORE STOCKPILE 3
ORE STOCKPILE 1
ORE STOCKPILE 2
CHANNEL1
CULVERT3
BERM2
CELL 3
FOOTPRINT OF TSF
TAILINGS
CELL 2
TAILINGS STORAGE FACILITY (TSF)
CULVERT1
CELL 1
CP1
CP3
D-CP3
WASTE ROCK COVER
CHANNEL3
LANDFILL
WASTE ROCK & OVERBURDEN STORAGE FACILITY 2 (WRSF2)
CULVERT5
CHANNEL6
BERM1
CHANNEL8
CHANNEL7
CHANNEL4
D-CP1
D-CP6
CULVERT4
WASTE ROCK & OVERBURDEN STORAGE FACILITY 1 (WRSF1)
CP6
D-CP4
CP4
WASTE ROCK & OVERBURDEN STORAGE FACILITY 3 (WRSF3)
CP5 JETTY
CP5
D-CP5
CULVERT6
CHANNEL5
BERM3
TIRIGANIAQ PIT 1 (TIRI_1000_01)
TIRIGANIAQ PIT 2 (TIRI_1000_02)
FUEL TANK
0
500 m
Scale: 1: 12 500
ISSUED FOR PERMITTING
DATE : 29-03-2015
AGNICO EAGLE
TETRA TECH EBA
TITRE / TITLE
DWG
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DATE 29-03-2015
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APPROUVÉ PAR APPROVED BY
No. PROJET PROJECT NO.
DATE
TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.9 YEARLY SITE LAYOUT PLAN FOR WATER MANAGEMENT (YEAR 4)
ÉCHELLE/ SCALE 1:12500
FICHIER FILE .DWG
No. DESSIN/ DRAWING NO. 6500-680-210-200-009
REVISION A
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Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 3.9.dwg

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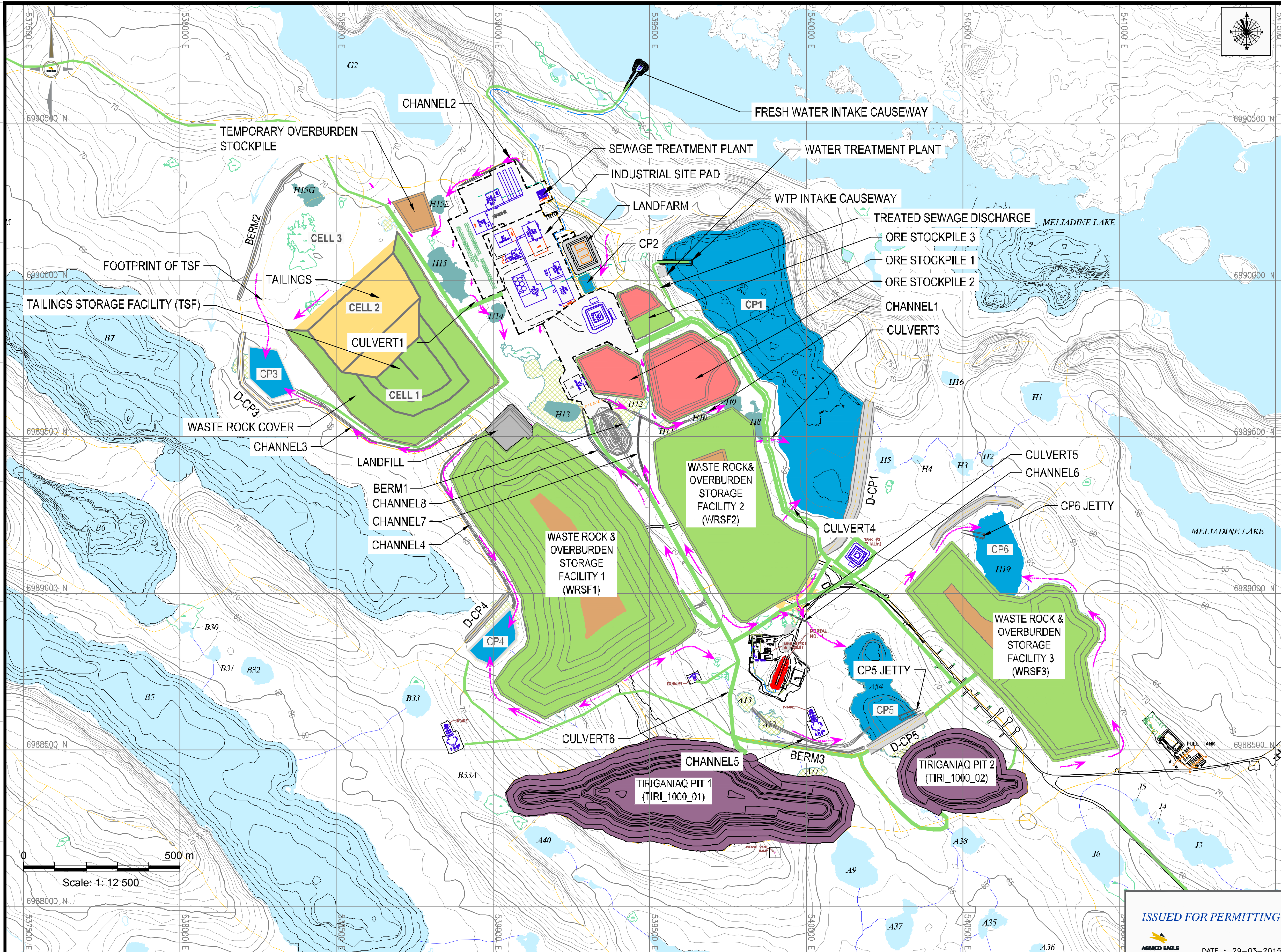

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.10 YEARLY SITE LAYOUT PLAN FOR WATER MANAGEMENT (YEAR 5)

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AGNICO EAGLE
DATE : 29-03-2015

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
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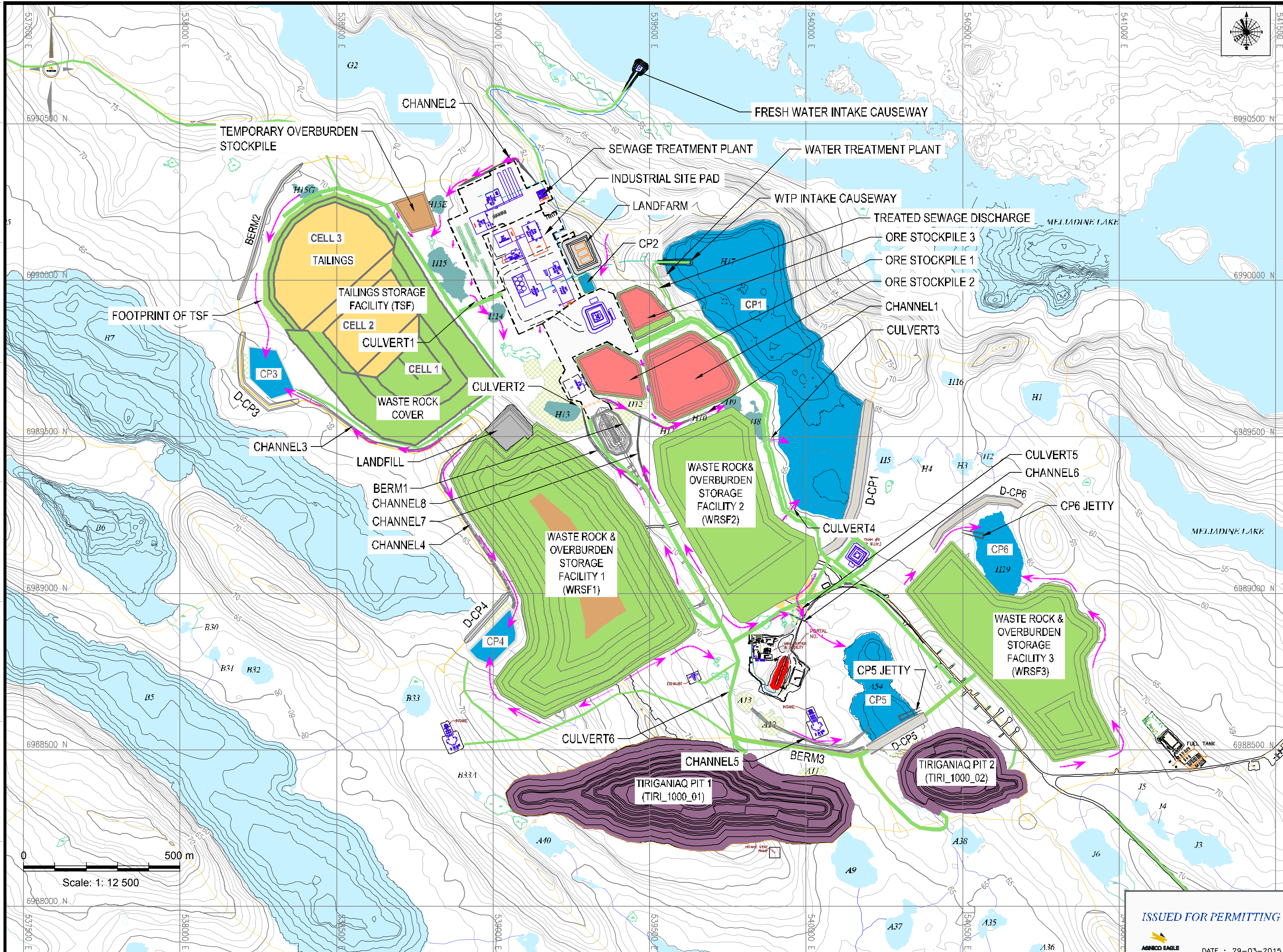

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

ISSUED FOR PERMITTING

DATE : 29-03-2015

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DATE			

TITRE / TITLE

AGNICO EAGLE – MELIADINE GOLD PROJECT

FIGURE 3.11 YEARLY SITE LAYOUT PLAN FOR WATER MANAGEMENT (YEAR 6)

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
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Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 3.11.dwg

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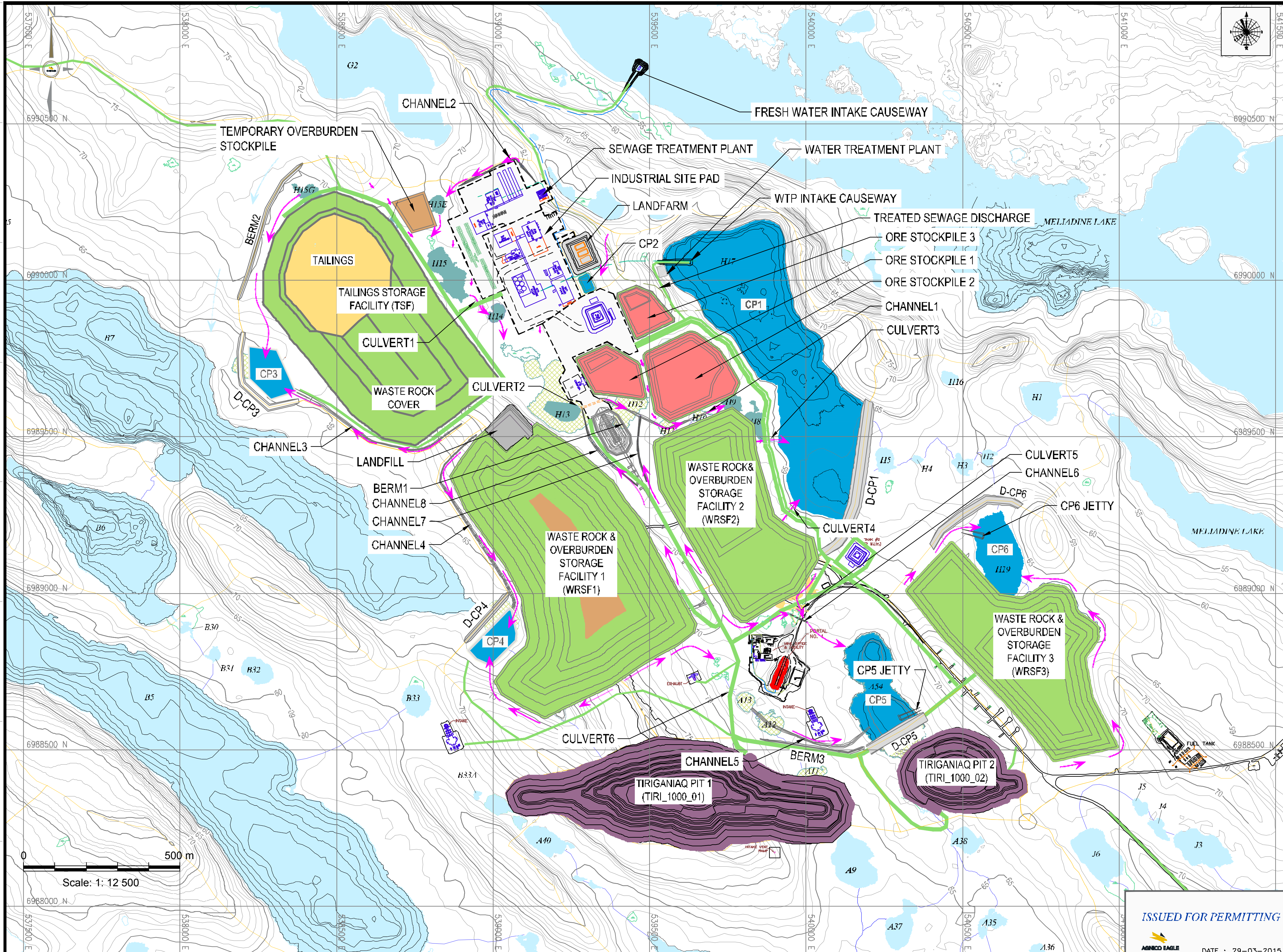

LEGEND
- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.12 YEARLY SITE LAYOUT PLAN FOR WATER MANAGEMENT (YEAR 7)

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
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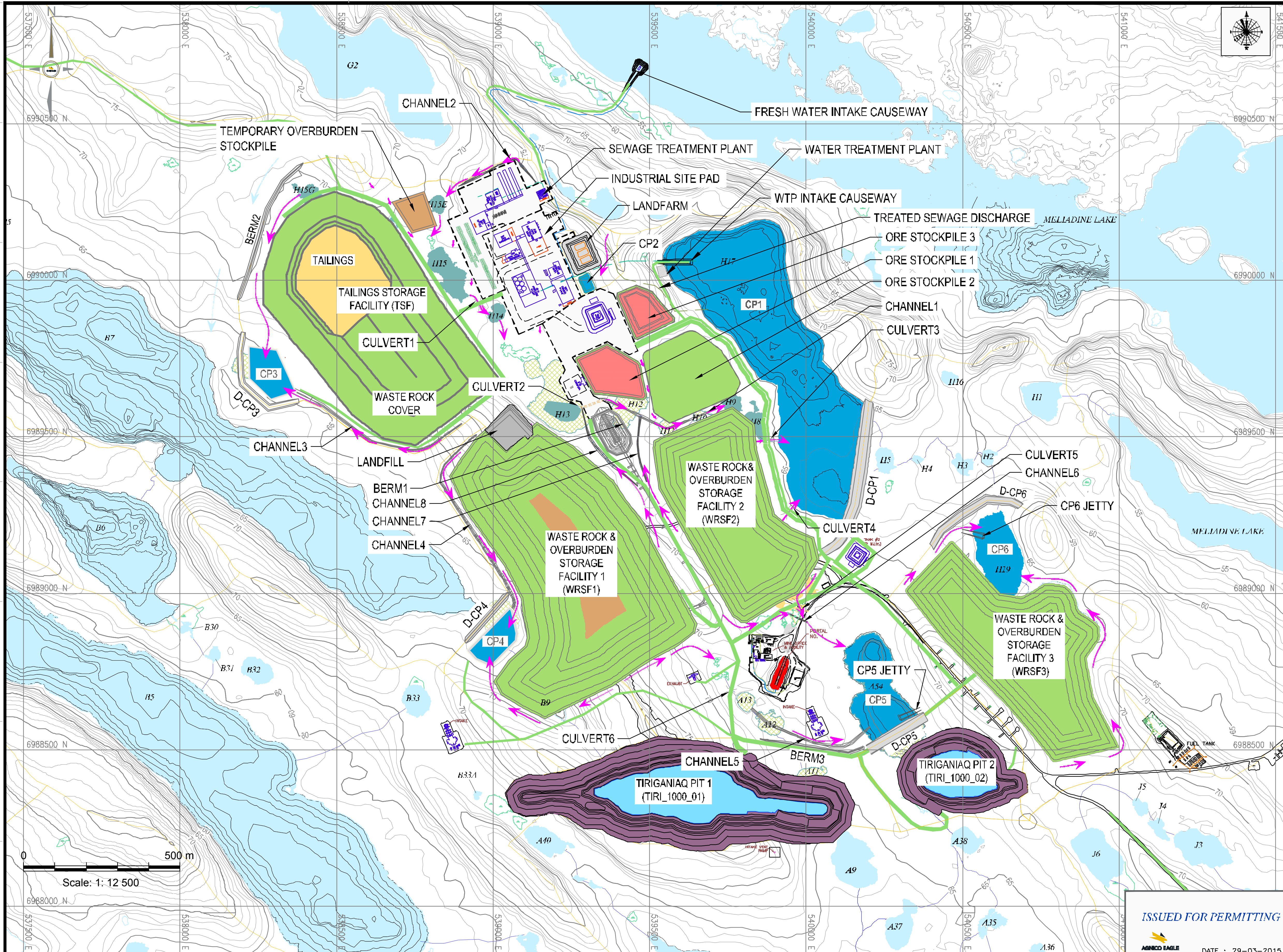

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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DESSINS EN RÉFERENCE/REFERENCE DRAWINGS

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DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 3.13 YEARLY SITE LAYOUT PLAN
FOR WATER MANAGEMENT
(YEAR 8)

ÉCHELLE/ SCALE	FICHIER FILE
1:12500	.DWG

No. DESSIN/ DRAWING NO.	REVISION	FEUILLE/SHT
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DRAWING NO.

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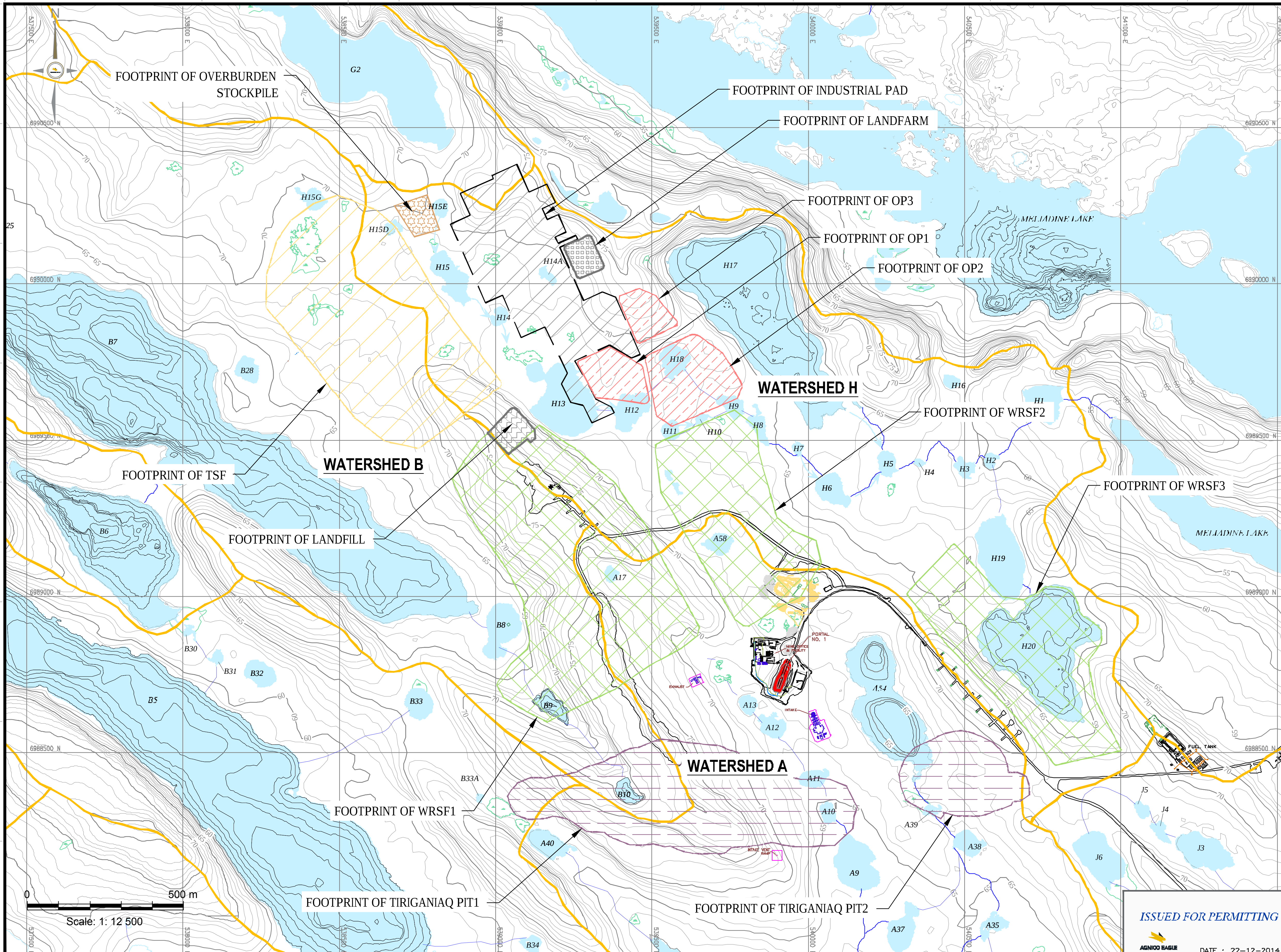

LEGEND

CATCHMENT BOUNDARY
NON CONTACT WATERBODY

AGNICO EAGLE

TETRA TECH EBA

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DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 4.1 WATERSHED AND WATERBODIES AFFECTED BY SITE INFRASTRUCTURE

ISSUED FOR PERMITTING
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ÉCHELLE/SCALE	FICHIER FILE		
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Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 4.1.dwg-September 5, 2014

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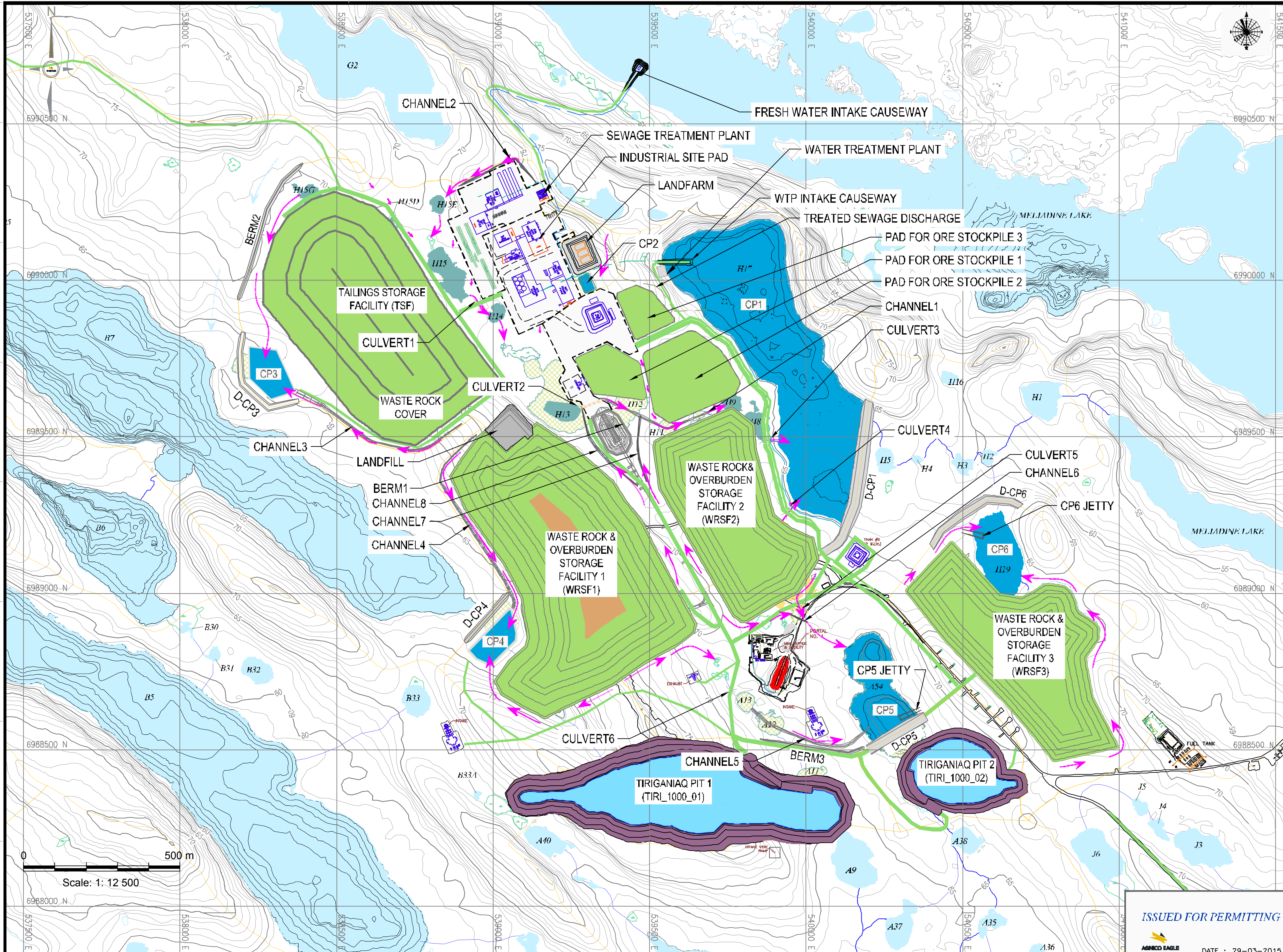

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OPEN PIT
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- STREAM

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

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APPROUVÉ PAR APPROVED BY			
No. PROJET PROJECT NO.			
DATE			

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 6.1 SITE LAYOUT PLAN
FOR WATER MANAGEMENT DRUING CLOSURE
(YEAR 9)

ISSUED FOR PERMITTING
DATE : 29-03-2015

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
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DRAWING NO.

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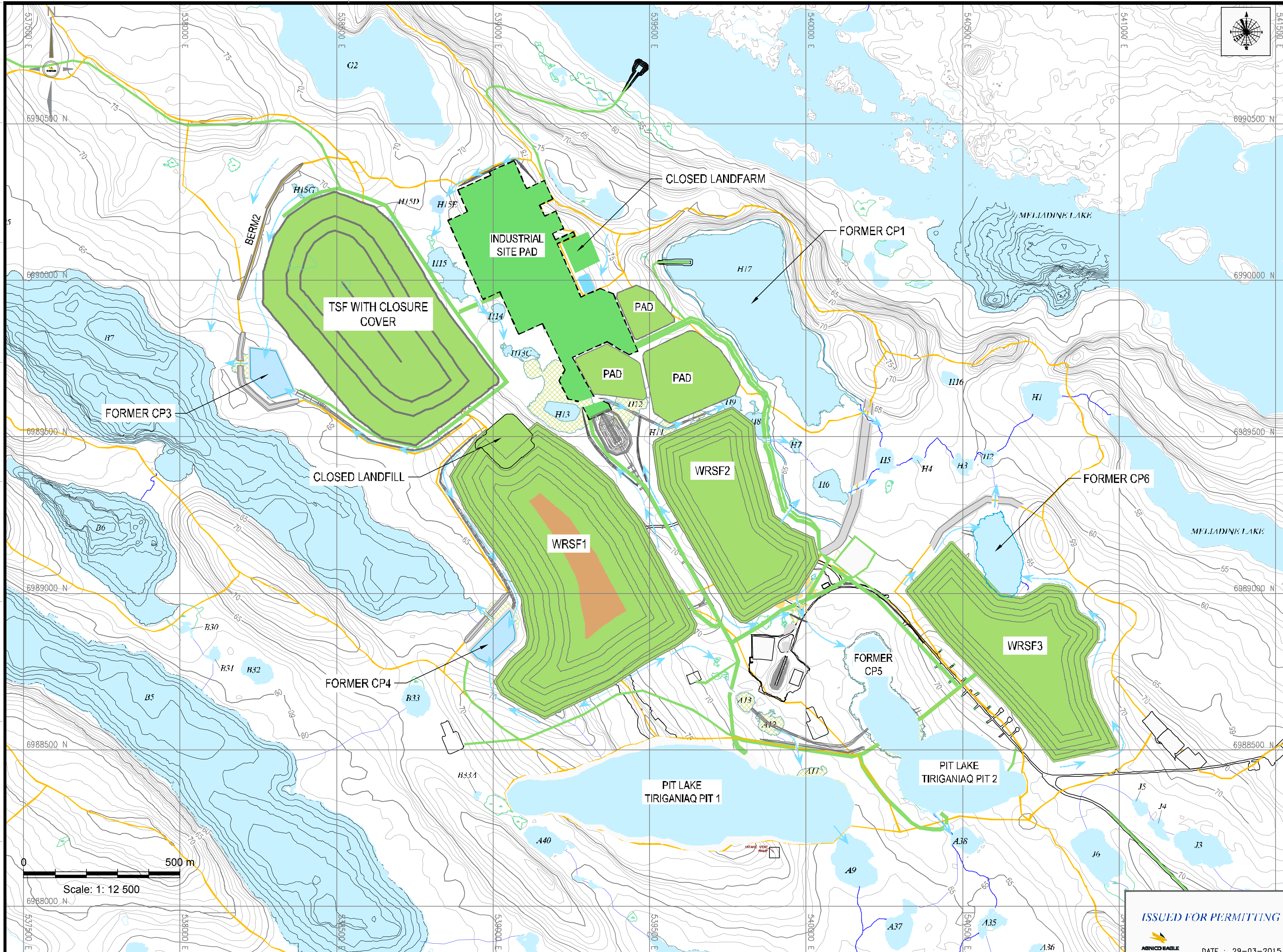

LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- STREAM
- WATERBODY
- DRAINED POND AREA
- WASTE ROCK
- WATER FLOW DIRECTION

AGNICO EAGLE

TETRA TECH EBA

TITRE / TITLE	# DWG
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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

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No. PROJET / PROJECT NO.		
DATE		

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 6.2 MINE SITE LAYOUT AFTER CLOSURE

ÉCHELLE/ SCALE	1:12500	FICHIER FILE	.DWG
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Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 6.2.dwg

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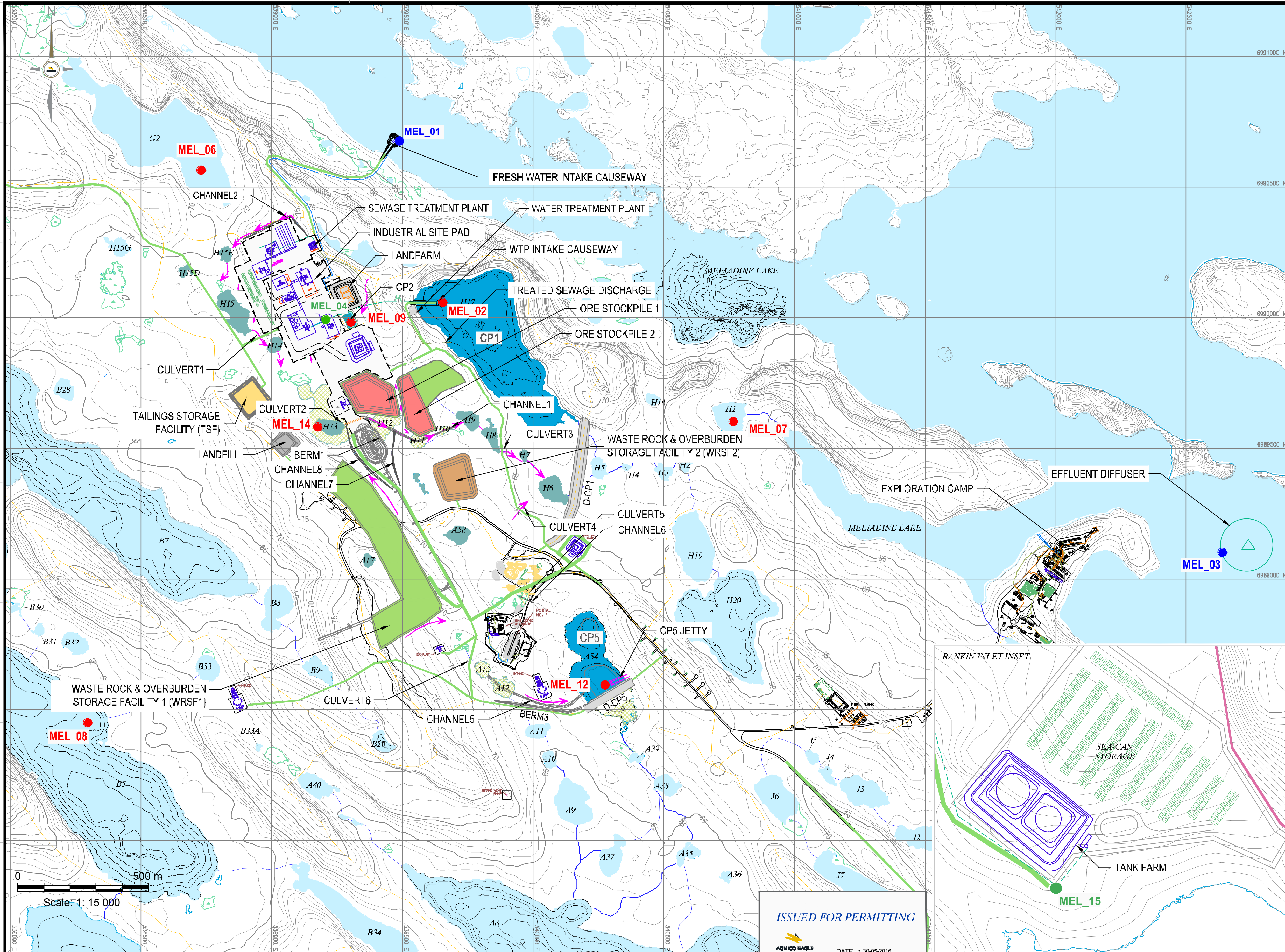
DRAWING NO.

FORMAT ANSI B–11x17



LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- REGULATED MONITORING LOCATION
- GENERAL AQUATIC MONITORING LOCATION
- VERIFICATION MONITORING LOCATION

AGNICO EAGLE

Golder Associates

TETRA TECH EBA

TITRE / TITLE	# DWG

DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

REV	DESCRIPTION	DATE	PAR BY

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DATE		

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 9.1: WATER QUALITY MONITORING LOCATIONS DURING CONSTRUCTION

ÉCHELLE/ SCALE	1:15000	FICHIER FILE	.DWG

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Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 9.1.dwg

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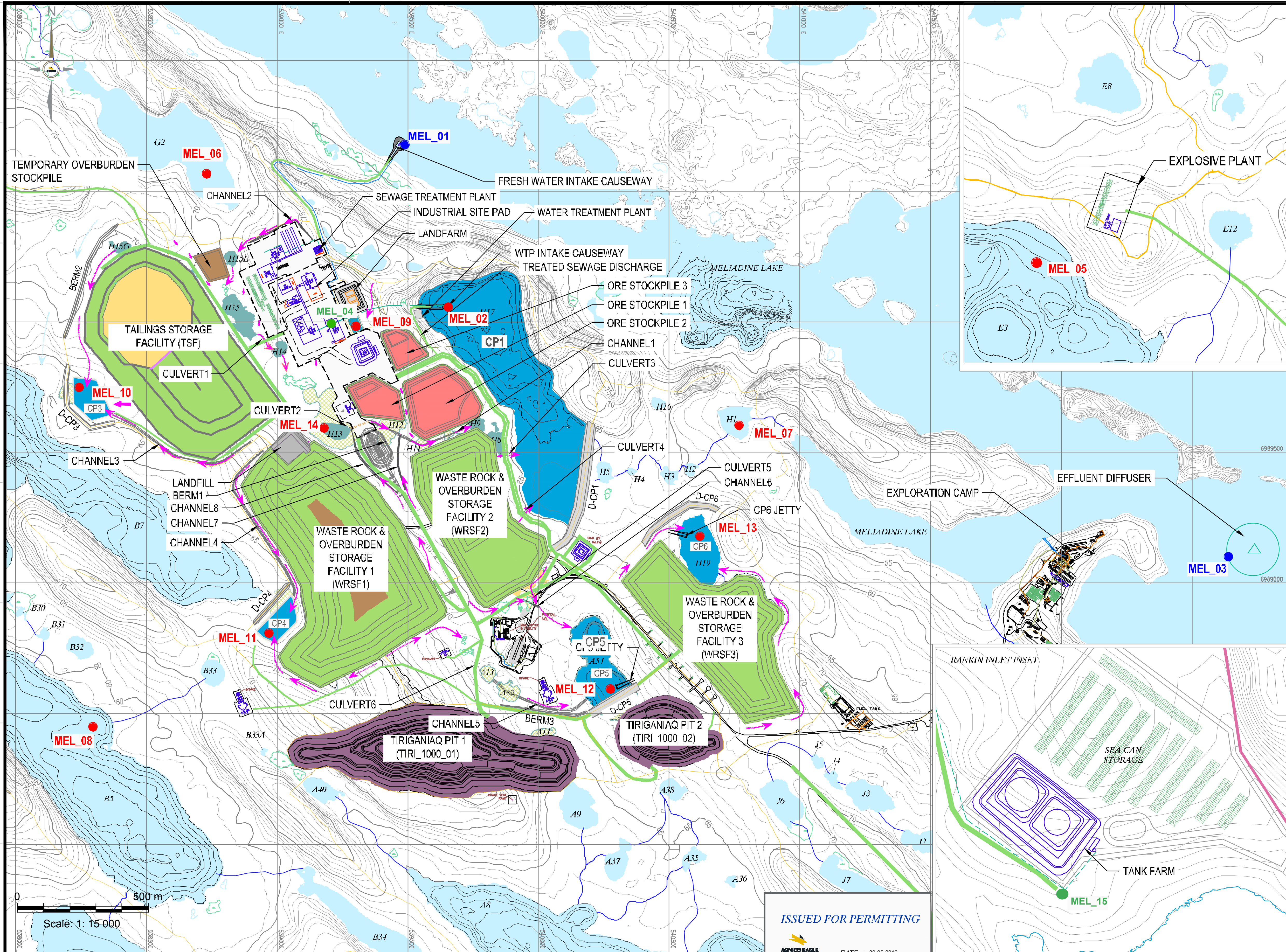
DRAWING NO.

FORMAT ANSI B–11x17



LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- REGULATED MONITORING LOCATION
- GENERAL AQUATIC MONITORING LOCATION
- VERIFICATION MONITORING LOCATION

AGNICO EAGLE

Golder Associates

TETRA TECH EBA

TITRE / TITLE	# DWG
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APPROUVÉ PAR / APPROVED BY	LY	30-05-2016
No. PROJET / PROJECT NO.		
DATE		

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 9.2: WATER QUALITY MONITORING LOCATIONS DURING OPERATIONS

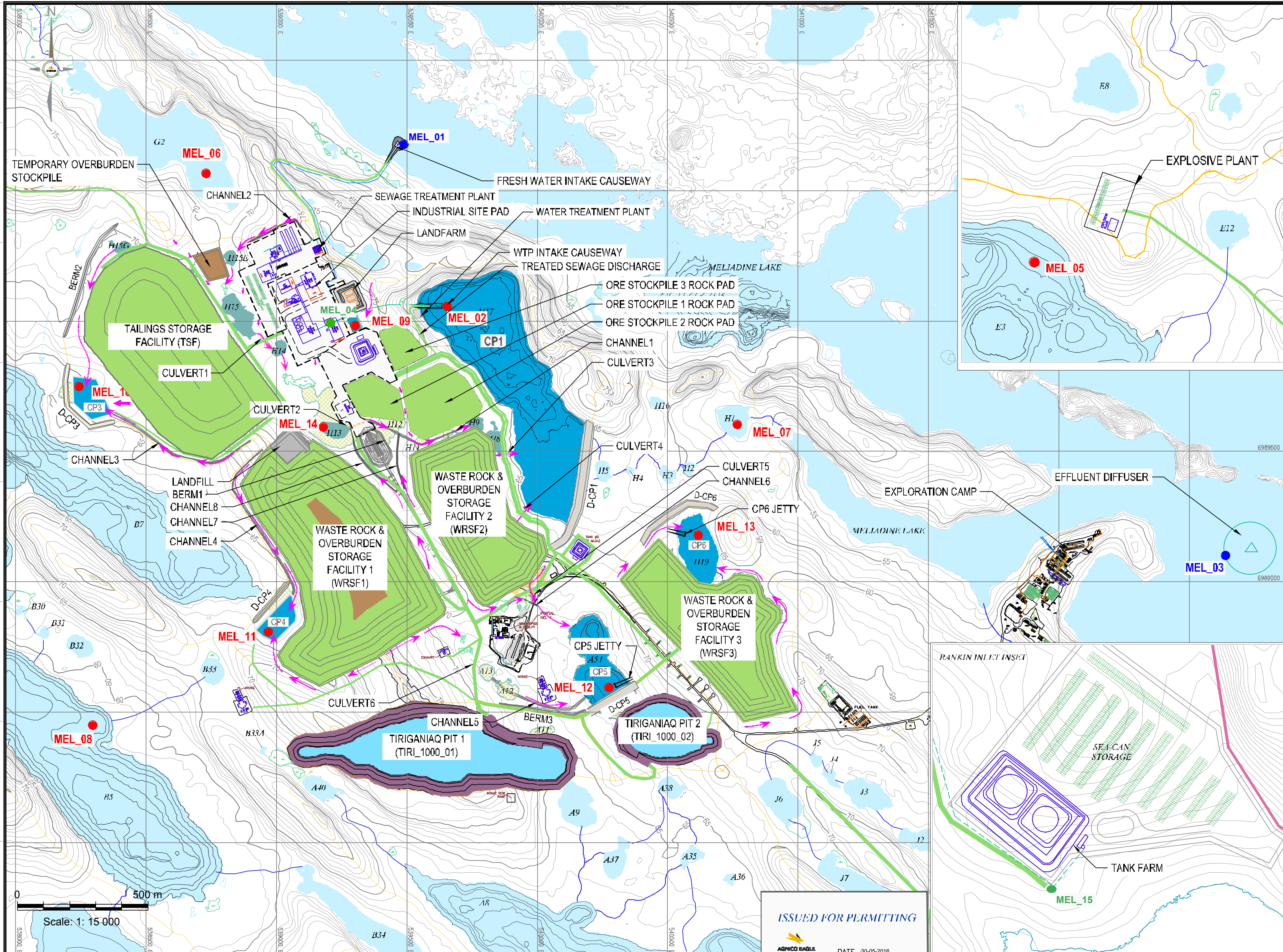
ÉCHELLE/ SCALE	1:15000	FICHIER FILE	.DWG
No. DESSIN/ DRAWING NO.	6500–680–210–200	REVISION A	FEUILLE/SHT 1 / 1

AE-CART-ANSI B

Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 9.2.dwg

NO. DESSIN
DRAWING NO.

FORMAT ANSI B–11x17



LEGEND

- CATCHMENT BOUNDARY
- SERVICE ROAD
- HAUL ROAD
- NON CONTACT WATERBODY
- CONTACT WATERBODY
- WATER COLLECTION POND
- DRAINED POND AREA
- OVERBURDEN
- WASTE ROCK
- ORE
- TAILINGS
- INDUSTRIAL SITE PAD
- WATER FLOW DIRECTION
- REGULATED MONITORING LOCATION
- GENERAL AQUATIC MONITORING LOCATION
- VERIFICATION MONITORING LOCATION

AGNICO EAGLE

Golder Associates

TETRA TECH EBA

TITRE / TITLE	# DWG
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DESSINS EN RÉFÉRENCE/REFERENCE DRAWINGS

REV	DESCRIPTION	DATE	PAR BY

REVISIONS

DESSINÉ PAR DRAWN BY	HX	DATE	29-03-2015
VÉRIFIÉ PAR CHECKED BY	NG		29-03-2015
APPROUVÉ PAR APPROVED BY	LY		30-05-2016

No. PROJET
PROJECT NO.

DATE

TITRE / TITLE
AGNICO EAGLE – MELIADINE GOLD PROJECT
FIGURE 9.3: WATER QUALITY MONITORING LOCATIONS DURING CLOSURE

ÉCHELLE/SCALE 1:15000
FICHIER/FILE .DWG
No. DESSIN/DRAWING NO. 6500-680-210-200
REVISION A
FEUILLE/SHT 1 / 1

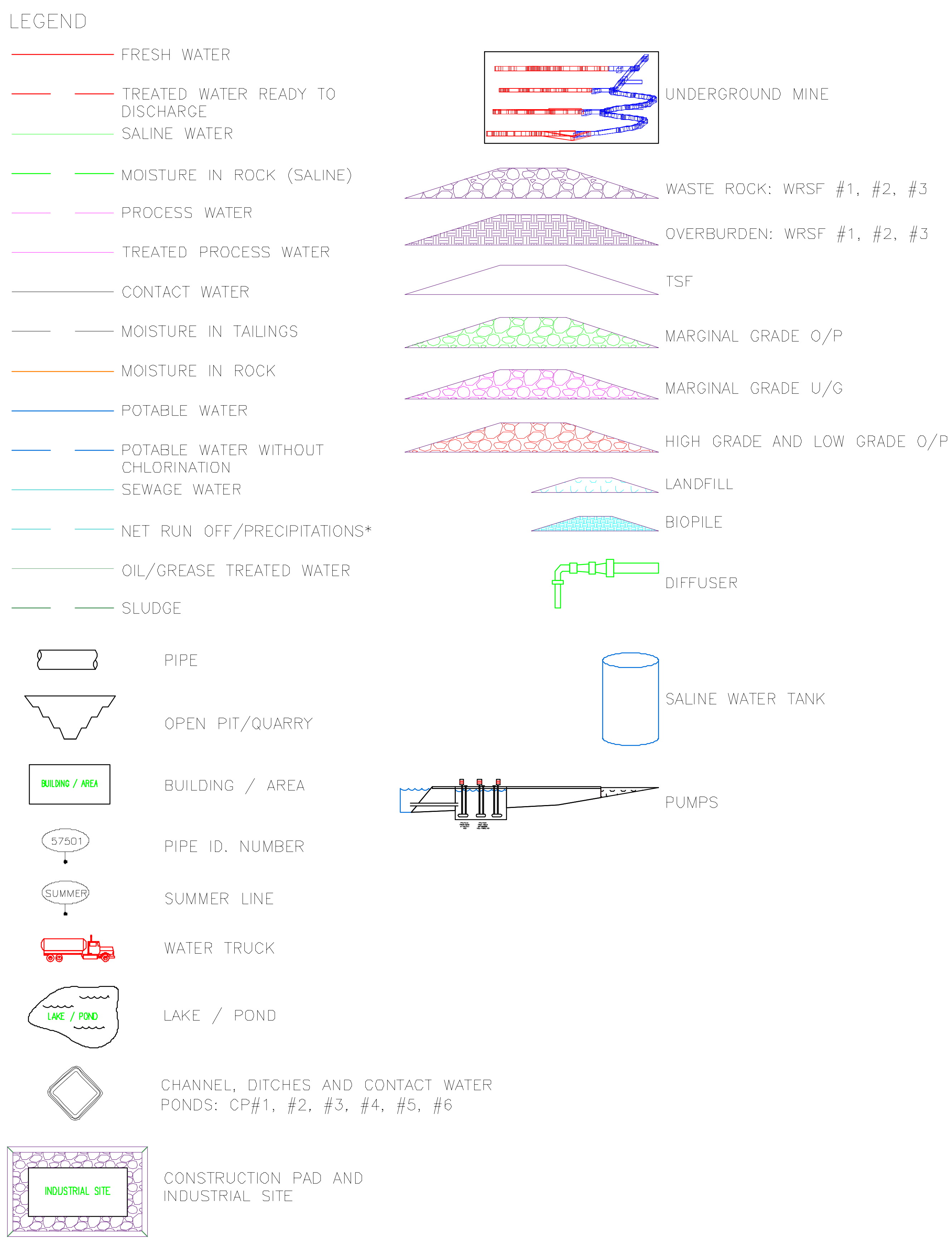
AE-CART-ANSI B

Q:\Edmonton\Engineering\E141\Projects\E14103209_Meladine_Mgmt_Plans\EBA Drawings\Water MP\CAD_Dec_2014\FIGURE 9.3-1.dwg

APPENDIX B • WATER MANAGEMENT SCHEMATIC FLOW SHEETS

NO. DESSIN DRAWING NO 6509-680-200-001_1

LEGEND



PLAN CLÉ / KEY PLAN

NOTES GÉNÉRAL / GENERAL NOTES

*: FOR CLARITY, THE NET RUN OFF AND THE PRECIPITATIONS ARE NOT DRAWN BUT MUST BE CONSIDERED WHERE APPLICABLE.

ÉMISSION FINALE
NE PAS UTILISER POUR CONSTRUCTION
FINAL ISSUE
NOT TO BE USED FOR CONSTRUCTION
DATE : 2014-08-19

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITRE / TITLE	# DWG
	-
	-
	-
	-
	-
	-

AGNICO EAGLE

REV	DATE	DESCRIPTION	PAR/BY	APP	CLIENT
2	2014-08-19	FLOWRATES/BBA PIPE I.D.	SO	FP	
1	2014-07-15	REVISION WITH TETRATECH EBA	SO	FP	
0	2014-07-14		SO	FP	
C	2014-07-01	REVISION WITH TETRATECH EBA	SO	SO	
B	2014-06-16	AEM MARKUP	KBB	SO	

REVISIONS

MELIADINE GOLD PROJECT

TITRE / TITLE
AGNICO-EAGLE – MELIADINE DIVISION
680 – WATER MANAGEMENT
200 – FLOWSHEET
DIAGRAM
WATER MANAGEMENT PLAN
LEGENDS

DESSINÉ PAR / DRAWN BY	SERGE OUELLET	DATE 2014-05-2
VÉRIFIÉ PAR / CHECKED BY	SERGE OUELLET	2014-08-1
APPROUVÉ PAR / APPROVED BY	FRANCOIS PETRUCCI	2014-08-1
ÉCHELLE / SCALE	N/A	DATE

NO. DESSIN / DRAWING NO 6509-680-200-001_1

NO PROJET / PROJECT NO.	REVISION	FEUILLE / SHT
6509	0	1 / 9

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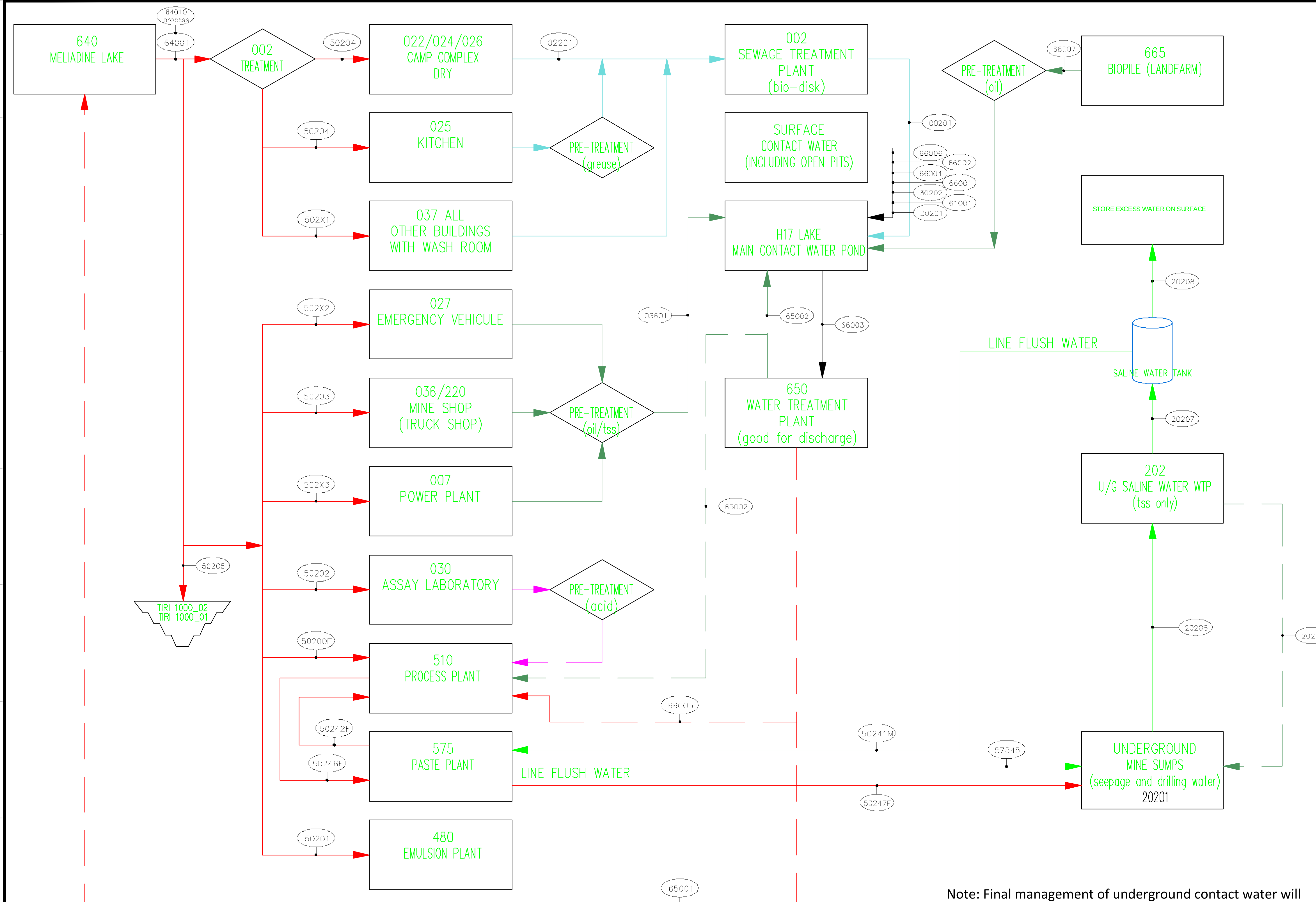
FILE NO. 6509-680-200-001-9_R2.dwg



Note: Final management of underground contact water will be provided in the Groundwater Management Plan.

PLAN CLE KEY PLAN

NOTES GÉNÉRAL / GENERAL NOTES

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NE PAS UTILISER POUR CONSTRUCTION
FINAL ISSUE
NOT TO BE USED FOR CONSTRUCTION
DATE . 2014-08-19

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

AGNICO EAGLE

REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT
2	2014-08-19	FLOWRATES/EBA PIPE I.D.	SO	FP	
1	2014-07-15	REVISION WITH TETRATECH EBA	SO	FP	
0	2014-07-14		SO	FP	
C	2014-07-01	REVISION WITH TETRATECH EBA	SO	SO	
B	2014-06-16	AEM MARKUP	KBB	SO	

REVISIONS

MELIADINE GOLD PROJECT

TITRE / TITLE
AGNICO-EAGLE – MELIADINE DIVISION
680 – WATER MANAGEMENT
200 – FLOWSHEET
DIAGRAM
WATER MANAGEMENT PLAN
GENERAL FLOWSHEET

DESSINÉ PAR DRAWN BY	SERGE OUELLET	DATE 2014-05-23
VERIFIÉ PAR CHECKED BY	SERGE OUELLET	2014-08-19
APPROUVÉ PAR APPROVED BY	FRANCOIS PETRUCCI	2014-08-19
ÉCHELLE SCALE	N/A	DATE

NO. DESSIN DRAWING NO. 6509-680-200-001_2

NO PROJET PROJECT NO.	REVISION	FEUILLE / SHT
6509	0	2/9