AGNICO EAGLE

MELIADINE GOLD PROJECT

Environmental Management and Protection Plan (EMPP)

JANUARY 2019
VERSION 8
6513-MPS-07

ᓇᐃᓈᖅᓯᒪᔪᖅ

ᐊᕙᑎᓕᕆᓂᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᒥᐊᓂᖅᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᑕᑯᒃᓴᐅᑎᑦᑎᔪᖅ ᖃᓕᓈᖓᔪᓂᒃ ᖃᓄᐃᓕᐅᕐᑯᓯᓂᐅᔪᓂᒃ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐃᓄᐃᑦ-ᐱᕈᖅᐸᓪᓕᐊᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᐊᒡᓃᑯᒃᑯᑦ ᑕᓯᕐᔪᐊᕐᒥᑦ ᒎᓗᒧᑦ ᐱᓕᕆᐊᖓᓐᓂᒃ (ᐱᓕᕆᐊᖅ). ᐃᑲᔪᖅᑕᐅᔪᖅ ᑲᑎᒪᔪᓂᑦ ᐱᓕᕆᐊᕐᒨᖓᔪᓂᒃ ᐊᖏᓗᐊᖏᒋᐊᖅᑎᑦᑎᓂᕐᒥᒃ, ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᕐᒥᒃ, ᐊᒻᒪᓗ/ᐅᕝᕙᓘᓐᓃᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᐸᕐᓇᐅᑎᓄᑦ ᐅᖃᖅᓯᒪᔪᑦ ᐱᓕᕆᐊᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᓂᒃ ᐊᒻᒪᓗ ᐱᔭᕆᐊᖃᖅᑐᓂᒃ ᐃᓚᖏᓐᓄᑦ ᐃᓂᐅᔪᓄᑦ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐃᓄᐃᑦ-ᐱᕈᖅᐸᓪᓕᐊᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᑦ. ᐊᒡᓃᑯᒃᑯᑦ ᐊᐅᓚᓐᓂᐊᖅᑕᖏᑦ ᖃᓄᐃᖓᔭᕆᐊᖃᕐᓂᐅᔪᑦ ᐱᓕᕆᐊᕐᒧᑦ ᓇᓗᓇᐃᒃᑯᑕᕐᒦᑦᑐᑦ, Type A ᐃᒪᕐᒧᑦ ᓚᐃᓴᓐᓯ (2AM-MEL1631)-ᒥᑦ, ᐊᓯᖏᑦ ᐱᒋᐊᕈᓐᓇᖅᑎᑦᑎᓃᑦ, ᐊᒻᒪᓗ ᐱᔭᕆᐊᖅᑐᑦ ᐱᔾᔪᑎᖃᖅᑐᓂᒃ ᑖᑉᑯᓄᙵ ᒪᓕᒐᐅᔪᓂᒃ ᐊᒻᒪᓗ ᒪᓕᒐᕋᓛᓂᑦ. ᐊᒡᓃᑯᒃᑯᑦ ᐋᖅᑭᒃᓯᓚᐅᖅᑐᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂᒃ ᐊᐅᓛᖅᑎᑦᑎᓂᕐᒧᑦ ᑕᑯᒃᓴᐅᑎᑦᑎᔪᓂᒃ ᒪᓕᒐᓕᕆᓂᕐᒧᑦ ᐱᔭᕆᐊᖃᖅᑐᓂᒃ ᐱᓕᕆᐊᕐᒧᑦ ᑐᕌᖓᔪᓂᒃ.

ᐅᑎᖅᑕᖅᑐᒥᒃ ᑐᓴᕐᕕᖃᖃᑦᑕᙱᓐᓂᐅᔪᖅ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᖅ ᐊᐅᓛᖅᑎᑦᑎᓂᕐᓄᑦ ᐸᕐᓇᐅᑕᐅᔪᓂᑦ ᐊᒻᒪᓗ ᐊᑐᓕᖅᑎᑕᐅᔪᓂᑦ, ᑲᑎᖅᓱᖅᑕᐅᔪᓂᑦ ᓈᓴᐅᑎᓂᒃ/ᑎᑎᖅᑲᓂᒃ ᐊᒻᒪᓗ ᖃᐅᔨᓴᖅᑕᐅᔪᓂᑦ, ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᓂᑦ ᐋᖅᑭᒋᐊᖅᓯᓂᕐᒧᑦ ᒥᒃᓵᒋᐊᕐᓂᐊᕐᓗᒋᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐱᑕᖃᕈᓐᓃᖅᑎᓐᓂᐊᕐᓗᒋᑦ ᖃᐅᔨᓴᐅᔪᑦ ᓱᓇᑐᐃᓐᓇᐃᑦ ᐱᐅᖏᑦᑐᑦ ᐊᒃᑐᖅᓯᓃᑦ ᐊᐅᓛᕐᓂᓗᒃᑖᖓᓂᑦ ᐱᓕᕆᐊᑉ. ᐊᑐᖅᑕᐅᓂᖓ ᑐᓴᕐᕕᐅᖃᑦᑕᖅᑐᓂᒃ ᐱᑕᖃᙱᓐᓂᐅᔪᑦ ᑲᔪᓯᓂᐊᖅᑐᖅ ᐊᑐᓕᖅᑎᓐᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐃᓱᒪᓕᐅᕆᓃᑦ ᑕᒪᓐᓇ ᑲᔪᓯᓂᐊᕐᓗᓂ, ᐊᒻᒪᓗ ᐱᐅᓯᒋᐊᖅᑎᑦᑎᓇᔭᖅᑐᖅ ᐊᕙᑎᓕᕆᓂᕐᒥᒃ ᐊᒻᒪᓗ ᐃᓄᐃᑦ-ᐱᕈᖅᐸᓪᓕᐊᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᐋᖅᑭᐅᒪᔪᒧᑦ.

ᐊᕙᑎᓕᕆᓂᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᒥᐊᓂᖅᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᐊᔪᕐᓇᖏᑎᑦᑎᔪᖅ ᐱᓕᕆᐊᖃᕐᓂᕐᒧᑦ ᐊᓯᐊᙳᕐᓂᐅᔪᓂᒃ, ᐆᒃᑰᑎᒋᓗᒍ, ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ ᐱᕙᓪᓕᐊᓂᕐᒥᑦ ᐸᕐᓇᐅᑎ, ᒪᓕᒐᓕᕆᓂᖅ, ᐃᓄᖕᓂᒃ ᐊᒻᒪᓗ ᐃᓄᐃᑦ-ᐱᕈᑦᐸᓪᓕᐊᓂᕐᒧᑦ ᐊᕙᑎᒥᒃ, ᑲᑉᐳᔾᔭᓅᖅᑐᓂᒃ, ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᖃᓄᐃᖓᓂᐅᔪᓂᒃ, ᐊᒻᒪᓗ ᑐᑭᓯᐊᔭᐅᓂᖓᓂᒃ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ. ᑎᑭᐅᑎᓃᑦ ᐊᒻᒪᓗ ᓇᓗᓇᐃᖅᓯᔾᔪᑏᑦ ᐱᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᖃᓄᐃᓕᐅᕆᐊᖅᑕᓂᐅᔪᓂᒃ ᑐᓂᓯᓂᐊᖅᑐᑦ, ᐱᔭᕆᐊᖅᑐᓂᑦ, ᐸᕐᓇᐅᑎᒦᑦᑐᓂᒃ ᐊᕙᑎᓕᕆᓂᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᒥᐊᓂᖅᓯᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒥᑦ, ᐋᖅᑭᐅᒪᔪᖅᑕᖅᓗᓂᓗ ᐱᔭᒃᓴᐅᑎᖃᕐᓂᐅᔪᓂᒃ.

ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᖅ ᐊᒻᒪᓗ ᐊᑐᓕᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑏᑦ ᐱᔭᕆᐊᖅᑐᑦ ᐱᓕᕆᐊᖅ ᐊᑐᓕᖅᑎᑕᐅᒐᓗᐊᕐᓂᖓᓄᑦ ᐸᕐᓇᐅᑕᐅᓯᒪᓂᖓᑐᑦ, ᐊᖏᓗᐊᖏᒋᐊᖅᑎᑦᑎᓂᕐᒨᖓᔪᑦ ᐊᔪᙱᑦᑎᐊᖅᑐᑦ, ᒪᓕᒃᑕᐅᔪᒃᓴᐃᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᓪᓗ ᐊᑑᑎᖃᖅᑑᓂᖏᓐᓄᑦ, ᐊᖏᔪᒥᒃ ᐊᒃᑐᖅᓯᓂᐅᔪᖕᓇᖅᑐᑦ ᐱᑕᖃᙱᑎᑕᐅᓗᑎᒃ ᐅᕝᕙᓘᓐᓃᑦ ᒥᑭᓛᒃᑰᖅᑎᑕᐅᓗᑎᒃ, ᐊᒻᒪᓗ ᐱᐅᓯᒋᐊᖅᓯᓂᕐᒨᓐᓇᓕᐅᑦ ᐊᑑᑎᖃᕐᓂᐊᕐᓗᑎᒃ. ᐊᑐᓂ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑏᑦ ᖃᐅᔨᓴᐃᓂᐊᖅᑐᑦ ᐊᑑᑎᖃᕐᓂᖓᓄᑦ ᐊᖏᓗᐊᖏᒋᐊᖅᑎᑦᑎᓂᕐᒨᖓᔪᑦ ᐊᒻᒪᓗ ᑖᑉᑯᓄᙶᖓᔪᓂᒃ ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᓂᒃ ᐊᑐᓕᖅᑎᑦᑎᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ. ᑖᑉᑯᐊ ᐸᕐᓇᐅᑏᑦ ᑕᑯᒃᓴᐅᑎᑦᑎᓂᐊᖅᑐᑦ ᖃᓄᖅ ᖃᓄᐃᓕᐅᕐᓂᐅᔪᑦ ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᖏᓐᓂᒃ ᐊᑐᖅᑕᐅᓂᐊᕐᒪᖔᑕ ᐱᐅᓯᒋᐊᖅᓯᓂᕐᒧᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐋᖅᑭᒋᐊᖅᓯᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᓂᐊᕐᓗᓂᒃ ᐊᒻᒪᓗ ᐊᑐᓕᖅᑎᑕᐅᓂᖓ ᐊᖏᓗᐊᖏᒋᐊᖅᑎᑦᑎᓂᕐᒨᖓᔪᓄᑦ ᐊᒻᒪᓗ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᓂᒃ, ᐊᒻᒪᓗ ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᕐᒧᑦ

ᖃᓄᐃᖓᓂᐅᔪᑦ ᐃᓕᓴᐅᑎᓂᐊᖏᓐᓇᑦ ᐱᓕᕆᐊᖏᑦ ᖃᐅᔨᒪᓕᖅᑎᑎᑲᓂᕐᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐱᐅᔨᐊᖅᓯᐅᔪᓐᓇᖅᑐᓂᒃ ᐊᑐᓕᖅᑎᑎᓂᕐᒧᑦ ᐊᔨᔪᖏᖅᑕᑐᓂᒃ ᐃᓕᑎᕆᐅᔪᓂᒃ ᐱᓕᕆᐊᖏᑦ.

ᐊᑦᖁᐅᒪᓂᕆᔨᖏᑦ ᖃᐅᔨᑎᐊᖃᑦᑕᕐᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐊᐅᓪᓕᑎᓂᕐᒧᑦ <ᕐᓇᐅᑦᑐᑦ, ᓇᓴᐅᑎᓂᒃ/ᑎᑎᖃᖅᓂᒃ ᖃᐅᔨᓴᐃᓂᖅᑕ, ᐅᓂᐸᒃᓕᐅᕆᓂᖅ, ᐊᒻᒪᓗ ᐃᓕᓴᐅᑎᓂᖅ ᖃᓄᐃᖓᓂᐅᔪᑦ ᐊᐅᓪᓚᖃᑎᓂᕐᓂᕐᒧᑦ ᒪᓕᒃᑕᐅᔨᓴᓄᑦ ᐱᓕᕆᐊᖓᓂᐊᖃᖅᑐᓂᖅ ᐊᒃᓂᓄᓄᓂᖅ. ᐅᖃᖃᑎᖃᖃᑦᑕᕐᓂᖅ ᑕᐸᔪᓄᖓᒃ ᐊᓯᐊᖓᖃᓂᖃᑕᐃᓐᓇᕆᐊᖃᖃᖅᑐᖅ ᒪᓕᒃᓂᓂᐊᕐᓗᑦ ᐱᕈᐅᒪᔨᓄᑦ ᐊᒻᒪᓗ ᐃᓱᒪᓕᑕᐅᔨᓄᑦ ᐊᓯᖏᓐᓄᓄᑦ ᑲᑎᓴᖃᑎᒋᓄᑦ. ᐊᒃᓂᓄᓄᓂᖅ ᐅᔨᓄᖓᓐᓂᖅ ᐃᓕᓴᐅᑎᓂᐊᖅᑐᓂᒃ ᐅᑭᐅᖅᑕᐅᔪᓂᒃ ᐊᑐᓕᖅᑎᑎᓂᕐᓂᕐᒧᑦ ᐃᓕᓴᐅᑎᓂᐊᖅᑐᓂᒃ ᐊᑐᓕᖅᑎᑎᓂᕐᓂᕐᒧᑦ ᐃᓕᓴᐅᑎᓂᐊᖅᑐᓂᒃ (VECs) ᐊᒻᒪᓗ ᐃᓕᐱᓂᖃᖅᑎᑎᓂᕐᓂᕐᒧᑦ ᐃᓄᐃᑦ-ᐱᑭᖅᑕᓪᓕᐊᓂᖓᓐᓄᑦ ᐃᓕᓴᐅᑎᓂᐊᖅᑐᓂᒃ (VSECs) ᖃᐅᔨᓴᐅᑎᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᓗᑎᒃ;

- ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖅᑐᓂᒃ ᓇᓂᔨᐅᔨᓂᖅ;
- ᖃᐅᓚᐅᔭᖃᑦᑕᕐᓂᖓᓂᕐᒧᑦ, ᖃᓄᑎᒋᐅᓂᖓᓂᕐᒧᑦ, ᐊᒻᒪᓗ ᓄᓇᐅᔨᑦ ᐃᓂᖓᒡᑕ ᐊᖓᔪᓂᖅᓄᑦ ᑎᑭᐅᑎᓂᕐᒪᑐᒃ ᖃᐅᔨᓴᐅᑎᖅᑕᐅᖃᑦᑕᕐᓂᖅ;
- ᑐᓴᕐᕋᐅᑕᐅᔨᓂᕐᒧᑦ ᓇᓗᓇᐃᖅᓯᓂᖅ ᐊᒻᒪᓗ ᖃᓄᐃᖓᓂᐊᖅᑐᓂᕐᒧᑦ ᐊᐅᓪᓚᖃᑎᓂᕐᒧᑦ <ᕐᓇᐅᑦᑐᑦ, ᑕᒪᓐᓇᐊᕐᓗᐃᑦ.

ᐱᔭᕆᐊᖃᖅᑎᖓᑦ, ᖃᐅᔨᓴᐅᑎᖅᑕᐅᖃᑦᑕᕐᓂᕐᒧᑦ ᑐᑦᖓᓚᐅᑦ ᐁᑦᖁᐴᑕᐅᓂᐊᖅᑐᑦ ᖃᓄᐃᖓᓂᐅᔨᑦ ᐱᓕᕆᐊᖓᔪᓇᐃᓂᐊᕐᓗᒃᑕ ᐱᓕᕆᐊᖓᐃᓇᓇᖅᑐᓂᒃ ᐅᑭᐅᖅᑕᖅᑐᑐᒃ ᐊᐃᑐᖅᑕᖅᑐᑦ ᐱᓕᕆᐊᓐᓂᐊᖅᑐᓂᒃ ᐅᖃᓕᓴᐅᓂᒃ ᑐᑦᖓᓚᐅᑦᓂᒃ ᐱᔭᐅᑎᖅᑕᖅᑐᓂᒃ ᓚᐲᒃᑯᓐᓂᒃ ᑲᑎᓴᖃᑎᒋᓄᑦ ᐅᖃᓕᓴᐅᓂᒃ ᐅᑭᐅᖅᑕᖅᑐᑐᒃ ᐊᐃᑐᖅᑕᖅᑐᑦ ᐱᔭᐅᑎᖅᑕᖅᑐᓂᒃ ᓚᐲᒃᑯᓐᓂᒃ ᐅᖃᓕᓴᐅᓂᒃ ᐅᑭᐅᖅᑕᖅᑐᑐᒃ ᐊᐃᑐᖅᑕᖅᑐᑦ ᐱᔭᕇᓇᖅᑐᓂᒃ.

AGNICO EAGLE

EXECUTIVE SUMMARY

The Environmental Management and Protection Plan (EMPP) describes the overall intent and direction for environmental management at Agnico Eagle Mines Limited (Agnico Eagle) Meliadine Gold Project (Project). This document outlines and describes project-specific management plans, mitigation measures, adaptive management and other standards and requirements for specific areas of environmental management. It is Agnico Eagle's intent to comply with and manage the conditions of the Nunavut Impact Review Board Project Certificate (#006), the Nunavut Water Board Type A Water Licence (2AM-MEL1631), and requirements pertaining to relevant laws and regulations. Agnico Eagle has also developed standard operating and inspection procedures that take into account licenses, permits and legal requirements pertaining to the Project.

A cyclical feedback loop will be employed where operations are planned and implemented, monitoring data collected and analyzed, and practices adjusted to promptly reduce or eliminate any observed negative impacts throughout the life of the Project. Continual use of this feedback loop will allow adaptive management decisions to be made, and shall lead to improvements to the environmental management systems as necessary over time.

The EMPP allows flexibility to respond to changes, for example, in the mining development plan, the regulatory regime, the biophysical environment, technology, research results, and the understanding of Inuit Qaugimajatuqangit (IQ). Thresholds and indicators to trigger management actions are provided, where applicable, in the management plans associated with licenses and permits, along with a system of accountability.

Monitoring and adaptive management are essential tools for ensuring that a project progresses as planned, that mitigation measures are successful, that the procedures and practices are effective and that potential adverse impacts are avoided or minimized. Management Plans and relevant Standard Operating Procedures outline mechanisms such as monitoring, which will be used to refine and modify any mitigation measures.

The design of monitoring and management plans, data analysis, reporting, and integration of results into operational procedures will be carried out by Agnico Eagle. Consultation on the same may lead to changes to meet the needs and concerns of other stakeholders. Agnico Eagle has incorporated the following

- objectives, applicable laws, and regulations;
- the Valued Ecosystem Components (VECs) and Valued Socio-economic Components (VSECs) to be monitored;
- IQ findings;
- frequency, duration, and geographic extent of monitoring;
- proposed action plans and reporting procedures; and

- quality assurance and quality control programs.

When applicable, monitoring programs will be designed so that the results can be coordinated with ongoing regional initiatives or programs with the relevant government organizations or regional authorities.

As a function of Agnico Eagle's adaptive management several management plans have been revised and/or updated, including, but not limited to, the following:

- Environmental Management and Protection Plan Version 8 - Jan, 2019
- Water Management Plan Version 3 - Jan, 2019
- Incinerator Management Plan Version 5 – Dec, 2018
- Landfill Management Plan Version 7 Dec - 2018
- Quality Assurance/Quality Control Plan – Version 3, Dec, 2018
- Aquatic Effects Monitoring Plan – Version 2 - Oct, 2018
- Mine Waste Management Plan – Version 4 - Dec, 2018

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Tables and Figures

DOCUMENT CONTROL

Version	Date	Section	Page	Revision	Author
1	November 2012			First draft of the Environmental Management and Protection Plan	John Witteman, Env. Consultant, Agnico Eagle
2	March 2013	1.2	2-4	Add Project phases to Table 1-1 and details on adaptive management	John Witteman, Env. Consultant, Agnico Eagle
		3.2	11-13	Add details on adaptive management in design of plans	
		4.5	20-21	Independent audits and reviews	
3	April 2014	1.2	5	Monitoring and mitigation plans vs licensing process	John Witteman, Env. Consultant, Agnico Eagle
		1.3	5	Revision throughout life-of-mine	
		1.3	7	Added Table 1-3	
		2.1	8	Updated Sustainable Development Policy	
		4	16 and 18	Added design, practices and procedures; link with VECs and VSECs	
4	April 2015			Update of entire document for Water Licence Application	John Witteman, Env. Consultant, Agnico Eagle
		4.2.2	24	New section on Traditional Knowledge (IQ)	
		4.2.3	25	New section on Inspections	
5	June 2016	Executive Summary		Revised Section to reflect receipt of Water Licence	Golder Associates, Ltd.
		1		Revised Introduction	
		4.2.1		Revised Environmental Monitoring to meet Water Licence	
		4.2.3		Revised Inspections	
		4.4		Revised Table 4-4 to meet Water Licence	
6	March 2017	Table 4-1 Figure 4-2		Revised Table as per approved new sampling location nomenclature	Manon Turmel, Agnico Eagle Mines Ltd.

7	February 2018	All	Revised to reflect current conditions at Site and reduce repetition	Alex Gauthier and Jennifer Brown, Agnico Eagle Mines Ltd.
8	December 2018	All	Revision required by part I Item 2 of the NWB water Licence 2AM MEL1631, Update relevant Management Plan Version and Date	Dan Gorton, Kevin Buck, Martin Theriault

ACRONYMS

CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
AEMP	Aquatic Effects Monitoring Program
Agnico Eagle	Agnico Eagle Mines Limited
DFO	Fisheries and Oceans Canada
DOE	Department of Environment
EA	Environmental Assessment
ECCC	Environment and Climate Change Canada
EMPP	Environmental Management and Protection Plan
FEIS	Final Environmental Impact Statement
GN	Government of Nunavut
HTO	Hunting Trapping Organization
IP	Inspection Plan
IQ	Inuit Qaugimajatuqangit
KIA	Kivalliq Inuit Association
NIRB	Nunavut Impact Review Board
NPC	Nunavut Planning Commission
NWB	Nunavut Water Board
PDCA	Plan, Do, Check, Adjust
QA/QC	Quality Assurance and Quality Control
RMMS	Responsible Mining Management System
TC	Transport Canada
VEC	Valued Ecosystem Component
VSEC	Valued Socio-Economic Component

SECTION 1 • INTRODUCTION

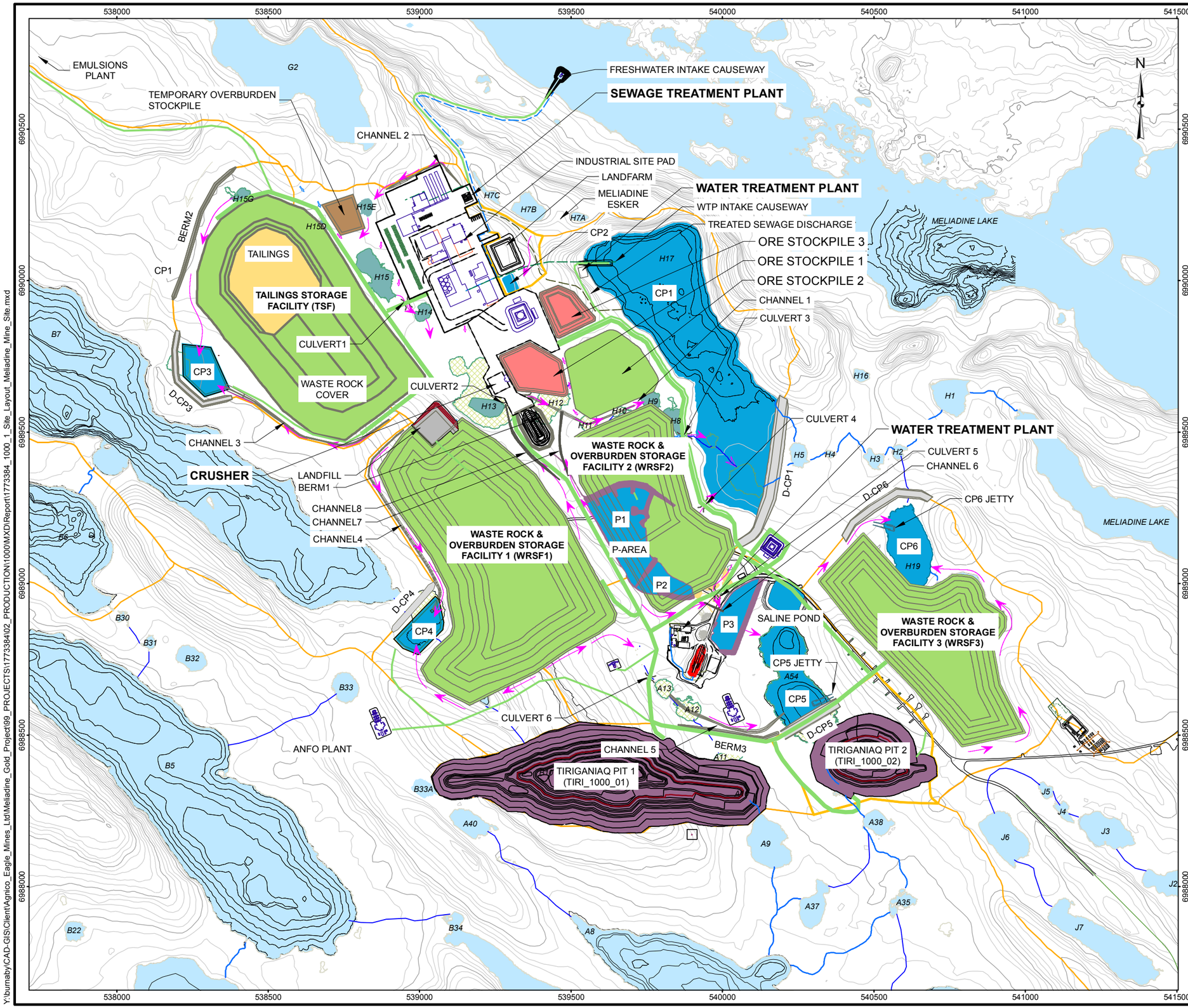
1.1 Purpose and Scope

The Environmental Management and Protection Plan (EMPP) provides Agnico Eagle with direction to measure and manage environmental effects of the Project throughout the life of mine. It is a site-specific plan that describes the systematic means by which Agnico Eagle will consistently manage and control potentially adverse impacts, and enhance potential project benefits identified through the Environmental Assessment (EA) process and the subsequent licensing and permitting of the Project.

The goal of the activities related to the EMPP is to ensure that Agnico Eagle complies with laws, regulations, and authorizations, and to enable the achievement of goals set out in Agnico Eagle's Sustainable Development Policy. This plan applies to the pre-development, construction, operations, and closure phases for the Project.

The EMPP defines the sequence of policy, planning, implementation, monitoring, and review processes that will ensure that the Project complies with commitments made throughout the EA process, applicable regulated standards and Agnico Eagle's environmental standards. The Plan also contemplates implementation of adaptive management activities for ongoing improvement.

The EMPP encompasses a suite of project specific management plans that set out the Project's standards and requirements for different areas of environmental management. Many of the plans are required by law or by conditions of the NIRB Project Certificate, and the NWB Type A Water Licence 2AM-MEL1631 issued for the Project. The plans and measures are specific to activities and phases of the Project.



LEGEND

- SERVICE ROAD
- HAUL ROAD
- CATCHMENT BOUNDARY
- 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

REFERENCE

BASE DATA OBTAINED FROM AGNICO EAGLE MINES LIMITED.
DATUM: NAD 83 PROJECTION: UTM ZONE 15

250 0 250
METRES

PROJECT
AGNICO EAGLE MINES LIMITED
MELIADINE GOLD PROJECT
NUNAVUT

TITLE
SITE LAYOUT
MELIADINE MINE SITE

Golder Associates

PROJECT NO.		1773384	FILE No.	
DESIGN	CLT	8 Dec. 2017	SCALE AS SHOWN	REV. 0
GIS	CDB	8 Dec. 2017		
CHECK	JR	8 Dec. 2017		
REVIEW	LY	8 Dec. 2017		

FIGURE: 1

Y:\burnaby\CAD-GIS\Client\Agnico_Eagle_Mines_Ltd\Meliadine_Gold_Project\99_PROJECTS\1773384\02_PRODUCTION\1000\MXD\Report\1773384_1000_1_Site_Layout_Meliadine_Mine_Site.mxd

1.2 Environmental Management Documentation

The structure of the Project's environmental management documentation is shown in Table 1-1. Socio-economic plans are also included. For specific details, please consult the individual plans.

Table 1-1 Environmental and Socio-Economic Monitoring, Mitigation, and Management Plans

Environmental Management System							
				Project Phase			
Plan			Purpose	Construction	Operation	Closure	Post-Closure
6513-MPS-01	Incineration Management Plan	Version 5, Dec 2018	To outline the operation of an incinerator located at the site.	√	√	√	
6513-MPS-03	Roads Management Plan	Version 5, Mar 2018	To manage access, service, and haul roads proposed in the Project areas, covering construction, operations, and final closure (the Plan also covers temporary closure).	√	√	√	
6513-MPS-04	Borrow Pits and Quarries Management Plan	Version 6, Mar 2018	To outline environmental aspects of developing, using, and closing the borrow pits and quarries necessary for the overall Project. May be used throughout the Project's life as necessary (when quarries and borrow pits will be required).	√	√	√	
6513-MPS-05	Spill Contingency Plan	Version 7, Mar 2018	To ensure the efficient cleanup of spills related to the Project and to promote prevention, safety and environmental awareness on and off site..	√	√	√	√
6513-MPS-06	Landfill and Waste Management Plan	Version 7, Dec 2018	To describe how non-combustible, non-hazardous, solid industrial wastes will be managed using a landfill, and how remaining non-hazardous waste will be managed.	√	√	√	
6513-MPS-07	Environmental Management and Protection Plan	Version 8, Dec 2018	To provide overarching direction for environmental and socio-economic management for the Project.	√	√	√	√
6513-MPS-08	Ore Storage Management Plan	Version 1, Apr 2015	To address the management of ore mined at the Project.		√		
6513-MPS-09	Mine Waste Management Plan	Version 3, Mar 2018	To address the management of all waste rock and overburden generated through all phases of the Project, and all tailings generated during the operational phase of the Project.	√	√	√	√
6513-MPS-10	Mine Plan	Version 1, Apr 2015	Provide a summary of consolidated information on the design, operation, production and environment management of the mining and milling facilities.	√	√	√	
6513-MPS-11	Water Management Plan (includes	Version 3, Dec 2018	To provide a consolidated source of information on the strategies that will be applied to intercept, collect, contain, conserve, and monitor water in	√	√	√	√

Table 1-1 Environmental and Socio-Economic Monitoring, Mitigation, and Management Plans

Environmental Management System							
				Project Phase			
Plan			Purpose	Construction	Operation	Closure	Post-Closure
	Freshet Action Plan)		the Project's area, thus preventing potential adverse impacts on water.				
6513-MPS-12	Hazardous Materials Management Plan	Version 6, Dec 2018	To describe how solid and liquid hazardous materials, including hazardous waste, will be managed and. Includes the Fuel Management Plan.	√	√	√	
6513-MPS-14	Explosive Management Plan	Version 5, Mar 2018	To provide information on explosives transport, storage, manufacture, and handling at the Project.	√	√		
6513-MPS-15	Landfarm Management Plan	Version 3, Dec 2018	To outline the storage and remediation of petroleum hydrocarbon contaminated soil, snow, and ice that may be generated at the Project.	√	√	√	
6513-RMM-01	Risk Management and Emergency Response Plan	Version 4, Apr 2015	An assessment of the potential risks from natural hazards, in both aquatic and terrestrial environments, plus a response plan to emergencies. Includes risk assessment and management if incidents and mechanical and procedural malfunctions emergency response plan.	√	√	√	√
6513-CRP-01	Preliminary Closure and Reclamation Plan	Version 1, Apr 2015	To develop a conceptual plan which outlines how the various mine components will be decommissioned, reclaimed and/or closed following temporary closure or final mine closure. Includes care and maintenance.			√	√
6513-QQY-01	Quality Assurance/Quality Control	Version 3, Dec 2018	Provides consolidated information on the quality assurance and quality control measures for the Project.	√	√	√	
6513-REP-03	Aquatic Effects Monitoring Program (AEMP) Design Plan	Version 2, Oct 2018	To provide information on monitoring the aquatic environment and on mitigation measures to protect and minimize potential impacts on the aquatic environment.	√	√	√	√
	Greenhouse Gas Emissions Reduction Plan	Version 1, Dec 2018	To discuss monitoring, mitigation and adaptive management strategies for the reduction of greenhouse gas emissions over the life of the project.	√	√	√	√
	Conceptual Fisheries		To discuss measures to be implemented to offset the loss of fish habitat resulting from Project	√	√	√	√

Table 1-1 Environmental and Socio-Economic Monitoring, Mitigation, and Management Plans

Environmental Management System						
			Project Phase			
Plan		Purpose	Construction	Operation	Closure	Post-Closure
Protection and Offsetting Plan		activities and components. Not applicable at this time.				
Air Quality Monitoring Plan	Version 1, Nov 2015	To present air quality monitoring and management, and emissions and dust reduction/control strategies.	√	√	√	
Noise Monitoring Plan	Version 2, Mar 2017	To provide information on monitoring and mitigation of noise.	√	√	√	
Terrestrial Environment Management and Monitoring Plan (TEMMP)	Version 1, Nov 15	To include appropriate mitigation and monitoring for selected terrestrial species.	√	√	√	√
Shipping Management Plan	Version 7, Mar 2018	To present all Project-related shipping of dry cargo and fuel to Rankin Inlet.	√	√	√	
Oil Pollution Prevention Plan	Version 1.3, Feb 2018	To present the requirements for emergency procedures, equipment, and resources specific to the Rankin Inlet Oil Handling Facility (Itivia) tank farm), as well as preventive measures.	√	√	√	

The EMPP is not a static document; it should be updated periodically as site and external conditions change and as knowledge is gained. Requirements to refine the EMPP may result from changes in operations, technologies employed, the phase of the Project, the result of research findings commissioned by Agnico Eagle, improvements in safety procedures, and/or greater understanding of traditional knowledge (IQ). Changes to laws and regulations, environmental conditions, and other external factors can also have a bearing on the EMPP.

SECTION 2 • BACKGROUND

2.1 Sustainable Development Policy

The Sustainable Development Policy is Agnico Eagle's commitment to operate in a safe social and environmentally responsible manner. It forms the basis of the EMPP and defines the framework within which Agnico Eagle operates. Environmental commitments from the Policy are listed below.

PROTECT THE ENVIRONMENT

We aim to minimize the effects of our operations on the environment and maintain its viability and its diversity. To achieve this, we:

- *Minimize the generation of waste and ensure its proper disposal;*
- *Manage tailings, waste rock and overburden to ensure environmental protection;*
- *Implement measures to conserve natural resources such as energy and water;*
- *Implement measures to reduce emissions to air, water and land, and to minimize our footprint;*
- *Implement measures to reduce our greenhouse gas emissions and address climate change;*
- *Integrate biodiversity conservation and land use planning considerations through all stages of business and production activities;*
- *Rehabilitate sites to ensure physical and chemical stability and in consultation with the communities in a timely manner.*

2.2 Regulatory Setting

Appendix A provides a listing of the various territorial and federal laws, regulation, and guidelines applicable to the Project.

The main authorizing agencies that participated in the review of the Project's Type A Water License (Nunavut Water Board) and the authorizing Project Certificate (Nunavut Impact Review Board) are the following:

- Nunavut Impact Review Board (NIRB);
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC);
- Nunavut Planning Commission (NPC);
- Nunavut Water Board (NWB);
- Kivalliq Inuit Association (KIA);
- Fisheries and Oceans Canada (DFO);
- Environment and Climate Change Canada (ECCC);
- Rankin Inlet Hunting Trapping Organization (HTO)
- Transport Canada (TC);
- Nunavut Research Institute;

- Department of Environment (DOE), Government of Nunavut (GN);
- Department of Culture and Heritage, (CH)[1], GN;
- Community and Government Services (CGS), GN; and
- Hamlet of Rankin Inlet.

2.3 Environmental Management and Protection Plan Effectiveness

It is Agnico Eagle's intent to ensure the effectiveness of the EMPP by:

- applying best management practices and using best available information throughout the life of the Project;
- employing adaptive management to address any concerns that may be raised through monitoring;
- seeking continual improvements in environmental and socio-economic management;
- implementing procedures to comply with the conditions imposed by the NIRB Project Certificate and the NWB issued Type A Water Licence;
- consulting with Kivalliq communities and Inuit organizations to understand and address their concerns and to develop guidance for environmental and socio-economic management;
- consideration for incorporating Inuit Qaujimajatuqangit (IQ) into management decisions;
- complying with laws, regulations, and authorizations,
- managing environmental risks associated with the Project through the use of the Precautionary Principle[2] to prevent risks of serious or irreversible harm to the environment;
- assigning roles and responsibilities in making decisions and responding to environmental and impacts that may occur; and
- Reducing or eliminating potentially adverse impacts while maximizing beneficial effects.

2.4 Flexibility in the Environmental Management and Protection Plan

Adaptive management can improve long-term management outcomes. This is possible due to flexibility of this Plan and all other Management Plans developed by Agnico Eagle. Decision-making will meet management objectives and accrue information needed to improve future environmental management (Holling 1978). Flexibility allows for adjustments to operating procedures and refinement of mitigation measures based on what has been learned through experience, monitoring, and research.

[1] Formerly Department of Culture, Language, Elders and Youth (CLEY)

[2] The *Canadian Environmental Protection Act* (1999) defines the Precautionary Principle as follows: "*…where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."*

SECTION 3 • ENVIRONMENTAL MANAGEMENT SYSTEM

3.1 Responsibilities and Resource Allocation

The Responsible Mining Management System (RMMS), developed by Agnico Eagle, is expected to provide information related to two key questions:

1. *Does the RMMS effectively conserve and protect the environment in which the mine operates and allow traditional pursuits to continue unimpeded?*

2. *Does the RMMS achieve the goals found in Agnico Eagle's Sustainable Development Policy?*

The RMMS is designed to provide a framework to ensure adequate protection of the environment. It includes the flexibility for continual improvement over time. RMMS verifies that the assignment of environmental management responsibilities and resource allocation to environmental management, monitoring, and mitigation has been considered.

The use of adaptive environmental management allows scenarios to be tested and mitigation measures to be planned and developed beforehand. This allows for a rapid response to adverse effects and reduces the length of time land and water potential impacts could persist. In the event inadequacies are detected in the RMMS, the flexibility afforded by adaptive management allows these to be addressed quickly and in a comprehensive manner.

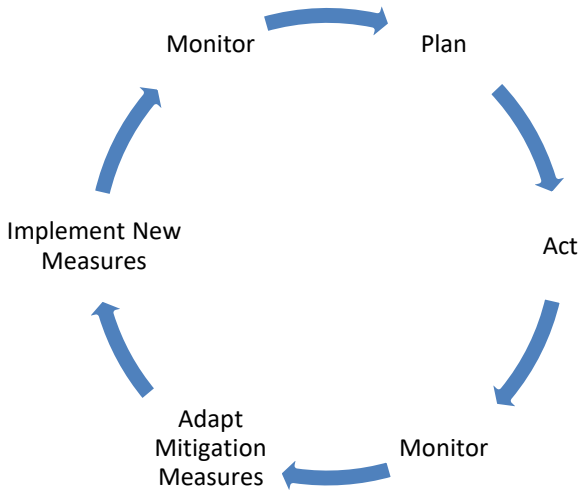
Responsibility for decision-making and providing the resources for the implementation, maintenance, and improvements to the EMPP rests with mine management with input from Agnico Eagle's corporate office. Management responses to potential adverse effects will be based on the analysis of monitoring results and an understanding of the cause and effect, the severity and duration of the adverse effect, and the impact on traditional pursuits. Decisions made using an adaptive management process will improve the EMPP's effectiveness in addressing environmental effects while maintaining the economic viability of the mine. The Environment Superintendent, as a member of the mine senior management team, will have input to collective decisions.

The response initiated and resources provided would be commensurate with the gravity and duration of the observed effect. The goal is to remove the cause of the adverse effect or reduce the observed effect to an acceptable level. This could include administrative actions, such as adjustments to standard operating procedures, especially if negative effects persist.

3.2 Design of Mitigation and Monitoring Plans

Environmental mitigation and monitoring plans outline specific procedures and actions considered essential in accomplishing defined tasks required by the Project. These plans (e.g., Water Management Plan [Agnico Eagle 2018], Terrestrial Environment Management and Monitoring Plan [Agnico Eagle 2017], Borrow Pits and Quarries Management Plan [Agnico Eagle 2018], etc.) include various responses, mitigation measures and strategies designed to be corresponding to the potential

adverse effects. The Plans also include monitoring provisions and programs designed with the objective of assessing effectiveness of the planned mitigation measures after such measures have been implemented. These Plans will assist Agnico Eagle in modifying its work activities and in making improvements to its mitigation measures during all phases of the Project. Adaptive management is a cycle that is applicable to all activities under the RMMS.



In this way, Agnico Eagle can continue to monitor the effectiveness of its mitigation measures, both against regulatory requirements and against the outcomes predicted through the FEIS and permitting processes, and then to adaptively adjust its mitigation measures until the effectiveness of such mitigation measures meet the expected or required outcomes. Agnico Eagle has incorporated initial trigger or threshold levels/points, for example, in the Aquatic Effects Monitoring Plan (AEMP) that, when reached or exceeded, would allow Agnico Eagle to initiate further mitigation measures or adaptively adjust its activity to reverse or stop unwanted outcomes. These initial threshold points will be the subject of continued assessment and would be reviewed and, where appropriate, revised in subsequent updates to the site AEMP.

In the instance of economic hardship (be it internal project economic hardship or external economic hardship recession or collapse in the price of gold]), Agnico Eagle will adjust its operational plans to the prevailing economic condition but it will not sacrifice its commitment to operate in accordance with statutory requirements or compromise its internal mandate to operate in a safe, responsible and sustainable manner. It is understood that Agnico Eagle will consult the NIRB and the NWB to determine whether any potential change to the Project would result in a change to the scope of the Project and potentially require an additional environmental review.

In the event of a transfer of ownership, Agnico Eagle expects that, as a precedent condition to such a sale or transfer, the new owner would be obligated to continue to meet all of the same requirements under the NIRB Project Certificate/NWB Water Licence/or other authorizations, and to continue to operate in a safe, responsible, sustainable manner under the Project's RMMS/EMPP.

In developing the monitoring and management plans for the Project, Agnico Eagle has included the following elements, where applicable:

- objectives of the monitoring program, applicable laws, and regulations;
- discussion of actions to be taken in case of non-compliance with the law or regulations;
- the Valued Ecosystem Component (VEC) to be monitored, and applicable criteria/thresholds and regulations, including, if relevant, the obligations imposed on contractors by the environmental provisions of their contracts;
- description of how the efficiency of mitigation measures will be evaluated;
- description of the frequency, duration, and geographic extent of monitoring with justification for each, and identification of personnel who will conduct the collection, analyse and interpretation of data;
- proposed actions in the event that observed results or impacts differ from those predicted;
- proposed reporting scheme for monitoring results, including format, reporting intervals, and responsible territorial and federal authorities;
- identification of organizations to which to communicate results of monitoring efforts: Inuit organizations, institutes of public government, territorial, and federal authorities, etc.;
- plans for integration of monitoring results with other aspects of the Project, including adjustments of procedures and refinement of mitigation measures;
- procedures/mechanisms to assess the effectiveness of monitoring and adaptive management programs; and
- quality assurance and quality control (QA/QC) measures to be applied to monitoring and management programs.

The initial design of monitoring and management plans, data analysis, reporting, and integration of results into operational procedures will be carried out by Agnico Eagle. Consultation on the same may lead to changes to meet the needs and concerns of other organizations.

Monitoring will use a hierarchical sequence of responses when criteria levels or compliance limits are exceeded, thereby triggering corrective actions.

Mitigation measures as well as corrective and preventative actions will be implemented by applicable mine departments or contractors with support from the Meliadine Environmental Department. This could include the evaluation of mitigation measures in place and updates to operational procedures. Communication will be maintained with Inuit organizations, authorizing agencies and the public in describing any adverse effect observed and what corrective action is being used to mitigate it.

3.3 Mitigation of Adverse Environmental Effects

Mitigation is a means of eliminating, reducing, or controlling a potential adverse environmental effect at the Project, including restitution for any damage to the environment caused by such effects through

replacement, restoration, compensation, or other means (JRP 2010). The ranking of mitigation options is as follows:

- **Avoidance** – using an alternate site or technology to avoid the adverse effect all together. This is the most desirable.
- **Minimization** – taking actions to minimize and/or contain effects to the maximum extent possible during engineering design, construction, operation and closure.
- **Rectification** – taking actions to rehabilitate or restore the affected environment after the fact.
- **Compensation** – this is used as a last resort to offset adverse environmental effects. This is the least desirable.

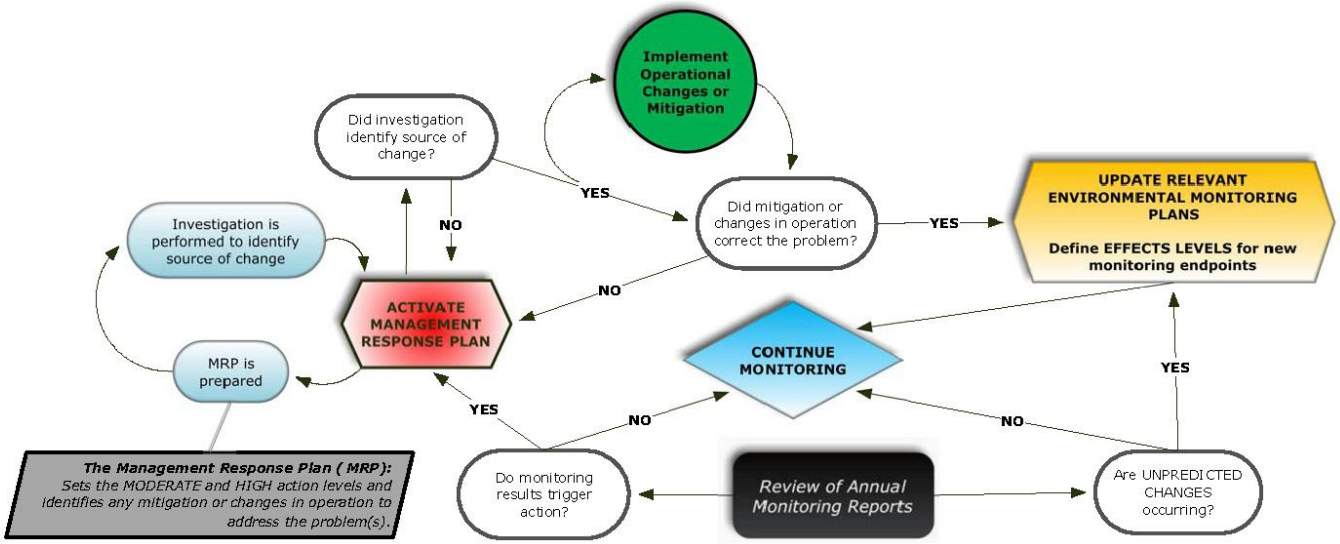
Environmental effects monitoring programs will monitor the effectiveness of mitigation measures. These programs will include a reporting and response system; through adaptive management, strategies (see Section 4).

SECTION 4 • FOLLOW-UP AND ADAPTIVE MANAGEMENT PLAN

Each of the management plans developed for the Project include an intrinsic process of continuous improvement that is aimed at evaluating the effectiveness of the design features, mitigation measures, operating practices, and procedures put in place.

Making use of adaptive management requires the recognition that it is a structured, iterative approach to environmental management decision-making (CPR 2011). Many VECs applicable to the Project are part of dynamic natural systems where uncertainty can be a significant factor. The goal is to reduce uncertainty over time by incorporating learnings from design, monitoring, mitigation, and changes in operations into environmental management at the proposed mine site. Where applicable, an adaptive management strategy or approach will be used for those VECs that will be monitored by Agnico Eagle. The adaptive management process is shown in Figure 4-1.

Trends will be documented and compared to the pre-established goals/thresholds. Any corrective action plan will also be documented through the RMMS.



Adaptive Management Plan triggered when EFFECT(S) LEVELS exceed pre-determined LOW ACTION LEVELS or UNPREDICTED CHANGES are occuring (i.e., conclusions of monitoring response framework).

Outcome may include engineering/mitigation, changes to Effluent Quality Criteria (EQC), and updated monitoring programs.

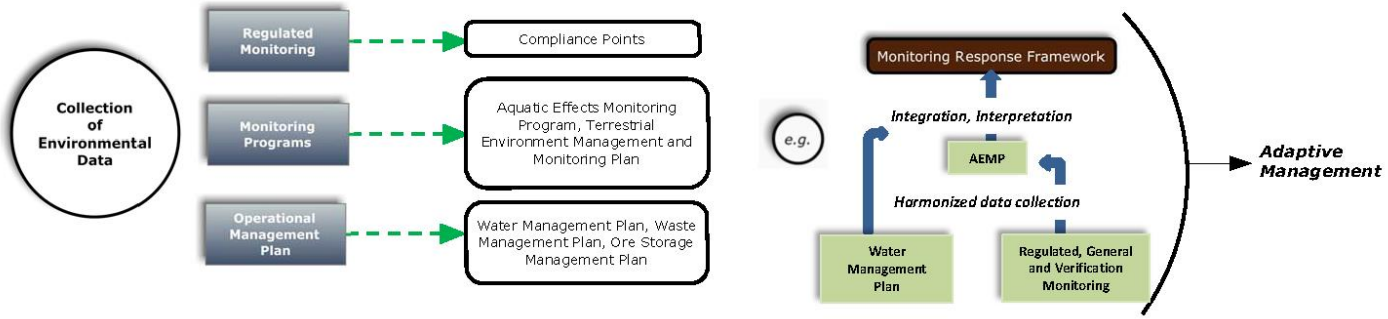


Figure 4-1 Adaptive Management Process

AGNICO EAGLE

4.1 Adaptive Management and Precautionary Principle

It is through monitoring that any unanticipated adverse environmental impacts can be discovered. Adaptive management is particularly useful in implementing the appropriate remedial measures in these instances. Additionally, the objectives of monitoring and adaptive management are to verify that:

- commitments are fulfilled;
- regulatory and other requirements are met;
- adverse effects are avoided or minimized; and
- benefits are enhanced.

The precautionary principle, in conjunction with adaptive management, will be used in decision-making. In the face of uncertainty, conservative approaches will be used with an aim to reducing uncertainty over time via monitoring and mitigation.

Inspection precedes maintenance. Inspections, combined with monitoring, will signal when adaptive management must be used to mitigate possible negative effects (see Section 4.2.3 Inspections).

4.2 Performance Measurement and Monitoring

To effectively communicate performance, it is important to select the appropriate indicators. As part of the Mining Association of Canada, Agnico Eagle reports its global performance through its annual Corporate Social Responsibility report. This report includes, notably, the indicators of the Global Reporting Initiative and Towards Sustainable Mining Initiative. Those will be incorporated into the Meliadine RMMS. Indicators to follow will be selected by taking into account:

- the compliance with relevant regulatory requirements and permitting targets;
- activities trends; and
- the progress towards achieving targets.

The RMMS will link the compliance thresholds to appropriate corrective actions and establish accountability.

The performance of the management plans will be monitored and the results communicated. Independent researchers or consultants may be engaged to review performance where necessary. The accuracy of the environmental impact predictions and the effectiveness of the mitigation measures will be verified through that process. If unusual or unforeseen adverse environmental impacts are noticed, corrective action will be put in place. Through the adaptive management process, the existing mitigation measures will be adjusted or new mitigation measures implemented if necessary. External reporting will be completed, as required. As a result, site Management Plans may be revised or modified as required.

A follow-up program will verify the effectiveness of any mitigation measures taken in response to expected and unexpected adverse environmental effects. An environmental effects monitoring

program, will monitor the effectiveness of all mitigation measures. This program will include a reporting and response system.

4.2.1 Environmental Monitoring

Environmental monitoring, for the purposes of the EMPP, consists of the following:

- Regulated discharge monitoring occurs at monitoring points specified in the Type A Water License, other licenses, or regulations. It includes discharge limits that must be achieved to maintain compliance with an authorization (e.g., water license) or regulation (e.g., Metal and Diamond Mining Effluent Regulations). Enforcement action occur 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. There is no obligation to report verification monitoring results, although some monitoring locations and these results can be mentioned in environmental management plans (e.g., sampling to verify soil remediation in the landfarm) or the Annual Reports required by regulators.
- General monitoring is commonly included in a water license specifying what is to be monitored according to a schedule[3]. It covers all types of monitoring (e.g., geotechnical, lake levels, etc.). This monitoring is subject to compliance assessment to confirm sampling was carried out using established protocols, including 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 NWB or the NIRB.

All three types of monitoring will be used at the Project. A summary of Water Quality Regulated, General Aquatic, and Verification Monitoring for the Project during Construction, Operations, and Closure is included in the Aquatic Effects Monitoring Program Design Plan (AEMP) (Golder 2018) and the list of parameters for sample analysis is included in the Type A Water Licence.

[3] Referred to in NWT and old NWB licenses as the Surveillance Network Program.

4.2.2 Use of Inuit Qaugimajatuqangit in Environmental Management and Monitoring

IQ consists of Inuit values, preferences and traditional knowledge; it is about the relationships between humans, animals, and the environment. It is location specific and reflects the particular conditions in specific geographic locations. IQ, although normally undocumented, is shared information within the community, and maintains the means and knowledge of living off the land, continues traditional land use activities, and promotes a cultural life style, all of which sustained Inuit for generations.

IQ is the most successful and oldest monitoring practice in Nunavut, where the resource users do the observing or monitoring. As such, IQ represents a valid and essential source of information in the design and implementation of environmental management and monitoring programs. Improvements have been incorporated based on stakeholder review, and through the inclusion of traditional knowledge from communities and Inuit organizations throughout the Kivalliq region. Agnico Eagle expects to continue active engagement with communities and Inuit organizations, which should lead to further inclusion of traditional knowledge in periodic updates to the design and implementation of environmental programs. Agnico Eagle has and will continue to engage with the KIA to advance the use of IQ. This will ensure that the combination of science and IQ leads to environmental management and monitoring that meets the expectations of government, communities, and Inuit organizations.

4.2.3 Inspections

Agnico Eagle is responsible for inspection and maintenance of all mine components, and the inspection and monitoring of mine activities. A regular inspection program will lead to the early identification of areas where improvements are needed. The early resolution of any deficiencies will result in less ongoing maintenance and repair of mine components, and a reduction in the risk of adverse environmental effects.

Inspections ensure that Project mine components are constructed, operated, maintained, managed, and closed in an environmentally sound, safe, and efficient manner. Further, inspections assist in obtaining better environmental outcomes for all activities and more timely maintenance of mine components throughout the mine life.

For the most part mine environmental personnel having knowledge and experience with the mine components and activities carry out the inspections. Training is provided by Agnico Eagle to effectively and efficiently complete inspections. Inspections result in month-end summary reports that are distributed to mine management and regulators. This allows action to be taken to address any deficiencies in components or activities. Inspection reports are retained on site by the respective inspecting departments.

4.2.3.1 Scope of Inspection Program

The Inspection Program (IP) is relevant to all phases of the mine life, including pre-development, construction, operation, closure, and any periods of care and maintenance. Inspections are conducted throughout the entire mine site and associated components. Inspections are also carried out at the Itivia site in Rankin Inlet. This includes, but is not limited to, mine components such as, open pits, quarries, borrow pits, roads, storage pads, waste rock storage facilities, diversion channels, dikes, sumps, berms, tailings storage facility, landfill, incinerator, landfarm, explosives plant, and pipelines. It includes such activities as the pumping of water and waste, discharge to the receiving environment, spill cleanup, and fuel transport on Agnico Eagle's roads.

4.2.3.2 Inspection Priority and Risk Analysis

Inspection priorities are based on analyzing all mine components / activities and their respective risks. Installations and activities are qualitatively[4] ranked as "high risk", "medium risk" and "low risk" with those posing a "high risk" receiving inspections that are more frequent[5]. If needed, the inspection schedule will be adjusted to accommodate an increased inspection frequency of mine components and/or activities requiring more attention.

The criteria used in determining risk arising from the use of water or discharging to water include the following:

- potential effect on the environment (e.g., due to the location of mine components and sensitivity of the nearby receiving environment);
- potential effect on public health (e.g., potable water treatment or sewage treatment);
- safety risks (e.g., the integrity of roads throughout freshet or following a major rain event);
- potential social impacts (e.g., dust from Agnico Eagle's roads); and,
- potential financial or economic impact resulting from an accident, malfunction, or spill (e.g., tanker truck leaving the all–weather access road, spilling fuel, and requiring significant resources for the cleanup).

4.2.3.3 Routine and Non-routine Inspections

Routine inspections are planned and scheduled on a reoccurring basis and cover the following:

- inspections required under authorizations;
- inspections of mine components where the management of water and waste takes place; and,

[4] If there is a disagreement on the level of risk based on a qualitative determination, a quantitative determination will be undertaken using accepted methods found in the literature (IMPEL 2012).

[5] Agnico Eagle has the capacity to carry out an inspection program. All activities and mine components identified in this inspection program affecting the use of water or the discharge of waste to water will be inspected, irrespective of the level of risk.

- activities that could affect water and waste management.

Non-routine, event, or unplanned inspections cover the following:

- environmental complaints or concerns raised by the public;
- accidents, malfunctions and spills;
- after major rain events;
- instances when the quality or quantity of water on the mine site is not meeting expectations; and
- instances where discharge criteria to the receiving environment approach, but do not exceed, Water License limits or the Metal Mining Effluent Regulations.

Inspections will have a strong seasonal component with some inspections suspended over the winter and others reduced. Agnico Eagle foresees a high frequency of inspections of engineered structures occurring just before and during freshet, followed by less frequent inspections over the remainder of the open water season. For example, inspections of culverts, bridges, ditches, and sumps will be suspended over the winter, and would resume before freshet and continue over the summer until freeze-up. Increased inspections during freshet will ensure mitigation measures employed to manage the higher spring flows prove effective, and that the integrity of bridges and culverts are not compromised.

Year-round inspections at a set frequency will occur for mine components such as the potable water treatment plant, the sewage treatment plant and the landfill. These are not directly influenced by the changing weather experienced at the mine site over the year.

Table 4-1 below provides a summary of proposed inspections of mine components and mine activities; this includes some unrelated to the use or water or the discharge of waste to water. Specific details are included in the respective management plans and/or procedures and indicate inspection methods or procedures, and frequency. It also identifies the department responsible for the inspection. Ultimately, the environmental department at Agnico Eagle will be responsible for ensuring that all monitoring and inspections are completed.

Table 4-1 Summary of Proposed Inspections

Mine Components / Activities Inspected	Inspection Methods/Procedures/ Department Responsible	Qualitative Risk Level - High, Medium, or Low	Department Responsible	Frequency
Dikes	Visual inspection for erosion of or seepage through or under the dikes, including movement of crests and slopes. The environment department would collect samples of any seepage.	High. Failure of a dike could have significant adverse effects on the downstream environment	Engineering	Weekly prior to freshet when the dikes are clear of snow, and weekly over the open water season. Monthly during the winter to check for seepage
Open Pits	Visual inspection for seepage and collection of samples, if it safe to do so	Low. Water seeping into open pits will be controlled and directed to CP1	Open Pits Mining Environment Engineering	Weekly at freshet and monthly thereafter over the open water season
Waste Rock Storage Facilities	Visual Inspection for seepage and collection of samples, if it safe to do so. Thermistor Installation	Low. Ditches will intercept any seepage from the waste rock and direct the water to CP1. Thermistors monitor the rate of freeze back and permafrost development progress	Open Pits Mining Engineering Environment	Visual inspection, monthly over the open water season and thermistors monitored four times per year.
Ore Stockpiles	Visual Inspection for seepage and collection of samples, if it safe to do so.	Low. Ditches will intercept any seepage from the ore stockpiles and direct the water to CP1.	Engineering	Visual inspection, monthly over the open water season
Tailings Storage Facility	Thermistor Installation	Low. Thermistor cables will be installed in the TSF to monitor the permafrost development progress within the facility during the operations stage	Engineering Environment	Four times per year
Berms	Visual inspection for erosion of or seepage through or under the berms, including movement of crests and slopes.	High. Failure of berms upstream from pits could pose a safety hazard.	Engineering	Weekly inspection just before, during and just after freshet; Monthly after freshet is over in the open water season
Culverts	Visual inspection for snow and/or debris blockage of culverts.	Medium. Snow can be removed from the front and back of the culverts before freshet	Energy and Infrastructure Environment Engineering	Just prior to freshet and daily during the first days of freshet; also following major rain events. Weekly during period of flow. Monthly after freshet is over in the open water season

Table 4-1 Summary of Proposed Inspections (continued)

Mine Components / Activities Inspected	Inspection Methods/Procedures/ Department Responsible	Qualitative Risk Level - High, Medium, or Low	Department Responsible	Frequency
Roads	Visual inspection for evidence of seasonal freeze and thaw adjacent to the toe of the road embankment	Low. Affected area will be repaired using granular material and/or crushed rock.	Energy and Infrastructure	Weekly over the summer (approximately mid-May , from the start of the freshet period to October, prior to the fall freeze-up)
Water ponding against roads	Visual inspection of roads after freshet and major rain events.	Low. Ponding can be dealt with by pumping the water or by installing a culvert in the road where water is ponding.	Energy and Infrastructure Environment	Weekly over the open water season and following freshet and major rain events
Bridges	Visual inspection for snow dams prior to freshet	High. Snow dams could lead to the bridge being overwhelmed at freshet with resultant damage. Snow dams may also result in flooding upstream from the bridge, potentially impacting existing heritage resources.	Energy and Infrastructure	Prior to freshet to allow time for any snow dams to be removed and weekly during freshet to confirm that snow dams were breeched.
Snow removal from roads	Visual inspections to ensure skidoo trails are not being blocked by snow removed from the roads	Low. Pushing snow onto skidoos trails that cross Agnico Eagle's roads will make it difficult for trail users to cross the roads.	Energy and Infrastructure Environment	Following each major winter storm and clearing of snow off the roads.
Road dust	Visual inspection of the road for excessive dust generation and deposition.	High. Dust can impact on the environment along the roads, and be a safety risk due to limited visibility.	Energy and Infrastructure Environment	Weekly when roads are very dry and/or when road traffic is heavy. Inspections will be suspended during rainy days and over the winter.
Caribou near or on roads	Visual inspection of hunting activities along the road when large numbers of caribou are near-by.	High. Hunters should observe the 1 km no shooting zone along the road	Environment	Weekly, year round, and more frequently when during caribou migration periods.

Table 4-1 Summary of Proposed Inspections (continued)

Mine Components / Activities Inspected	Inspection Methods/Procedures/ Department Responsible	Qualitative Risk Level - High, Medium, or Low	Department Responsible	Frequency
Watercourses and watercourse crossings	Visual inspection of infrastructure to identify defects, cracks or any other risks to structural integrity, sediment or other debris accumulation, or bed erosion or scour	Low. Infrastructure will be repaired after deficiencies are noted, when it is safe to do so.	Energy and Infrastructure Engineering Environment	Weekly during the open water, during the freshet period, and unscheduled inspections following a major rain event.
Sumps	Visual inspection of sumps and the measurement of freeboard.	Medium. Sumps need to be pumped down prior to freeze-up to accommodate the coming year's freshet.	Engineering	One inspection before freeze-up to ensure the water level in the sumps is low to allow for inflow during freshet. Weekly during freshet, immediately after a major rain event and weekly otherwise over the open water season. Monthly after freshet is over in the open water season
Collection Ponds	Visual inspection and measurement of freeboard in contact ponds	Medium. The storage capacity of the pond needs to be increased before freeze-up to accommodate next year's freshet.	Engineering	One inspection before freeze-up to ensure the water level in the sumps is low to allow for inflow during freshet. Weekly during freshet, immediately after a major rain event and weekly otherwise over the open water season; Monthly after freshet is over in the open water season
Diversion Channels	Visual inspection of the channel for permafrost degradation and excess snow and ice accumulation leading to potential blockages.	Medium. Permafrost degradation may result in bank slumping and channel instability. Diversion channels need to be clear of snow prior to freshet to allow for water flow.	Engineering	(1) Prior to and at freshet; (2) Immediately after a major rain event; and (3) Weekly for the remainder of the ice-free season
Potable Water Treatment Plant	Visual inspection for cleanliness and that the plant is operating as required. Water samples for testing will be collected.	High. Plant provides potable water to the camp and its proper operation is necessary for human health.	Energy and Infrastructure	Ongoing as prescribed by the Dep't of Health or Public Health Authorities. Daily inspections are expected

Table 4-1 Summary of Proposed Inspections (continued)

Mine Components / Activities Inspected	Inspection Methods/Procedures/ Department Responsible	Qualitative Risk Level - High, Medium, or Low	Department Responsible	Frequency
Sewage Treatment Plant	Visual inspection for cleanliness and collection of samples for testing	Medium. The sewage treatment plant discharges to CP1, which has a dike to control flow to Meliadine Lake. The water in CP1 is reclaimed for use in processing ore, or receives additional treatment if necessary before release to Meliadine Lake.	Energy and Infrastructure Environment	Weekly
Tank farms at the mine site and at Itivia	Visual inspection of water level within the secondary containment structure, and evidence of any spills or leaks. A geotechnical consultant performs a geotechnical inspection annually (between the months of July and September) of the bulk fuel secondary containment structures.	Low. Due to snow accumulation, melting and precipitation, contact water will unavoidably collect inside the secondary containment area. This water will be sampled and tested before discharge to CP1 Water from the Itivia tank farm will be returned to site, if necessary Spills and leaks will be cleaned up.	Energy and Infrastructure Environment	Weekly by Energy and Infrastructure Supervisor Weekly manual or electronic dip tests are conducted for inventory reconciliation of fuel in the tanks by sites services The geotechnical consultant inspects the tank farms annually.
Diesel Power Generating Plant	Visual inspection. Locate leak(s) and report promptly.	Low. All spills in Generating Plant will be held within the building.	Energy and Infrastructure	Weekly by powerhouse operator
Other Fueling Stations	Visual Inspection for leaks or spills and keep a written log of inspections to be made available to an Inspector upon request	Low. Fueling stations will have an impermeable liner to capture spills or leaks	Energy and Infrastructure Environment	Weekly by Energy and Infrastructure Supervisor
Hazardous Material Storage Areas	Visual inspection for proper storage of hazardous wastes	Low. Hazardous waste will be stored in areas having containment or in sea cans	Energy and Infrastructure Environment	Weekly by Energy and Infrastructure Supervisor
Waste Shipments	Inspect shipping forms to ensure they meet regulatory requirements	Low. Employees or contractor preparing waste for transport will be trained in the transportation of dangerous goods.	Warehouse/ Logistics Environment	Waste will be shipped south during the latter part of the shipping season. The shipping forms will be inspected monthly year round for

Table 4-1 Summary of Proposed Inspections (continued)

Mine Components / Activities Inspected	Inspection Methods/Procedures/ Department Responsible	Qualitative Risk Level - High, Medium, or Low	Department Responsible	Frequency
				sea cans that are full and have been sealed for shipment.
Landfarm	Visual inspection for water ponding outside the perimeter berm and water accumulating within the landfarm.	Low. The landfarm will have an impermeable liner and an oil: water separator will be used to remove excess water from the landfarm.	Energy and Infrastructure Environment	At freshet and weekly for the remainder of the summer.
Landfill	Visual inspection for orderly use of the landfill, absence of blowing debris, and leachate at the base of the landfill during the summer.	Low. The landfill has a berm to reduce blowing debris, and a ditch will intercept any leachate coming from the landfill.	Energy and Infrastructure Environment	Weekly over the entire year for the orderly use of the landfill and for evidence of blowing debris. Inspections for leachate following freshet and weekly thereafter over the open water season.
Incinerator	Visual inspection for cleanliness and the proper management of all waste delivered to the facility.	Low. All waste delivered to the facility will either be incinerated or managed for future off site recycling or disposal.	Energy and Infrastructure Environment	Weekly to ensure wastes generated at the mine are being properly managed.
Emulsion Plant	Visual inspection for spillage of NH_4NO_3 outside the explosives factory and at storage locations. All Plant components inspected as per regulations	High. If NH_4NO_3 gets into water, it can negatively affect fish.	Emulsion Plant Manager	Weekly, year round, or at a frequency required by regulation.
Quarries / Borrow Pits	Visual inspection for slumping and seepage from the quarries/borrow pits.	Low. Loose rock will be pulled down from the quarry face. Seepage sampled.	Energy and Infrastructure Environment	Weekly at freshet and monthly thereafter over the open water period. Also, after major rain events.
Freshwater Jetty	Visual inspection for erosion and settlement of the jetty	Low. If there is settlement of the jetty, additional clean waste rock will be added.	Engineering	Annually following Meliadine Lake becoming ice free
Pipelines	Visual inspection for leakage or damage to the pipeline	Low. If the freshwater pipeline were to fail, the pumps in Meliadine Lake can be remotely turned off. Other pipelines discharge to or from CP1.	Energy and Infrastructure	Weekly, year round

Table 4-1 Summary of Proposed Inspections (continued)

Mine Components / Activities Inspected	Inspection Methods/Procedures/ Department Responsible	Qualitative Risk Level - High, Medium, or Low	Department Responsible	Frequency
Spills	Document the recovery of spilled material and clean-up of any remaining residuals	This could range from low to high risk depending on what was spilled, where it occurred, and success of spill recovery efforts.	All departments; Environment to follow-up	Inspections begin when a spill is reported and continues on a regular basis until the spill is cleaned up. The frequency of inspections will be dependent on what was spilled, where it occurred, and success of spill recovery efforts.
Spill Kits	Inventory of spills response equipment and materials in each spill kit	Low. Spills kits will be restocked after use.	All departments; Environment to follow-up	Quarterly by Environment Technician
Archaeological Sites	Inspect archaeological sites and report annually	Low	Environment	The location of archaeological sites has been identified and Agnico Eagle will take photos of the sites inspected and when new construction is planned in these locations.

4.2.3.4 Periodic Revisions of the Inspection Program

Periodic Revisions of the Inspection Program. The effectiveness of the inspection program will be evaluated annually to determine the extent to which it achieved the desired environmental and maintenance outcomes. Updates to the program may be prompted by changes in policies or legislation, changes in operations and/or technology at the mine, or as part of corrective action.

4.3 Incident Investigations and Corrective Actions

One of the most important aspects in investigating incidents, accidents, and non-conformities is to analyse situations and try to find root cause(s). Through this process, actions taken to address those incidents, accidents, and non-conformity should result in permanent and positive changes to the RMMS as well as on site Plans and affirm continuous improvement. It is important that employees with responsibilities with regard to a situation under investigation be part of the process in identifying and assessing causes.

The following standard steps will be followed when conducting an investigation:

- identify the cause(s);
- prepare a report on the findings;
- develop a plan for corrective, mitigation, and preventive action(s)[6];
- implement the plan;
- evaluate the appropriateness and effectiveness of the corrective action(s);
- incorporate changes for continuous improvement; and,
- record and communicate changes arising from the continuous improvement.

Additional detail is provided in the Risk Management and Emergency Response Plan.

4.4 Communication and Reporting

The sharing and communication of information is an important part of the EMPP. Internal communications will be recorded and distributed to managers before being filed for future reference. Agnico Eagle will maintain and preserve internal and external records.

External reporting will detail the activities at the mine site (including accidents and incidents), the monitoring being carried out, how it complies with authorizations and meets environmental goals. Communications shall utilize available modern means of presenting information on environmental performance to interested parties through community liaison meetings, Agnico Eagle Nunavut website (http://www.aemnunavut.ca/), training initiatives, public notices, compliance reports, annual reports, community presentations, formal correspondence, updates to management and mitigation plans, radio announcements, etc. All efforts will be made to keep Inuit organizations, communities, authorizing agencies, the business community, and the public informed of environmental

[6] In the case of spills this would include the verification of its cleanup through inspections and, if necessary, the collection of samples.

performance of the Project. As a member of the Mining Association of Canada, Agnico Eagle is committed to "Towards Sustainable Mining (TSM)" Guiding Principles, one of which is to be "proactively seeking, engaging, and supporting dialogue regarding our operations." The "Towards Sustainable Mining" Guiding Principles are part of Agnico Eagle's RMMS. Agnico Eagle communication initiatives support this guiding principle.

4.5 Audit, Review, and Update

It is expected that regulatory agencies will inspect the Project over its life for compliance with permits, regulations, and licences. Audits will also be conducted internally; however, independent researchers or consultants may also be engaged to complete the audits. Management reviews will also be conducted to determine the continued suitability, adequacy and effectiveness of the RMMS. The internal inspection process described previously can also be considered as an audit procedure. Outputs of the audits and management reviews could include:

- recommendations to revise the Environmental, Health, and Safety Policies and Management Plans;
- revision to established objectives and targets; and,
- specifications for corrective actions for individual management plans.

SECTION 5 • WATER LICENCE 2AM-MEL1631 PART I, ITEM 2

As requested in the Nunavut Water Board Water Licence No: 2AM-MEL1631 Part I, Item 2

The Licensee shall update the Environmental Management and Protection Plan for submission to the Board for approval in writing, at least ninety (90) days prior to Operations. The updates are to take into account commitments made with respect to submissions received during the technical review of the Application, as well as final submissions and issues raised during the Public Hearing Process, where applicable.

a. Comprehensive Receiving Environment monitoring to identify changes to the aquatic environment associated with mine activities;
b. Linkage between monitoring results and adaptive management response;
c. Sampling and analysis plans;
d. Thresholds for contaminant levels in CP1 and triggers for mitigation measures; and
e. Monitoring under Fisheries Authorizations, NWB Licence Compliance Monitoring, Metal Mining Effluent Regulations (MMER) Environmental Effects Monitoring, and Groundwater Monitoring

a. Comprehensive Receiving Environment monitoring to identify changes to the aquatic environment associated with mine activities;

Since the Water License was issued, Agnico Eagle has submitted an Aquatic Effects Monitoring Program (AEMP) report. Agnico has addressed comments received from the NWB which were implemented in the 2018 AEMP Program. The AEMP is a comprehensive study that considers Water Quality sampling, Sediment Quality sampling, an assessment of the benthic community and an assessment of plankton abundance. The study considers both the proximity of near field sampling stations as well as far field stations. As mine operations are set to begin in the first half of 2019 it is especially important to have this initial pre-operation information which future monitoring results can be compared to. The 2019 AEMP will contain trigger levels which can initiate adaptive management/mitigation measures prior to any detrimental environmental impacts.

In addition, the study design for Agnico Eagle's Environmental Effects Monitoring Program (EEM) was approved by Environment Canada. In Dec, 2018 Environment Canada also approved Agnico Eagle's request to submit the results of the EEM as part of the AEMP as requirements for both programs have met the NWB and Environment Canada's criteria to conduct the program.

b. Linkage between monitoring results and adaptive management response

It is noted in Table 1 that most individual, site specific environmental management plans have been revised since the NIRB Project Certificate and NWB Type A Water License were issued. Many of the Plans are 2018 versions. The Mine Plan, Ore Storage Plan and the Closure and Reclamation Plan are the only plans that have not been revised since the issuance of permits; mainly because they are

reflective of the Operations phase of the mine (which has not commenced) The Water Management and Mine Waste Management Plan will be revised on a yearly basis moving forward. The reason for this is that these Plans encompass major components of mine operation and there are many changes that can occur. Thus as an adaptive strategy the plans are revised to ensure we comply with our permits and prevent adverse environmental impacts.

In addition, through a comprehensive site wide inspection program whereby Agnico Eagle monitors different departments for compliance with our permits and management plans any non-conformity or observed deficiency can lead to corrective actions being taken and/or modifications of individual management plans.

To summarize, Agnico Eagle has revised or modified most of the environmental management plans approved for the project since the Water License was issued. This was in response to legal requirements or observations (inspections) on site where there have been changes or modifications to existing management plan requirements. Therefore, Agnico Eagle has demonstrated adaptive management as a strategy to prevent or mitigate any adverse environmental impact. Any revisions or modifications (along with the reasons) are referred to in the Document Control Section of the specific management plans.

c. Sampling and analysis plans;

Agnico Eagle has developed comprehensive sample and monitoring plans. These include the Air Monitoring Program (includes noise monitoring and particulate from site operations), Roads Management Plan (dustfall sampling), Freshet Action Plan (TSS sampling at critical areas during spring freshet), Compliance sampling at CP1 to name a few.
As mentioned in the previous section many individual environmental management plans have been revised to reflect sample monitoring programs (ie., Freshet Mgt Plan). Individual Plans should be consulted for specific details regarding sampling and analysis.

d. Thresholds for contaminant levels in CP1 and triggers for mitigation measures;

Thresholds for contaminant levels in CP1 are linked with the NWB Licence Compliance Monitoring and Metal and Diamond Mining Effluent Regulations (MDMER) regulations. Sampling is completed as per the requirements of the Water License and MDMER in CP1 during discharge events to ensure water discharge criteria are met.

With respect to TSS monitoring during CP1 discharge events Agnico has developed triggers for mitigation. Rating curves predicting TSS concentration as a function of turbidity and TDS as a function of conductivity were developed with simple linear regressions. The regressions applied *in situ* conductivity and turbidity readings and MEL-14 sample results. Rating curves are applied to continuous conductivity and turbidity readings taken from internal probes within the EWTP to predict TDS and TSS, respectively. Regarding conductivity, a trigger limit has been set to 1900 µS/cm which corresponds to 1,244 mg/L TDS (Appendix B). When this trigger is reached, discharge to Meliadine

Lake will be stopped. The correlation strength pertaining to the TDS-conductivity rating curve is R^2 = 0.85. Thus, the trigger limit was set below the maximum allowable concentration (1400 mg/l - TDS limit) to allow for uncertainty associated with the correlation.

Regarding turbidity, two trigger limits have been set. The first is set to 1.2 NTU which corresponds to app 15 mg/L TSS (Appendix X). When this first trigger is reached, sample frequency will be increased to twice per week for TSS at an accredited lab. The second trigger limit is set to 2.3 NTU which corresponds to app. 25 mg/L TSS (Appendix X). When this second trigger is reached, discharge to Meliadine Lake will be stopped. The correlation strength pertaining to the TSS-turbidity rating curve is R^2 = 0.79. Thus, the trigger limit was set below the maximum allowable concentration (15mg/l – TSS Max Ave Concentration and 30 mg/l - TSS Max Grab Concentration) to allow for associated uncertainty the correlation.

e. Monitoring NWB Licence Compliance Monitoring, Metal Mining Effluent Regulations (MMER) Environmental Effects Monitoring, and Groundwater Monitoring

As stated in section 4.2.1, regulated discharge monitoring occurs at monitoring points specified in the Type A Water License, other licenses, or regulations. It includes discharge limits that must be achieved to maintain compliance with an authorization (e.g., water license) or regulation (e.g., Metal and Diamond Mining Effluent Regulations). Groundwater quality and quantity metrics are monitored at points and frequencies identified in the Groundwater Management Plan with the purpose of monitoring inflows and outflows of mine water and associated water quality.

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APPENDIX A • FEDERAL AND TERRITORIES LAWS, REGULATIONS AND GUIDELINES

Acts	Regulations	Guidelines
Federal		
Canadian Environmental Protection Act (1999 c.33)	*Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* (SOR/2008-197) *Environmental Emergency Regulations* (SOR/2003-307) *Interprovincial Movement of Hazardous Waste and Hazardous Recyclable Material Regulations* (SOR/2002-301) *Release and Environmental Emergency Notification Regulations* (SOR/2011-90)	Canadian Council of the Ministers of Environment - Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products Notice with respect to substances in the National Pollutant Release Inventory Canada-Wide Standards for Particulate Matter (PM) and Ozone Canada-Wide Standards for Petroleum Hydrocarbons (PHC) In Soil
Canada Wildlife Act (1985 w9)		
Species at Risk Act (2002 c.29)		Species at Risk Policies
Migratory Birds Convention Act (1994 c.22)	*Migratory Birds Regulations* (C.R.C., c. 1035)	
Canada Water Act (1985 c.11)		
Oceans Act (S.C. 1996, c. 31)		
Arctic Waters Pollution Prevention Act (R.S.C., 1985, c. A-12)	*Arctic Waters Pollution Prevention Regulations* (C.R.C., c. 354) *Arctic Shipping Pollution Prevention Regulations* (C.R.C., c. 353)	
Canadian Transportation Accident Investigation and Safety Board Act (S.C. 1989, c. 3)	*Transportation Safety Board Regulations* (SOR/92-446)	
Canada Shipping Act, 2001 (S.C. 2001, c. 26)	*Response Organizations and Oil Handling Facilities Regulations* (SOR/95-405) *Pollutant Discharge Reporting Regulations*, 1995 (SOR/95-351) *Environmental Response Arrangements Regulations* (SOR/2008-275) *Ballast Water Control and Management Regulations* (SOR/2006-129) *Vessel Pollution and Dangerous Chemicals Regulations* (SOR/2012-69)	Oil Handling Facilities Standards – TP12402 Environmental Prevention and Response National Preparedness Plan 2008 – TP13585 Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants – TP9834E 2009 Arctic Waters Oil Transfer Guidelines, 1997 - TP10783E Response Organizations Standards – TP 12401E 1995

Acts	Regulations	Guidelines
		Guidelines for the Control of Ballast Water Discharge from Ships in Waters under Canadian Jurisdiction (TP 13617)
Navigation Protection Act		
Marine Liability Act (A.C. 2001, c.6)	*Marine Liability Regulations* (SOR/2002-307)	
Fisheries Act (R.S.C. c. F-14)	*Metal Mining Effluent Regulations* (SOR/ 2002-2222) *Marine Mammal Regulations* (SOR/93-56)	The Policy for the Management of Fish Habitat Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters Freshwater Intake End-of-Pipe Fish Screen Guideline Standard Operating Procedure – Clear Span Bridges
Safe Containers Convention Act (R.C.C. 1985, c. S-1)		
Transport of Dangerous Goods Act (1992, c.34)	*Transportation of Dangerous Goods Regulations* (SOR/2001-286)	
Explosives Act (1985 c.E-17)	*Explosives Regulations* (C.R.C., c. 599) *Ammonium Nitrate and Fuel Oil Order* (C.R.C., c. 598)	
National Fire Code of Canada (2010)		
Nuclear Safety and Control Act (s.c. 1997, c.9)	*General Nuclear Safety and Control Regulations* (SOR/2000-202)	
Canadian Human Rights Act (R.S.C., 1985, c. H-6)	Canadian Charter of Rights and Freedom	
Canada Labour Code (R.S.C., 1985, c. L-2)	*Canada Labour Standards Regulations* (C.R.C., c. 986) *Canada Occupational Health and Safety Regulations* (SOR/86 304)	
Territorial Lands Act (R.S. 1985, c. T-7)	*Northwest Territories and Nunavut Mining Regulations* (C.R.C., c. 1516) *Territorial Land Use Regulations* (C.R.C. 1524) *Territorial Quarrying Regulations* (C.R.C. c. 1527)	

Acts	Regulations	Guidelines
Nunavut Waters and Nunavut Surface Rights Tribunal Act (2002, c. 10)	*Northwest Territories Waters Regulations* (SOR/93/303)	
Nunavut Act (1993 c.28)	*Nunavut Archaeological and Paleontological Sites Regulations* (SOR/2001-220)	
Nunavut Land Claims Agreement Act (1993, c. 29)		
Territorial – Nunavut		
Environmental Protection Act (RSNWT (Nu) 1988, c E-7)	*Spill Contingency Planning and Reporting Regulations* (NWT Reg (Nu) 068-93) *Used Oil and Waste Fuel Management Regulations* (NWT Reg 064-2003) [The removal of hazardous materials requires the registration with the Government of Nunavut, Department of Environment as a waste generator as well as carrier (if applicable) prior to transport. The Meliadine Project and the Meadowbank Mine are registered under a single permit for Agnico Eagle Mines Limited - Waste Generator Number - NUG100031]	Guideline on Dust Suppression Guideline for the General Management of Hazardous Waste in Nunavut Guideline for Industrial Waste Discharges in Nunavut Guideline for Air Quality – Sulphur Dioxide and Suspended Particulates Guideline for the Management of Waste Antifreeze Guideline for the Management of Waste Batteries Guideline for the Management of Waste Paint Guideline for the Management of Waste Solvents Guideline for Industrial Projects on Commissioner's Land Canada-Wide Standards for Particulate Matter (PM) and Ozone Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil
Scientists Act (RSNWT (Nu) 1988, c S-4)	*Scientists Act Administration Regulations* (NWT Reg (Nu) 174-96)	
Historical Resources Act (RSNWT (Nu) 1988, c H-3)		
Territorial Parks Act (RSNWT (Nu) 1988, c T-4)	*Territorial Parks Regulations* (RRNWT (Nu) 1990 c T-13)	
Wildlife Act (RSNWT (Nu) 1988, c W-4)	*Wildlife General Regulations* (NWT Reg (Nu) 026-92)	

Acts	Regulations	Guidelines
	Wildlife Licences and Permits Regulations (NWT Reg (Nu) 027-92)	
	Wildlife Management Barren-Ground Caribou Areas Regulations (NWT Reg (Nu) 099-98)	
	Wildlife Management Grizzly Bear Areas Regulations (NWT Reg (Nu) 155-96)	
	Wildlife Management Zones Regulations (RRNWT (Nu) 1990 c W-17)	
	Wildlife Regions Regulations (NWT Reg (Nu) 108-98)	
Commissioner's Land Act (RSNWT 1988, c C-11)	*Commissioner's Airport Lands Regulations* (NWT Reg (Nu) 067-97)	
	Commissioner's Land Regulations (RRNWT 1990, c C-13)	
Safety Act (RSNWT 1988, c.S-1)	*General Safety Regulations* (RRNWT (Nu) 1990 c S-1)	
	Work Site Hazardous Materials Information System Regulations (RSNWT 1988, C 81 (Supp))	
Mine Health and Safety Act (SNWT (Nu) 1994, c 25)	*Mine Health and Safety Regulations* (NWT Reg (Nu) 125-95)	
Workers' Compensation Act (RSNWT, 1988, c. W-6)	*Workers' Compensation General Regulations* (Nu Reg 017-2010)	
Apprenticeship, Trade and Occupations Certification Act (RSNWT (Nu) 1988, c A-4)	*Apprenticeship, Trade and Occupations Certification Regulations* (RRNWT (Nu) 1990 c A-8)	
Labour Standards Act (RSNWT (Nu) 1988, c L-1)	*Annual Vacations Regulations* (RRNWT 1990, c.L-1)	
	Educational Work Experience Regulations (RRNWT 1990, c.L-2)	
	Employment of Young Persons Regulations (RRNWT 1990, c.L-3)	
	Labour Standards Meal Regulations (RRNWT 1990, c.L-4)	
	Notice of Termination Exemption Regulations (RRNWT 1990 c.L-5)	

Acts	Regulations	Guidelines
	Pregnancy and Parental Leave Regulations (RRNWT 1990, c.8(Supp.))	
	Reciprocating Jurisdiction Order (RRNWT 1990, c.L-6)	
	Wages Regulations (RRNWT 1990, c.L-7)	
Electrical Protection Act (RSNWT (Nu) 1988, c E-3)	*Electrical Protection Regulations* (RRNWT 1990 c. E-21)	
Explosives Use Act (RSNWT (Nu) 1988, c E-10)	*Explosives Regulations* (RRNWT (Nu) 1990 c E-27)	
Petroleum Products Tax Act (RSNWT (Nu) 1988, c P-5)	*Petroleum Products Tax Regulations* (RRNWT (Nu) 1990 c P-3)	
Fire Prevention Act (RSNWT (Nu) 1988, c F-6)	*Fire Prevention Regulations* (RRNWT (Nu) 1990 c F-12)	
Hospital Insurance and Health and Social Services Administration Act (RSNWT 1988, c T-3)	*Territorial Hospital Insurance Services Regulations* (RRNWT (Nu) 1990 c T-12)	
Public Health Act (RSNWT (Nu) 1988, c P-12)	*Camp Sanitation Regulations* (RRNWT (Nu) 1990 c P-12)	
	General Sanitation Regulations (RRNWT (Nu) 1990 c P-16)	
All-terrain Vehicles Act (RSNWT (Nu) 1988, c A-3)	*All-terrain Vehicles Regulations* (RRNWT (Nu) 1990 c A-1)	
Motor Vehicles Act (RSNWT (Nu) 1988, c M-16)	*Large Vehicle Control Regulations* (RRNWT (Nu) 1990 c M-30)	
	Motor Vehicle Registration and Licence Plate Regulations (NWT Reg (Nu) 054-94)	
Public Highways Act (RSNWT (Nu) 1988, c P-13)	*Highway Designation and Classification Regulations* (NWT Reg (Nu) 047-92)	
Transportation of Dangerous Goods Act (1990, RSNWT (Nu) 1988, c 81 (Supp))	*Transportation of Dangerous Goods Regulations* (1991, NWT Reg (Nu) 095-91)	

APPENDIX B • RATING CURVES PREDICTING TSS AND TDS CONCENTRATION

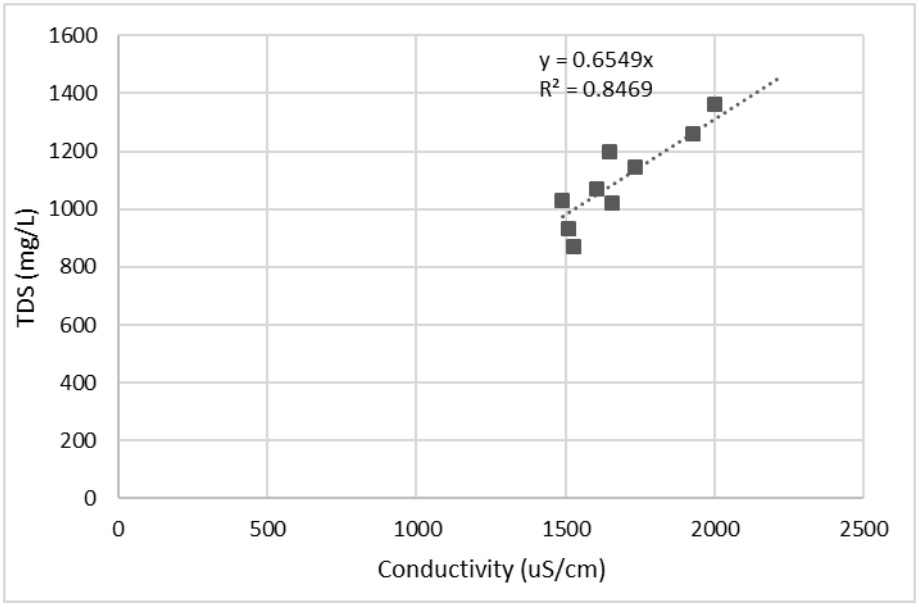

Figure 1: Rating curve relating conductivity to TDS.

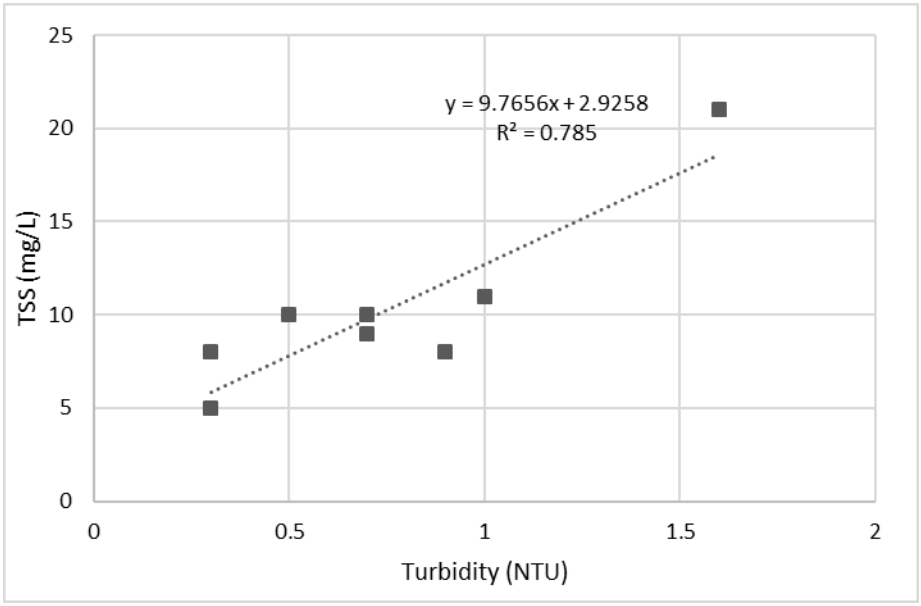

Figure 2: Rating curve relating turbidity to TSS.