AGNICO EAGLE

MELIADINE GOLD MINE

Spill Contingency Plan

November 2021
VERSION 12_NIRB

ᓇᐃᓈᖅᓯᒪᔪᖅ

ᑯᕕᔪᖃᖅᐸᑦ ᓂᕆᐅᓇᙱᑦᑐᓕᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ (ᐸᕐᓇᐅᑎ) ᐊᒃᓃᑯ ᐋᒍ ᐅᔭᕋᒃᑕᕆᐊᓕᕆᔨᒃᑯᓐᓄᑦ (ᐊᒃᓃᑯᒃᑯᑦ) ᑕᓯᕐᔪᐊᕐᒥᑦ ᒎᓗᒧᑦ ᐱᓕᕆᐊᖓᑦ (ᐱᓕᕆᐊᖅ) ᐱᔾᔪᑎᖃᖅᑐᖅ: ᑕᓯᕐᔪᐊᖅ, ᑲᖏᖅᓱᓂᕐᒥᑦ ᐃᑎᕕᐊᒦᑦᑐᓄᑦ ᐱᖁᑎᓂᒃ, ᐅᑭᐅᓗᒃᑖᖅ ᐊᑉᖁᑎ (AWAR) ᐃᓚᒋᔭᐅᔪᓪᓗ ᐊᑉᖁᑏᑦ ᐃᓂᐅᔪᒥᑦ ᓯᓚᑖᓂᓪᓗ, ᐃᓚᐅᑉᓗᓂ ᑲᖏᖅᓱᓂᕐᒥᑦ ᐊᑉᖁᑎ.

ᑖᓐᓇ ᐸᕐᓇᐅᑎ ᐊᒃᓃᑯᒃᑯᓐᓂᑦ ᐃᒃᐱᒍᓱᖕᓂᖃᖅᑎᑦᑎᔪᖅ ᐊᑐᖅᑐᒃᑖᓂᒃ ᑲᓇᑕᒥᑦ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᒪᓕᒐᕐᓂᒃ, ᒪᓕᒐᕋᓛᓂᒃ, ᐊᒻᒪᓗ ᒪᓕᒃᑕᐅᔪᒃᓴᓂᒃ ᑯᕕᔪᓄᑦ ᓄᓇᒧᑦ, ᐃᒪᕐᒧᑦ ᐊᒻᒪᓗ/ᐅᕝᕙᓘᓐᓃᑦ ᓯᑯᒧᑦ. ᑯᕕᔪᑦ ᐃᓱᒪᒋᔭᐅᔪᑦ, “ᐅᖃᐅᓯᕆᔭᕆᐊᖃᖅᑐᑦ ᑯᕕᔪᑦ” ᒪᓕᒃᓱᒋᑦ ᐊᑐᖅᑐᑦ ᒪᓕᒐᐃᑦ ᐊᒻᒪᓗ ᒪᓕᒐᕋᓛᑦ ᐊᒃᓃᑯᒃᑯᑦ ᐅᖃᐅᓯᕆᓂᐊᖅᑕᖓᑦ ᓄᓇᑦᑎᐊᕐᒥᑦ-ᓄᓇᕗᒻᒥ 24 ᐃᑲᕐᕋᓄᑦ ᑯᕕᔪᖃᖅᐸᑦ ᐅᖃᓗᒡᕕᐅᔪᙳᖅᑐᒧᑦ, ᑲᓇᑕᒥᑦ-ᓄᓇᖃᖅᑳᖅᑐᓄᑦ ᓄᓇᖁᑎᒋᔭᐅᔪᑦ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᑲᒪᔨᒃᑯᑦ, ᑲᓇᑕᒥᑦ ᐊᕙᑎᒥᒃ ᐊᒻᒪᓗ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᔪᓕᕆᔨᒃᑯᑦ, ᐃᖅᑲᓗᓕᕆᔨᒃᑯᑦ, ᑭᕙᓪᓕᕐᒥᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᒃᑯᑦ, ᐊᒻᒪᓗ ᓄᓇᕗᒻᒥ ᐃᒪᓕᕆᔨᒃᑯᑦ.

ᑐᕌᒐᐅᔪᖅ ᐸᕐᓇᐅᑎᒧᑦ ᒥᑭᓛᒃᑰᖅᑎᓪᓗᒋᑦ ᐊᒃᑐᖅᓯᓂᐅᔪᑦ ᑯᕕᔪᓂᒃ ᓴᖅᑭᑦᑎᓗᓂ ᖃᐅᔨᔭᐅᓯᒪᕙᓖᖅᑐᒥᒃ ᐅᐸᓗᐊᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᒃᓴᓂᒃ ᐊᒻᒪᓗ ᒥᐊᓂᕆᓂᐊᕐᓗᒋᑦ ᐱᓕᕆᔩᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᖅᑯᓇᒋᑦ, ᑳᓐᑐᕌᒃᖃᖅᑐᑦ ᐊᒻᒪᓗ ᐃᓄᓗᒃᑖᑦ ᑯᕕᔪᖃᖅᐸᑦ. ᑐᕌᒐᐅᔪᖅ ᑎᑭᐅᑎᔭᐅᓂᐊᖅᑐᖅ ᐊᑐᖅᑕᖅᑕᕐᓗᒋᑦ ᐱᐅᓛᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᖅᑕᖅᑐᑦ, ᐅᔾᔨᕈᓱᒃᑎᑦᑎᓗᓂ ᐊᕙᑎᒥᒃ ᐅᓗᕆᐊᓇᖅᑐᖃᙱᓐᓂᕐᒥᒃ, ᐃᑲᔪᖅᑐᐃᓗᓂ ᐱᑕᖃᖅᑕᐃᓕᑎᑦᑎᓂᕐᒥᒃ ᐊᒻᒪᓗ ᐱᓕᕆᐊᖃᖃᑦᑕᕐᓂᕐᒥᒃ, ᐊᒻᒪᓗ ᓴᓗᒻᒪᖅᓴᐃᑦᑎᐊᖃᑦᑕᕐᓗᓂ ᑯᕕᔪᓂᒃ, ᓴᐸᒃᑕᐅᔪᓂᒃ, ᐅᕝᕙᓘᓐᓃᑦ ᓄᓇᒧᑦ ᑯᕕᖅᑕᖅᑐᓂᒃ, ᐃᒪᕐᒧᑦ, ᓯᑯᒧᑦ ᐊᒻᒪᓗ ᐊᐳᑎᒧᑦ.

ᐃᓚᒋᔭᐅᔪᑦ ᐸᕐᓇᐅᑎᒥᑦ ᑯᕕᔪᑦ ᑐᑭᓕᐅᖅᑕᐅᓯᒪᓂᖓᑐᑦ MDMER-ᒥᑦ, ᓱᓇᑐᐃᓐᓇᐃᑦ ᐅᖅᓯᓛᑦ, ᑭᓂᖅᑐᑦ ᐊᒻᒪᓗ ᓯᑎᔪᑦ ᐋᓐᓂᕈᑕᐅᔪᙳᖅᑐᑦ ᐃᓚᒋᔭᐅᔪᑦ, ᑕᕆᐅᓕᒃ ᐃᒪᖅ ᐊᒻᒪᓗ ᐳᐸᓚᙳᖅᑎᑕᐅᓯᒪᔪᖅ ᐅᖅᓯᖅ. ᐊᓯᖏᑦ ᑯᕕᓂᐅᔪᑦ ᓲᕐᓗ ᑯᕕᔪᑦ ᐃᒪᖃᐅᓯᕝᕙᖓᓂᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐃᑎᑕᐅᔪᓂᑦ ᐊᒃᑐᖅᓯᓂᖃᖅᐸᖓᖅᑐᑦ ᐅᔭᖅᑕᖅᑕᕆᐊᖓᖅᑐᓂᒃ ᐆᒪᔪᑦ ᐃᒃᐱᒋᓂᖃᖅᑐᑦ.

ᑯᕕᔪᓄᑦ ᑐᐊᕕᓇᖅᑐᒃᑖᓄᑦ, ᓯᕗᓪᓕᖅᐹᖅ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᑦ ᐅᑯᐊ: (1) ᐊᑦᑕᕐᓇᖅᑐᖃᙱᑎᑦᑎᓗᓂ, (2) ᐱᐊᓚᔪᒥᒃ ᐅᐸᓗᐊᓗᓂ, ᐊᒻᒪᓗ (3) ᐅᖃᐅᓯᕆᓗᒍ ᑯᕕᔪᖅ. ᐸᕐᓇᐅᑎᒥᑦ ᑎᑎᕋᖅᓯᒪᔪᖅ ᐅᐸᓗᐊᓂᕐᒧᑦ ᐋᖅᑭᒃᓯᒪᔪᖅ ᐊᒻᒪᓗ ᑐᓴᖅᑎᑦᑎᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕆᐊᖃᖅᓂᐅᔪᑦ, ᑎᑎᕋᖅᓯᒪᐸᓗᑎᓪᓗ ᑐᐊᕕᓇᖅᑐᒃᑖᖅ ᐅᐸᓗᐊᓂᕐᒧᑦ ᖃᐅᔨᑎᑦᑎᔪᒃᓴᐃᑦ. ᐃᓚᒋᔭᐅᔪᑦ, ᑲᒪᓛᐅᔪᑦ ᑯᕕᔪᖃᖅᐸᑦ, ᐅᕝᕙᓘᓐᓃᑦ ᓯᕗᓪᓕᖅᐹᖑᔪᑦ ᖃᐅᔪᑦ ᑯᕕᔪᖅᑎᓪᓗᒍ, ᓯᕗᓪᓕᖅᐸᐅᔪᑦ ᐅᐸᓗᐊᑉᓗᓂ. ᐅᐸᓗᐊᔪᖅ ᖃᐅᔨᑎᑦᑎᑉᓗᓂ ᐃᓱᒪᑕᕆᓴᐅᔪᒥᒃ ᖃᓄᐃᓕᔪᖃᖅᐸᑦ ᑲᒪᓛᒥᒃ, ᐱᔭᕐᓴᐅᑎᖅᑐᖅ ᐱᒋᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᑯᕕᔪᖃᖅᐸᑦ ᑐᐊᕕᓇᖅᑐᒃᑯᑦ ᐅᐸᓗᐊᓂᕐᒧᑦ.

ᐊᒃᓃᑯᒃᑯᑦ ᑐᐊᕕᓇᖅᑐᖃᖅᐸᑦ ᐅᐸᓗᐊᓂᕐᒧᑦ ᐱᓕᕆᔨᖃᖅᑐᑦ (ERT) ᐊᔪᕈᓐᓃᖅᓴᖅᑕᐅᖅᑕᖅᑐᑦ ᐊᒻᒪᓗ ᐃᑲᔪᖅᑕᐅᑉᓗᑎᒃ ᐅᐸᓗᐊᓂᕐᒧᑦ ᑯᕕᖅᔪᐊᖅᑐᓄᑦ, ᐱᔭᕆᐊᖃᖅᓴᖕᒪᑕ. ᐃᓚᒋᔭᐅᔪᓗᒃᑖᑦ ᑐᐊᕕᓇᖅᑐᓕᕆᓂᕐᒧᑦ ᐊᔪᕈᓐᓃᖅᓴᖅᑕᐅᖅᑕᖅᑐᑦ ᐊᒻᒪᓗ ᖃᐅᔨᒪᓕᖅᑎᑕᐅᑉᓗᑎᒃ ᑐᐊᕕᓇᖅᑐᓄᑦ ᐊᒻᒪᓗ ᑯᕕᔪᖃᖅᐸᑦ ᐅᐸᓗᐊᓂᕐᒧᑦ ᐱᖁᔭᐅᔪᓐᓇᖅᑐᓂᒃ, ᐸᕐᓇᐅᑎ, ᐊᒻᒪᓗ ᐊᑐᓇᐊᖅᑐᑦ ᑐᐊᕕᓇᖅᑐᒃᑯᑦ ᐅᐸᓗᐊᓂᕐᒧᑦ ᑯᕕᔪᓄᑦ ᐊᑐᖅᑕᐅᖅᑕᖅᑐᓂᒃ. ᑐᐊᕕᓇᖅᑐᓕᕆᓂᕐᒧᑦ ᐃᓚᒋᔭᐅᔪᑦ ᐊᔪᕈᓐᓃᖅᓴᖅᑕᐅᖅᑕᖅᑐᑦ ᐋᓐᓂᖅᑕᐅᔪᓐᓇᖅᑐᓄᑦ ᐊᑐᖅᑕᐅᖅᑕᖅᑐᓂᒃ ᑲᒪᔭᖅᓯᓂᕐᒧᑦ (ᐊᑦᑕᕐᓇᖅᑐᖃᙱᑦᑎᑦᑎᓂᕐᒧᑦ ᓈᓴᐅᑎᓄᑦ/ᑎᑎᖅᑲᓄᑦ ᑎᑎᕋᕝᕕᑦ) ᐊᒻᒪᓗ ᓱᓇᓗᒃᑖᖅᑎᑕᐅᔪᑦ ᐅᐸᓗᐊᓂᐊᕐᓗᑎᒃ ᐅᓗᕆᐊᓇᖅᑐᖃᙱᑦᑐᒃᑯᑦ ᐊᑐᕐᓗᒋᑦ ᐃᓄᖕᒥᒃ ᒥᐊᓂᖅᓯᔪᑦ ᐊᓄᕌᑦ ᐊᑐᖅᑕᐅᖅᑕᖅᑐᑦ (PPE). ᓱᓇᑐᐃᓐᓇᓄᑦ ᐅᔭᖅᑕᐊᒥᑦ ᐊᐅᓚᑦᑎᔨ, ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐊᖓᔪᖅᑳᖅ, ᐊᓂᐊᖅᑕᐃᓕᒪᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐅᐸᓗᐊᓂᕐᒧᑦ ᑐᐊᕕᓇᖅᑐᓕᕆᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐊᓂᐊᖅᑐᓕᕆᓂᕐᒧᑦ ᑲᒪᓛᐅᔪᑦ ᐅᕝᕙᓘᓐᓃᑦ ᑎᓕᔭᐅᓯᒪᔪᑦ ᓇᓗᓇᐃᖅᑕᐅᓗᒃᑖᖅᓯᒪᔪᑦ ᐃᓚᒋᔭᐅᑎᑦᑎᓂᖃᕐᓂᕐᒧᑦ ᑯᕕᔪᖃᖅᐸᑦ ᑐᐊᕕᓇᖅᑐᒃᑯᑦ ᐅᐸᓗᐊᓂᕐᒧᑦ.

ᑯᕕᔪᖃᖅᐸᑦ ᐊᑐᖅᑕᐅᔭᕆᐊᖃᖅᑐᑦ ᐃᓂᒦᑎᑕᐅᔪᑦ ᐃᓂᒋᔭᕆᐊᖃᖅᑕᖏᓐᓂᑦ ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ. ᐃᖏᕐᕋᔪᓗᒃᑖᑦ ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ (ᓄᓇᐅᑉ ᖄᖓᓂᑦ ᓄᓇᒃᑰᕈᑎᕐᔪᐊᑦ) ᐱᑕᖃᕐᒥᔪᑦ ᑯᕕᔪᖃᖅᐸᑦ ᑐᐊᕕᓇᖅᑐᒃᑯᑦ ᐅᐸᓗᐊᔾᔪᑎᓂᒃ. ᐃᖏᕐᕋᔭᖃᑦᑕᖅᑐᖅ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᑐᐊᕕᓇᖅᑐᓕᕆᕝᕕᒃ ᐅᔭᕋᒃᑕᕆᐊᕐᒦᒻᒥᔪᖅ. ᓰᑳᓐ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐅᓯᔭᐅᖃᑦᑕᖅᑐᑦ ᑐᖅᑯᖅᓯᓯᒪᕝᕖᑦ ᑯᕕᔪᖃᖅᐸᑦ ᐅᐸᓗᐊᓂᕐᒧᑦ ᐱᕐᑯᑎᖃᖅᑐᑦ ᐊᑐᖅᑕᐅᔭᕆᐊᖃᖅᑐᓂᒡᓗ ᖃᓂᑕᖓᓂᑦ ᐃᖃᓗᒑᕐᔫᑉ ᑰᖓᓂᑦ ᑭᓛᒥᑕ 18-ᒥᑦ ᐊᒻᒪᓗ ᐃᑎᕕᐊᓂᑦ (ᓯᑲᐅᑦ ᑎᑭᖃᑦᑕᖅᑎᓪᓗᒋᑦ).

ᖃᓄᐃᓕᐅᕆᐊᖃᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᓂᑦ ᐃᓚᐅᔪᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᐊᒻᒪᓗ ᓈᒻᒪᒃᑐᑦ ᑯᕕᔪᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᓄᖅᑲᖓᑎᑦᑎᓂᕐᒧᑦ ᐋᖅᑭᐅᒪᔪᓂᒃ (ᓰᕐᓗ, ᐊᕙᓗᐃᑦ ᐊᒻᒪᓗ ᐃᓗᑦᑐᖅᓯᒪᔪᑦ, ᐳᒃᑕᓛᓰᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᑦ, ᑕᒪᒃᑯᐊᕋᓗᐃᑦ). ᑯᕕᔪᖃᖅᐸᑦ, ᖃᓄᐃᖏᑦᑐᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᓕᒫᑦ ᐅᑎᖅᑎᑕᐅᖃᑦᑕᖅᑐᑦ ᐊᑐᖅᓱᑎᒃ ᒥᓗᑲᐅᑎᓂᒃ, ᑯᕕᖅᑕᐃᔾᔪᑎᓂᒃ, ᑕᒪᒃᑯᓂᙵᕋᓗᒃ ᐃᓕᔭᐅᐸᓗᑎᒃᓗ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᓄᑦ. ᖃᐅᓯᖅᑐᓂᒃ ᒥᓗᑲᐃᔭᖕᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᒥᓗᒃᑕᐅᓂᐊᖅᑐᑎᒃ ᕿᒪᒃᑎᑦᑐᑦ. ᐱᐅᖏᑦᑐᖅᑕᓛᑦ ᐱᔭᐅᐸᓗᑎᒃ, ᐃᓕᔭᐅᐸᓗᑎᒃᓗ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᓄᑦ ᐊᑎᓕᖅᑕᐅᐸᓗᑎᒃ ᑐᖅᑯᕐᕕᐅᓯᒪᓚᐅᐱᓪᓚᖕᓂᐊᕐᓗᑎᒃ. ᒪᓕᒃᓱᒍ ᖃᓄᐃᖓᓂᖓ ᐱᐅᖏᑦᑐᖅ, ᓯᑎᔪᑦ ᐊᑐᖅᑕᐅᔪᑦ ᐱᓕᕆᐊᖑᖃᑦᑕᖅᑐᑦ ᐅᔭᕋᒃᑕᕆᐊᕐᒥᑦ (ᐊᒃᑕᑯᐃᑦ), ᐅᕝᕙᓘᓐᓃᑦ ᐊᐅᓪᓚᖅᑎᑕᐅᐸᓗᑎᒃ ᐅᔭᕋᒃᑕᕆᐊᑉ ᓯᓚᑖᓄᑦ ᓈᒻᒪᒋᔭᐅᔪᒧᑦ ᐱᓕᕆᐊᖅᑲᕝᕕᖕᒧᑦ ᐊᒻᒪᓗ ᐊᒃᑕᑰᕈᕝᕕᖕᒧᑦ.

EXECUTIVE SUMMARY

The Spill Contingency Plan (Plan) for the Agnico Eagle Mines Limited (Agnico Eagle) Meliadine Gold Project (Project) covers: the Meliadine site, Rankin Inlet Itivia land-based facilities, conveyance of treated saline water via waterlines for ocean discharge, the All-weather Access Road (AWAR) and associated roads on and off site, including the Rankin Inlet bypass road.

This Plan ensures that Agnico Eagle respects all applicable federal and territorial laws, regulations, and guidelines for spills to land, water and/or ice. Spills that are deemed "reportable spills" pursuant to applicable laws and regulations will be reported by Agnico Eagle to the NT-NU 24-Hour Spill Report Line, Crown-Indigenous Relations and Northern Affair, Environment and Climate Change Canada, Department of Fisheries and Oceans, Kivalliq Inuit Association, and Nunavut Water Board.

The goal of the Plan is to minimize the impacts of spills by the establishment of predetermined response procedures and to protect the safety of workers, contractors and the public in the event of a spill. This goal will be achieved by applying best management practices, promoting environmental awareness and safety, encouraging prevention and maintenance, and facilitating efficient cleanup of spills, releases, or discharges to land, water, ice, and snow.

Substances covered by the Plan include effluent as defined by the MDMER, hydrocarbon products, liquid and solid hazardous substances, saline water and compressed gas. Other types of spills such as seepage from water containment structures or waste sources that could affect off site receptors are also considered.

For all spill emergencies, priority actions are: (1) ensure safety, (2) respond quickly, and (3) report the spill. The Plan outlines response organization and communication lines, and lists emergency response contacts. The person, who is the primary person involved in a spill, or the first to observe a spill, is the first responder. The first responder contacts a Supervisor or the Incident Coordinator, who is responsible for initiating appropriate spill emergency response.

Agnico Eagle has an Emergency Response Team (ERT) that are trained to provide support in the response of major spills, as needed. All members of the ERT are trained and familiar with emergency and spill response resources, the Plan, and appropriate emergency spill response methodologies. The ERT members receive basic training on hazardous materials handling (Safety Data Sheets) and are equipped to respond safely while wearing Personal Protective Equipment (PPE). The General Mine Manager, Environment Superintendent, Health and Safety Superintendent and Health care personnel or designates are all identified as key elements to spill emergency response.

Spill response kits are strategically located where required on-site. All mobile equipment on-site (surface heavy equipment) are also equipped with an emergency spill kit. A mobile environmental emergency trailer is located on-site. Sea cans with spill response equipment and supplies are located near the Meliadine River at Km 18 and at Itivia (during barge season). Agnico Eagle is consistently

evaluating effective deployment of emergency seacans at strategic locations alongside the AWAR to support spills from the AWAR and potential leaks from the waterline, and remains committed to maximizing response coverage when required

Action plans involve standard and appropriate spill control and containment techniques (e.g., dikes and trenches, floating booms, etc.). In the event of a spill, free-product is recovered as much as possible using vacuums, pumps, etc. and placed in appropriate containers. Absorbent materials are used to soak up residual products. Contaminated materials are salvaged, put into appropriate containers and labelled for temporary storage. Depending on the nature of the contamination, solid materials are either treated on-site (landfarm), or shipped off-site to an approved treatment and disposal facility.

Contents

DOCUMENT CONTROL

Version	Date	Section	Page	Revision	Author
1	October 2012			First draft of the Spill Contingency Plan	John Witteman, Env. Consultant, Agnico Eagle
2	March 2013			DEIS re-submission	Rebranding
3	April 2014	7	23-24	Included Tables 7-2 and 7-3 as per Information Request answer (TC_149)	John Witteman, Env. Consultant, Agnico Eagle
		6.5	21	Included commitment from technical review wrt TDGR.	
		App. H	A-32 A-36	Completed regulations table (ref. information requests)	Josée Noël, Env. Coord., Agnico Eagle
4	April 2015			Update for Type A Water License Application	John Witteman, Env. Consultant, Agnico Eagle
5	December 2015			Comprehensive revision and updates. Adapted to licenses B (MEL1424, 2BW-MEL1525 and 8BC-MEL1516) and future Type A Water License	Environment dept., Agnico Eagle
6	March 2017			Spill kit list and spill kit location updated	Alexandre Gauthier, Environment Dept., Agnico Eagle
7	March 2018			Annual review	Jessica Huza Alexandre Gauthier, Environment dept., Agnico Eagle
8	February 2019	All	All	Change of Plan to reflect production, change of MSDS to SDS, change of MMER to MDMER. Inclusion of the MDMER Emergency Plan	Bethany Hodgins, Terry Ternes, Agnico Eagle Environment Department
		Executive Summary		Substance covered including MDMER	
		3	6	Update table 3-1 to include AN	
		5	15-18	Update table 5-1, 5-2, 5-3 contact list	
		6.4 6.5	22-23	Update document for spills on ice and saline spills	
		10	32-33	Update section on MDMER to reflect changes from MMER	
		App H	All	Create Response for Spilled Saline Water	

Version	Date	Section	Page	Revision	Author
		App J	All	Latest Spill Response Test Record	
		App H	All	Procedure for saline water spill added	
		App K	All	MDMER Cross Reference table updated	
9	July 2019	10	32-33	Update section on MDMER to include MEL-26 and addition of the FDP pictures for MEL-14 and MEL-26. Addition of other water source for the MEL-14 discharge	Agnico Eagle Environment Department
10	December 2019	1 and 6	1, 23	Added a reference to sewage spills	Bethany Hodgins
11	January 2021			Revised to address Technical Comments related to spills associated with the waterline and issued as draft to the NIRB for the Waterline Project assessment process (Commitment 19)	Agnico Eagle Environment Department
12_NIRB	November 2021			Updated to address Meliadine Extension application submission to NIRB for review and approval	Permitting Department

Agnico Eagle	Agnico Eagle Mines Limited
ANFO	Ammonium Nitrate – Fuel Oil, a type of explosive
AWAR	All-Weather Access Road
CIRNAC	Crown-Indigenous Relation and Northern Affairs Canada
DFO	Department of Fisheries and Oceans Canada
ECCC	Environment Canada and Climate Change
ERT	Emergency Response Team
FDP	Final Discharge Point
IQ	Inuit Qaujimajatuqangit
KivIA	Kivalliq Inuit Association
MDMER	Metal and Diamond Mining Effluent Regulation
NIRB	Nunavut Impact Review Board
NT	Northwest Territories
NU	Nunavut
NWB	Nunavut Water Board
PLAN	Spill Contingency Plan
PPE	Personal Protective Equipment
Project	Meliadine Gold Project
RMMS	Responsible Mining Management System
SDS	Safety Data Sheet
TSF	Tailing Storage Facility
WHMIS	Workplace Hazardous Materials Information Sheet
Water Licence	Type A Water Licence No. 2AM-MEL1631
WRSF	Waste Rock Storage Facility

1.1 Purpose and Scope

The purpose of the Spill Contingency Plan (Plan) is to minimize the impacts of spills by the establishment of predetermined lines of response, plans of action, and to protect the safety of workers and contractors in the event of a spill.

This goal is achieved by applying best management practices, promoting environmental awareness and safety, encouraging prevention and maintenance, and facilitating efficient cleanup of spills, releases, or discharges to land, water, ice, and snow related to Agnico Eagle Mines Limited Meliadine Project (Project).

This plan meets the requirements of section 30 of the Metal and Diamond Mining Effluent Regulation (MDMER) Emergency Response Plan pursuant to the *Fisheries Act*.

This Plan is designed to facilitate effective communication and efficient cleanup of spills of potentially hazardous materials. Hazardous materials include and are not limited to:

- Hydrocarbon products such as diesel fuel, gasoline, hydraulic oil;
- Soluble solids, such as ammonium nitrate prill;
- Liquids, such as glycols and paints;
- Corrosive liquids, such as sulphuric acid and sodium cyanide;
- Effluent as defined by the MDMER;
- Treated groundwater effluent;
- Untreated sewage;
- Compressed (inert and flammable) gas; and
- Seepage from waste related structures that could affect off site receptors.

The Plan has been updated to include spill response would also apply in the case of a saline water spill originating from the waterline (Commitment 19 from the Nunavut Impact Review Board (NIRB) process).

Furthermore, the objectives of this Plan are to:

- Comply with federal and territorial laws, regulations and guidelines;
- Identify roles, responsibilities and reporting procedures;
- Detail plans of action to be followed in the event of a spill at the Project;
- Provide readily accessible emergency information to the cleanup crews, management, and government agencies;
- Promote the safe and effective recovery of spilled materials; and
- Minimize the environmental impacts of spills to land, water, ice and snow.

This Plan applies to all Agnico Eagle employees and contractors associated with:

- The Project site including Itivia fuel storage facility; and
- The All-weather Access Road (AWAR) and associated roads on and off site, including the Rankin Inlet bypass road.

1.2 Related Documents

Documents containing information related to this Plan include the following management plans:

- Risk Management and Emergency Response Plan;
- Explosives Management Plan;
- Borrow Pits and Quarries Management Plan;
- Roads Management Plan;
- Landfill and Waste Management Plan;
- Hazardous Materials Management Plan;
- Water Management Plan;
- Waste Management Plan; and
- Oil Pollution Emergency Plan (OPEP) and Oil Pollution Prevention Plan (OPPP).

The Plan is part of the Environmental Management and Protection Plan for the Project and will be in effect during the operation and closure of the Mine.

1.3 Use of Inuit Qaujimajatuqangit in Spill Management

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 stemming from IQ, where practical, in the design of management and monitoring plans for the Project.

This Plan considers IQ, including traditional ecological knowledge, traditional land use, and concerns regarding Project effects on traditional resources and traditional land use sites. The IQ indicates that the Project area is important for the traditional harvesting of caribou, other land mammals, waterfowl, geese, fish and vegetation, and maintaining the health of these resources so that traditional land use activities can continue. This Plan is designed to minimize the potential impacts of spills to land, water, ice and snow, and focuses on promoting environmental awareness, encouraging prevention and maintenance, and facilitating efficient cleanup of spills, releases, or discharges to land, water, ice, and snow as follows:

- Predetermined lines of response and plans of action are established;
- Spill prevention occurs though regular inspections of storage areas and ocean discharge waterlines for leaks and hazardous materials, and the training of workers in the use of safe work and spill clean-up procedures;
- Spill response kits are strategically located where required on-site and on all mobile equipment on-site (surface heavy equipment). A mobile environmental emergency trailer

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and a trained emergency response team (ERT) are located on-site. Sea cans with spill response equipment and supplies are located at km 7 and 18 along the AWAR;

- Spill and emergency response equipment is installed at hazardous material storage areas; and
- To minimize potential impacts to surface water, groundwater, and soil from potential vehicle accidents, a maximum speed of 50 km/hr on the AWAR is applied to all vehicles (empty and transporting hazardous materials). All employees and contractors using the roads will carry spill response equipment.

2.1 Classification of Spills

For the purposes of this Plan, a major spill is defined as an accidental release of a large or small quantity of material into the environment that has the potential for adverse impact, and cannot be handled safely without the assistance of the Emergency Response Team (ERT), including all events where a person is injured or material is contaminated. In the event of a major spill, the ERT is notified immediately and responds accordingly. As an example, for the purpose of this Plan, a tanker truck overturned on the AWAR is considered a major spill. Major spills are reported to the NU/NT Spill Report Line via email (spills@gov.nt.ca), dedicated phone line (867 920-8130) or fax (867 873-6924).

A minor spill is defined as any spill of material that does not involve highly toxic, highly reactive, or explosive chemicals, in a situation that is not life threatening to humans, fish or wildlife. Furthermore, this type of spill presents a manageable physical or health hazard to personnel who, when wearing proper PPE, are not exposed to any chemical at a level that exceeds any recognized action levels or permissible exposure limits. Minor spills are reported to the Environment Department but are not expected to involve emergency responders.

2.2 Materials and Reportable Spills on-Site

To ensure compliance with Section 36 (3) of the *Fisheries Act*, all spills and non-authorized releases of effluent, fuel or hazardous materials, regardless of quantity, into a waterbody or onto ice are reported immediately to the NT-NU 24-Hour Spill Report Line[1].

As a precaution, if there is any doubt as to whether the quantity spilled meets the minimum reportable thresholds listed in Table 2-1 (AANDC 2010), the spill incident will be reported to the Spill Report Line. Furthermore, Agnico Eagle will maintain a detailed log of all spills of hazardous materials, including non-reportable spills. As part of Agnico Eagle's overall Responsible Mining Management System (RMMS), and for continuous improvement of environmental performance, procedures are implemented to ensure that employees communicate non-reportable spill incidents and clean them up as required.

[1] Nunavut Environmental Protection Act. *Consolidation of Spill Contingency Planning and Reporting Regulations* R-068-93.

Table 2-1 Spill Quantities to be Reported to the Spill Report Line[(a)]

Transportation Class	Type of Substance	Compulsory Reporting Amount
1	Explosives	Any amount
2.1	Compressed gas (flammable)	Any amount of gas from containers with a capacity exceeding 100 L
2.2	Compressed gas (non-corrosive, non-flammable)	Any amount from containers with a capacity exceeding 100 L
2.3	Compressed gas	Any amount
2.4	Compressed gas (corrosive)	Any amount
3.1, 3.2, 3.3	Flammable liquid	100 L
4.1	Flammable solid	25 kg
4.2	Spontaneously combustible solid	25 kg
4.3	Water reactant solids	25 kg
5.1	Oxidizing substances	50 L or 50 kg
5.2	Organic peroxides	1 L or 1 kg
6.1	Poisonous substances	5 L or 5 kg
7	Radioactive substances	Any amount
8	Corrosive substances	5 L or 5 kg
9.1 (in part)	Miscellaneous substances	50 L or 50 kg
9.2	Environmentally hazardous	1 L or 1 kg
9.3	Dangerous wastes	5 L or 5 kg
9.1 (in part)	PCB mixtures of 5 ppm or more	0.5 L or 0.5 kg
None	Other contaminants	100 L or 100 kg

[(a)] *Nunavut Environmental Protection Act*. *Consolidation of Spill Contingency Planning and Reporting Regulations* R-068-93.
Note: PCB = polychlorinated biphenyls; ppm = parts per million.

SECTION 3 • HAZARDOUS MATERIALS ON-SITE

A variety of petroleum products and other hazardous materials are used as part of the mining operations. Explosives are stored on-site; details are available in the Explosives Management Plan. Other hazardous materials are used in smaller quantities (Table 3-1), all these products are considered as potential environmental and safety hazards.

Safety Data Sheets (SDS) of all materials transported, stored and used on-site are available at strategic locations, near where hazardous materials or toxic substances are stored or utilized. As a reference; the up-to-date SDS's can be found on the Agnico Eagle SDS portal. Appendices B to G also provide general response procedures for specific spilled chemical substances.

Table 3-1 Main Hazardous Materials Stored and Used On-Site

Product	Use/Location	Maximum Amount Anticipated On-Site (units)	Maximum Amount by Unit
Process Plant Reagents			
Anionic Flocculants 920	Mill/Grinding	80	750 kg/bag
Copper Sulphate	Mill/Cyanide Destruction	180	1,000 kg/ bag
Caustic Soda Anhydre	Mill/Stripping	40	1,000 kg/bag
Anhydre Borax 12 Mesh Dehybor	Mill/Refinery	50	25 kg/bag
Sodium Nitrate 98% Industrial grade	Mill/Refinery	48	22.7/bag kg
Quick Lime 0-2,5 MM 1152	Mill/Grinding/CIL/Cyanide Destruction	1160	1,700 kg
Activated Carbon PICA 210 AS	Mill/CIL/Stripping	360	500 kg/bag
Metabisulfite	Mill/Cyanide Destruction	960	1,000 kg/bag
Hydrochloric Acid 20 BE	Mill/Stripping	60	193 Liters or 240 kg
Caustic Soda Micropearl	Mill/Stripping	96	Bag/22.67 kg/bag
Lead Nitrate	Mill/CIL	200	25 kg/bag
Lead Nitrate	Mill/CIL	65	1,000 kg/bag
Ferric Sulphate	EWTP	0	1,000 kg/bag
Refractory Backup	Mill/Refinery	48	25 kg/bag
Cap Material	Mill/Refinery	48	25 kg/bag
ILR Acacia LeachAid	Mill/Grinding	100	15 kg /Bucket
Silica Sand	Mill/Refinery	48	22.68 kg/bag
Sodium Cyanide must be Cyplus	Mill/CIL	900	1,000 kg/bag
Cationic Polymer Hydrex 3613	EWTP	48	25 kg/bag
Coagulant Dry Poly Aluminium Chloride	EWTP	10	900 kg/bag Hydrex 3267

Product	Use/Location	Maximum Amount Anticipated On-Site (units)	Maximum Amount by Unit
Actisand 135 microns	EWTP	192	22.68 kg/bag
Anionic Polymer Hydrex 6105	EWTP	48	25 kg/bag
Scale Control CC7430 Controlchem	Mill/Grinding/Stripping	10	1,000 L or 1233.88 kg/tote
Sodium Sulphate	SWTP	0	1,000 kg/bag
Sulfamic Acid - 100%	SWTP	1200	25 kg/bag
Calcium Hypochlorite - 100%	SWTP	1104	25 kg/bag
Biocide 1 (Kathon CF150 or Microcide WT461)	SWTP	10	200 L (Drum)
Biocide 2 (Aqucar DB20)	SWTP	10	200 L (Drum)
Caustic Soda Anhydre	SWTP	70	1,000 kg/bag
Caustic Soda Micropeal	SWTP	2592	22.67 kg/bag (
Scale Control CC7430 Controlchem	SWTP	0	1,000 L or 1233.88 kg/tote
Antifoam (AF-64)	SWTP	1	(Tote/1000 L)
RO CIP Agent (ROClean)	SWTP	2	(Drum)
RO CIP Agent (ROClean P403)	SWTP	2	(Drum)
Sodium Metabisulfite (SMBS - 100%)	SWTP	16	25 kg/bag
Inhibited Ethylene Glycol 100% (Drum)	SWTP	2	(Drum)
Corrosion Inhibitor (Bar Cor CWS-55) 100%	SWTP	2	(Bottle 20L)
Cyanide Red Dye	Mill	5	20 kg /box
Sodium Hypochlorite	RO	32	5-gal totes
Vitec 7000 (Antiscalant)	RO	2.5	50-gal barrels
RO Clean L211	RO	11	5-gal totes
RO Clean L403	RO	4.2	50-gal barrels
Citric Acid	RO	3	Bags of 40 kg
Sodium Hydroxide	RO	9	Bags of 22.45 kg
Hydrochloric Acid	RO	2	5-gal totes
Avista 158	RO	10	20 Liters bottles
Sodium bisulfite	RO	18	25-kg bags
Water Treatment Reagents			
Ferric Sulfate	Water Treatment Plant	260 t	1 t/bag
Lime	Water Treatment Plant	320 t	1,743 kg/bag
Flocculant	Water Treatment Plant	5 bags	750 kg/bag (15 t/sea can)
Caustic Soda	Sewage Treatment Plant	1 t	22.5 kg/pail

Product	Use/Location	Maximum Amount Anticipated On-Site (units)	Maximum Amount by Unit
Soda Ash	Sewage Treatment Plant	365 kg	25 kg/bag
Citric Acid	Sewage Treatment Plant	50 kg	25 kg/bag
Chlorine (NaOCl)	Sewage Treatment Plant	962 L	20 L/bucket
Acetylene	Welding	830 bottles	11 m^3 / bottle
Paints	Maintenance	180 gal.	1 gal./pail
Solvents	Maintenance	56 gal.	1 gal./pail
Lead acid batteries (12V)	Maintenance	386	
Fuel Products			
Diesel	**Itivia**		
	1- Itivia Oil Handling Facility	20 ML	
	2- Itivia Oil Handling Facility	13.5 ML	
	3- Itivia Oil Handling Facility	4 ML	
	Industrial Site Tank Farm		
	4- Site Main Fuel Tank	6 ML	
	5- Site Fuel Tank summer	250,000 L	
	6- Powerhouse	50,000 L	
	7- Process Plant	10,000 L	
	8- Mechanical Shop (Oil)	10,000 L	
	Portal #1 Mine Site Tank Farm		
	9- Site Main Fuel Tank	3 ML	
	10- Site Fuel Tank summer	250,000 L	
	11- Site Fuel Tank Measure for UG	2,000 L	
	12- Site Fuel Tank UG Heating Intake West	25,000 L	
	13- Site Fuel Tank UG Heating Intake East	25,000 L	
	Meliadine Extension		
	Pump deposit	350,000 L	
	F Zone deposit	350,000 L	
	Discovery deposit	350,000 L	
	Additional Site Main Fuel Tank	6 ML	
Other	14 – Gasoline Storage Tank	2,300 L	
	15 – Jet A Tank	75,000 L	
	16 – Jet A drums	38,000 L	
	Underground		
	14- UG Fuel Tank UG Level 325		
Motor Oil	Mechanical Shop	800,000 L	20,800 L/sea can
	Powerhouse		

Hydraulic Fluid	Mechanical Shop		Cubes or Barrels
	Powerhouse		Cubes or Barrels
	Process Plant		Cubes or Barrels
Ethylene glycol	Mechanical Shop	60,000 L	10,000 L/sea can

Emulsion Reagents			
Ammonium Nitrate	Emulsion/ Dyno Nobel	3,044,000 Kg	1000 Kg/ Tote
Sodium Nitrate	Emulsion/ Dyno Nobel	195, 000 Kg	1000 Kg/ Tote
Titan Fuel Phase Oil 68	Emulsion/ Dyno Nobel	65, 280 Kg	960 Kg/ Cube

SECTION 4 • PREVENTION AND INSPECTIONS

Spill response is reactive while spill prevention is proactive. Spill prevention, response, and reporting is part of the online induction, which is mandatory for anyone coming to work at the Meliadine site. As well, all staff are trained to call the Environment Department in the event of a major spill and to notify their supervisor in the event of a minor spill. Spill kits are available to assist with containing the spill and starting cleanup, if safe to do so. Upon arriving and inspection of the spill site, if potential hazards are present, staff are instructed to call ERT or initiate a Code 1.

Regular worksite inspections are conducted to identify measures to minimize or prevent the risk of spills. Completion of the online orientation session ensures all staff know the procedure to follow in the event of a spill. The procedure includes reporting, containing and cleaning up all major and minor spills. Following the clean-up of a spill, the Environmental Department inspects the spill site and, if necessary, collects samples to verify clean-up is complete.

All personnel are trained to be aware of the potential hazards associated with the fuel/chemicals they are assigned to work. In addition to work site inspections conducted by area specific employees, the Environmental Department conducts weekly inspections to audit facilities where hazardous materials are handled and stored and the waterline. Inspection frequencies may change depending if a facility has no non-conformities over a few weekly inspections.

Agnico Eagle is implementing the following general principles for spill prevention:

- Provide up-to-date and accessible SDS for all hazardous materials to designated emergency response personnel, mine health staff, and Rankin Inlet health center staff;
- Regular inspection of fuel/chemical storage areas for leaks (including flex connectors and plumbing) and platform shifting;
- Regular inspection of hazardous materials storage areas;
- Regular visual inspection of the waterline and logging of inspections;
- Train workers in the use of safe work procedures for hazardous materials, and procedures to clean up spills;
- Encourage workers to take reasonable measures to prevent spills;
- Keep drums/containers sealed or closed;
- Place drums/containers within a suitable form of secondary or spill containment;
- Segregate incompatible materials;
- Ensure chemical storage areas are adequately protected from weather and physical damage; and
- Provide adequate spill response materials at storage areas (details of spill prevention and response equipment are outlined in Section 7 • Response Equipment).

Agnico Eagle is implementing the following general principles for spill prevention specific to the waterline:

During Design

- Covering 80-90% of the waterline
- Design for corrosion protection and freeze/thaw consistent with northern environments

During Construction

- Installation of the waterlines directly under and secured to the existing and approved bridges
- Construction inspection, visual examination of pipes after installation, initial pressure testing
- Apply best management practices

During Operations:

- Use of a leak detection system
    - The leak detection system is very sensitive and will respond to the slightest changes in pressure within the waterline. Agnico Eagle will have the ability to turn off the waterline when the leak detection system is triggered allowing for timely reaction. The leak detection system is the primary mitigation to address links and spills. The leak detection system will be calibrated when it is first implemented so that a leak or spill can be distinguished from an ATV or vehicle or caribou crossing the waterlines.
- Initial inspection/pressure testing, on-going visual examination of the surface condition of the pipes
- Waterline testing at the beginning of each discharge season and prior to commissioning
- Calibration of the leak detection system during commissioning and during operations
- A reporting line for the road user from the community to call in spills/leak
- Winterize the waterline to remove any accumulated sediment
- Regular maintenance, internal inspections, and visual inspection

Refer to Appendix H for additional details on spill prevention principles related to the waterlines and the protection of caribou.

During site orientation, induction training ensures all employees have an understanding of the steps to be undertaken in the event of a spill. All employees and contractors are shown where spill kits are stored, made aware of their contents, and are familiar with using spill equipment and responding to spills.

Figure 5-1 illustrates Agnico Eagle's spill/incident reporting procedure and the following sub-sections list the major responsibilities of site staff that will be participating in the emergency response.

5.1 First Responder

The person who is the primary person involved in a spill, or the first to observe a spill, is the first responder. The responsibilities of the First Responder are as follows:

- If considered safe to do so after initial assessment, STOP the spill using equipment contained in spill response kits, if required;
- In the event that a tanker truck is overturned, and a spill threatens human life or the spill is uncontrollable, initiate Code 1. Remain on radio to provide guidance to the ERT;
- In case of spill to land, ice or water, contact the Supervisor and the Environment Department to report the incident;
- Identify spilled product and contain the spill, IF SAFE TO DO SO; and
- Participate in spill response as a member of the cleanup crew.

5.2 Supervisor

The responsibilities of the Supervisor are as follows:

- Initially assess the severity of the incident;
- Contact the ERT Incident Coordinator and/or the Environment Department;
- Gather facts about the spill; and
- Participate in spill response as a member of the cleanup crew.

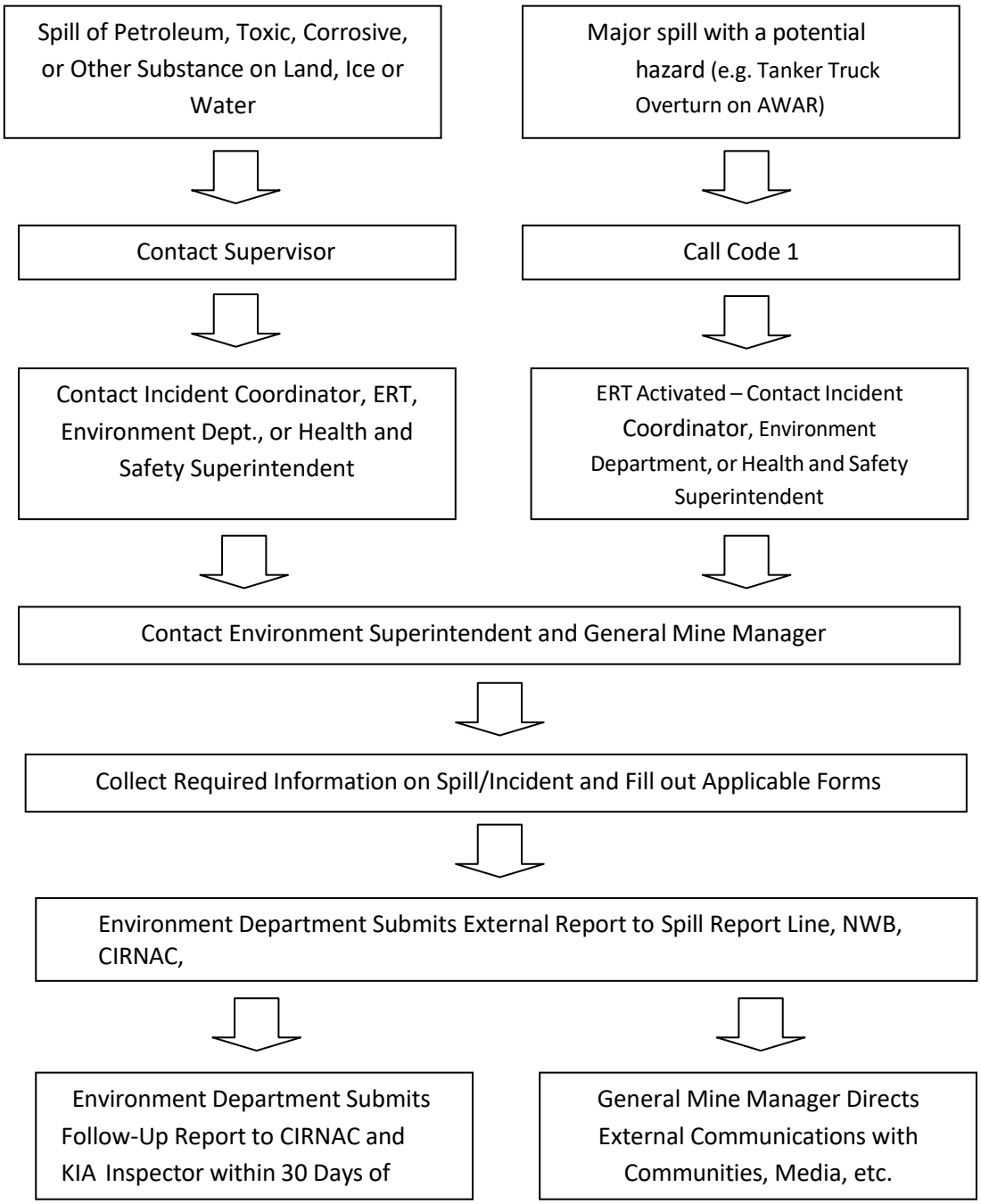

Figure 5-1 Spill/Incident Reporting Procedure

5.3 Environment Incident Coordinator

Responsibilities of the Environment Incident Coordinator are as follows:

- Assume complete authority over cleanup personnel and the spill scene;
- Assume responsibility for all mitigation efforts;
- Evaluate the initial situation and assess the magnitude of the problem;
- Activate the initial response plan;
- Alert and assemble key personnel in the ERT, as deemed appropriate, to handle the situation;
- In consultation with the Environment Superintendent or designate, develop the overall plan of action for containment and cleanup, and direct and implement the plan;
- Ensure assigned responsibilities are carried out and the activities of team members are coordinated;
- Assess the requirements for people, equipment, materials, and tools to contain the spill in light of what resources are immediately available - urgency will depend on the nature of the spill; and
- In consultation with the Environment Superintendent or designate, mobilize any additional resources that may be required and arrange for the transportation of necessary personnel and/or materials to the spill site.

5.4 Emergency Response Team

Since the commencement of construction, Agnico Eagle has an ERT team that is trained to assist in controlling major spills. For example, they could be called upon to respond in the event a tanker truck rolled over on the AWAR. These team members attend training sessions in spill response.

5.5 Emergency Response Team Incident Coordinator

The responsibilities of the ERT Incident Coordinator are as follows:

- Assume complete authority over securing the scene prior to cleanup;
- Mobilize all ERT personnel, equipment, PPE, and supplies as required to the site of the spill;
- Assist the Environment Incident Coordinator in obtaining any additional resources not available on-site;
- Ensure that appropriate PPE is worn and used properly;
- Assist in developing and implementing emergency response training programs and exercises; and
- Ensure that all spill response personnel receive adequate training to fulfil their responsibilities as part of the ERT.

5.6 Environment Superintendent or designate

The Environment Superintendent or designate is responsible for implementing and maintaining the Plan. In addition, the responsibilities of the Environment Superintendent or designate are as

follows:

- Liaise with the Environment Incident Coordinator;
- Provide technical advice on the anticipated environmental impacts of the spill;
- Advise on the effectiveness of various containment, recoveries and disposal options;
- Prepare and submit any formal report (see Appendix A for the Spill Report Form) to regulators and Agnico Eagle management detailing the occurrence of a spill;
- Contact the Senior Vice President - Environment and Sustainable Development immediately in case of a major spill;
- Contact the Corporate Director of Communication & Public Affairs immediately in case of a major spill;
- Act as the spokesperson with regulatory and government agencies;
- If authorized by the General Mine Manager or delegate, act as a spokesperson with the public and media, as required;
- Implement a sampling protocol for the collection and analysis of samples to identify and monitor possible contaminant levels resulting from the spill;
- Ensure on-site resources for spill response and cleanup are available;
- Monitor the effectiveness of the cleanup operation and recommend further work, if necessary;
- Review incident occurrences and recommend preventative measures; and
- Assist in implementing training and simulation requirements for spill response personnel.

5.7 General Mine Manager or designate

The General Mine Manager or designate is required to inform ERT members of the detailed nature of the operations to be performed in the event of a facility malfunction causing a spill during the operations phase. The responsibilities of the General Mine Manager or designate are as follows:

- Liaise with appropriate Agnico Eagle personnel and keep them informed of cleanup activities; and
- Assist the Incident Coordinator and ERT as needed, particularly in obtaining any additional personnel and resources not available on-site for spill response and cleanup.

5.8 Health and Safety Superintendent or designate

The following is the responsibilities of the Health and Safety Superintendent or designate in conjunction with the Training Department:

- Maintain emergency and health and safety records;
- Assist in conducting emergency spill response exercises;
- Track all emergency and health and safety training that on-site staff, including contractors, have received, and when retraining is required;
- Notify the Incident Coordinator (related to ERT) when retraining is required;
- Ensure that employees are retrained in appropriate emergency response skills prior to expiry

of existing training certification (e.g., Workplace Hazardous Materials Information System (WHMIS), Hazard Communication, Occupational Health and Safety Administration, first aid, respirator fit-testing; and
- Consult with appropriate organizations regarding retraining requirements and schedule.

5.9 On-Site Health Care Providers

On-site nurses are responsible to:

- Provide on-site first aid and other medical support; and
- Provide additional training for ERT members.

In addition to the health care providers on-site, the Rankin Inlet health professionals can be called for assistance, if required. For example, they may be the first to respond to incidences that could occur at Itivia.

5.10 Emergency Response Team Contact Information

Table 5-1 provides contact information for select Agnico Eagle contractors present at the Project. Internal contact information is presented in Table 5-2 for all Agnico Eagle personnel involved in spill recovery and subsequent reporting. Important external contacts relating to spill response, such as regulatory agencies and health organizations, are listed in Table 5-3. Table 5-4 provides contact information for external spill response contractors, should incident warrant assistance from outside sources. These tables are updated on an annual basis at minimum or as required.

5.11 Communication with the Public

Communication with public bodies during the state of emergency is the responsibility of the General Mine Manager or the Communications & Public Affairs Corporate Director.

In the case that the community of Rankin Inlet should need to be evacuated on short notice, the ERT will immediately assist in the evacuation of the community. The General Mine Manager will immediately contact the Mayor of the Hamlet to provide information regarding the situation. If safe to do so, a radio notification is immediately broadcasted on the Rankin Inlet Radio station.

Table 5-1 Contractor Contacts

Contractor	Telephone No.	Contact in Emergency for:
Nolinor Aviation Services (Vincent Dufort)	1 (888) 505-7025 (450) 476-0018 Cell: (514) 688-8825	Flight services for additional crew, or additional supplies
Canadian North (Elena Ramirez)	Cell: (613) 290-6290	Flight services for additional crew, or additional supplies
Calm Air (Naomi Van der Wal)	Cell: (204) 223-7947	Flight services for additional crew, or additional supplies
Dyno Nobel Explosives Ltd. (Marc Vasily)	(819) 759-3555 ext. 4603926 Cell: (403) 836-0685	Heavy Equipment, Man power, Emergency Blasting
Transport Desgagnes Inc. (Daniel Desgagnés)	(418) 692-1000 Cell: (514) 347-2115	Dry Cargo
Petro Nav (Chris King)	Cell: (514) 217-6611	Fuel Hauler

Table 5-2 Internal Contacts

Title	Name	Telephone No.
Senior Vice President, Sustainability, People and Culture	Carol Plummer	416.644.2056 Cell: 819.354.9877
Vice President, Environment and Critical Infrastructures	Michel Julien	416. 947-1212 ext. 4603738 Cell: 514.244.5876
Senior Corporate Director, Communications, Social and Public Affairs	Jason Allaire	819759.3555 ext. 4608004 Cell: 819.355.2608
Vice President Operations - Nunavut	Martin Plante	819.759.3555 Cell: 819.856.1873
Director, Shared Services Nunavut	Pascal Lavoie	819.759.3700 est.4105822 Cell: 819.277.0045
Meliadine General Mine Manager	Frédéric Mercier-Langevin	819-759-3555 ext. 4603170 Cell: 819.354.6676
H&S Superintendent	Benoit Massicotte	819.759.3555 ext.4603968 Cell: 819.762-2870
H&S General Supervisor	Charles-Andre Langevin	819.759.3555 Ext 4603073
Emergency Measure Counsellor	Dave Loder Darren Wilcox	819.759.3555 ext.4603113
Environmental Superintendent	Eric Giroux	819.759.3555 ext.4603175
Environmental General Supervisor	Robin Allard	819.759.3555 ext. 4603212 Cell:819.860.1414
Environmental Coordinator	Sean Arruda/Dan Gorton	819.759.3555 ext.4603996

Title	Name	Telephone No.
Environmental Department	Environmental Technicians	819.759.3555 ext.4603903 & 4603925
On-site Nurses		819.759.3555 ext.4603011

Table 5-3 External Contacts

Organization/Authority	Telephone Number	Fax Number
NT-NU24-Hour Spill Reporting Line (spills@gov.nt.ca)	(867) 920-8130	(867) 873-6924
Workers' Safety & Compensation Commission	(867) 979-8500	(867) 979-8501
Kivalliq Inuit Association (KivIA)	(867) 645-5725	(867) 645-2348
Nunavut Water Board (NWB)	(867) 360-6338	(867) 360-6369
CIRNAC Inspector (Atuat Shouldice) Nunavut Regional Office (NRO) – Indigenous and Northern Affairs Canada (INAC) – Iqaluit	(867) 645-2840 (867) 975-4500	(867) 669-2871 (867) 975-4560
Department of Fisheries and Ocean (DFO) – Nunavut Regional Office - Iqaluit	(867) 979-8000	(867) 979-8039
Manager, Environmental Protection, Government of Nunavut	(867) 975-7748	(867) 975-6099
Kivalliq Health Services – Rankin Inlet	(867) 645-8300	(867) 645-8304
Rankin Hamlet Office	(867) 645-2895	(867) 645-2146
Rankin Ambulance or Fire Emergency	(867) 645-2525	
RCMP 24 Hour Emergency Number	(867) 645-0123	
Canadian Coast Guard (in the event of a spill to the marine environment 24 hours) Superintendent, Environmental Response Coast guard e-mail for notification iqanordreg@innav.gc.ca	(800) 265-0237 (519) 383-1954 (867)-979-5724	(519) 337-2498 (867)979-4264
Transport Canada – Marine Safety Jaideep Johar	(204) 880-0754	(780) 495-8607
Shari Currie Ian Salisbury Philip Levesque - Marine Safety Inspector	(780) 495-8360 (250) 754-0290 (204) 984.5786 Cell: (204) 801.6951	

SECTION 6 • ACTION PLAN

Preventative measures are the primary form of ensuring safety. All personnel who have to deal with chemicals are trained in first aid and safe materials handling, including WHMIS. Regular training updates and site-specific exercises/drills are integral to preventing incidents.

Procedures vary depending on the season, hazardous materials spilled and location of the spill (land, water, ice or snow). The SDS are consulted to ensure safety procedures are followed. Response procedures specific to spills on land, water, snow and ice are presented in the following sub-sections as general guidelines.

6.1 Initial Action

For all spill emergencies, it is required that the following priority actions be undertaken:

- Ensure personal safety;
- Respond quickly; and
- Report the spill.

For the waterlines, initial actions also include responding to the leak detection system, such that if the leak detection system in place detects a leak, the waterline will be inspected to confirm if there is a leak. The waterline will cease to operate until the leak can be controlled and/or fixed.

6.1.1 Respond Safely

Responding safely involves the following:

- Consult the SDS and Product Guides for further information on the substance;
- Control the spill area to prevent unauthorized access by other workers;
- Ensure adequate ventilation;
- Assess whether the spill, leak or system failure can be readily stopped or brought under control;
- Stop product flow or leak if possible and IF SAFE TO DO SO, in the case of the waterline leaks, the waterline with a leak will cease to operate;
- Approach spill from upwind IF SAFE TO DO SO;
- Do not contain compounds (e.g., gasoline, aviation fuel) if vapours might ignite – allow them to evaporate;
- Depending on the type of compound spilled and IF SAFE TO DO SO, contain product using booms, berms, absorbent pads, earthen dike, trenches or improvise with materials at hand and
- Wear appropriate PPE, such as impervious clothing, goggles and gloves when containing the spill.

6.1.2 Respond Quickly

Responding quickly involves the following:

- Identify the spilled material;
- Stop the spill, if safe to do so;
- Be alert – ensure safety of yourself and others by notifying them of the incident;
- Contact the Incident Coordinator if it is a major spill (Code 1), identify the location and request assistance as required. The Incident Coordinator will mobilize the ERT if necessary;
- Shut off ignition sources such as vehicles and unplug electrical equipment – NO SMOKING nearby;
- Attend to the injured if applicable; and
- Assess the severity of the spill.

6.1.3 Report Spill

Reporting the spill includes the following:

- Obtain all necessary information to complete the external spill report and forward to Environment Department (see Appendix A). External reportable spills must be reported by Agnico Eagle Environment Staff to the NT-NU 24-Hour Spill Report Line, CIRNAC, Kivalliq Inuit Association (KivIA), ECCC, NWB and NIRB; and
- Submit a detailed spill follow up report to the same external stakeholders no later than 30 days after the spill. This is done by Agnico Eagle Environment Staff. The report contains the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain, cleanup, and restore the spill site.

6.2 Spills on Land

Response to spills on land includes the general procedures detailed in the following section. The main spill control techniques involve the use of two types of barriers: dikes and trenches. Barriers are placed down-gradient (down-slope) from the source of the spill, and as close as possible to the source of the spill. Barriers slow the progression of the spilled material and also serve as containment to allow recovery of the spilled material.

Depending on the spill volume, the site of the spill and available material, a dike may be constructed with soil, booms, lumber, snow, etc. A plastic liner is placed at the foot of and over the dikes to protect the underlying soil or other material and to facilitate recovery of the spill material.

Dikes are constructed to accumulate a thick layer of free product in a single area (V- shaped or U-shaped).

Trenches are useful in the presence of permeable soil and when the spilled material is migrating below the ground surface. If deemed necessary, a material specific liner is placed on the down-gradient edge of the trench to protect the underlying soil. Liners should not be placed on the

bottom of the trench to allow water to continue flowing underneath the layer floating material (such as fuel).

The use of large quantities of absorbent materials to recover significant volumes of spilled material should be avoided. Large volumes of free-product should be recovered, as much as possible, by using vacuums and pumps, and containerized. Mixtures of water and fuel may be processed through an oil-water separator. Absorbent sheets should be used to soak up residual fuel on water, on the ground (soil and rock), and on vegetation. Peat moss may also be sprinkled on vegetation to absorb films of petroleum products. Excavations will be planned for contaminated areas using heavy equipment and contaminated soil will be disposed at the Landfarm or shipped south during the summer barge season.

Figure 6-2 illustrates the decision and action process for spill that occur on land.

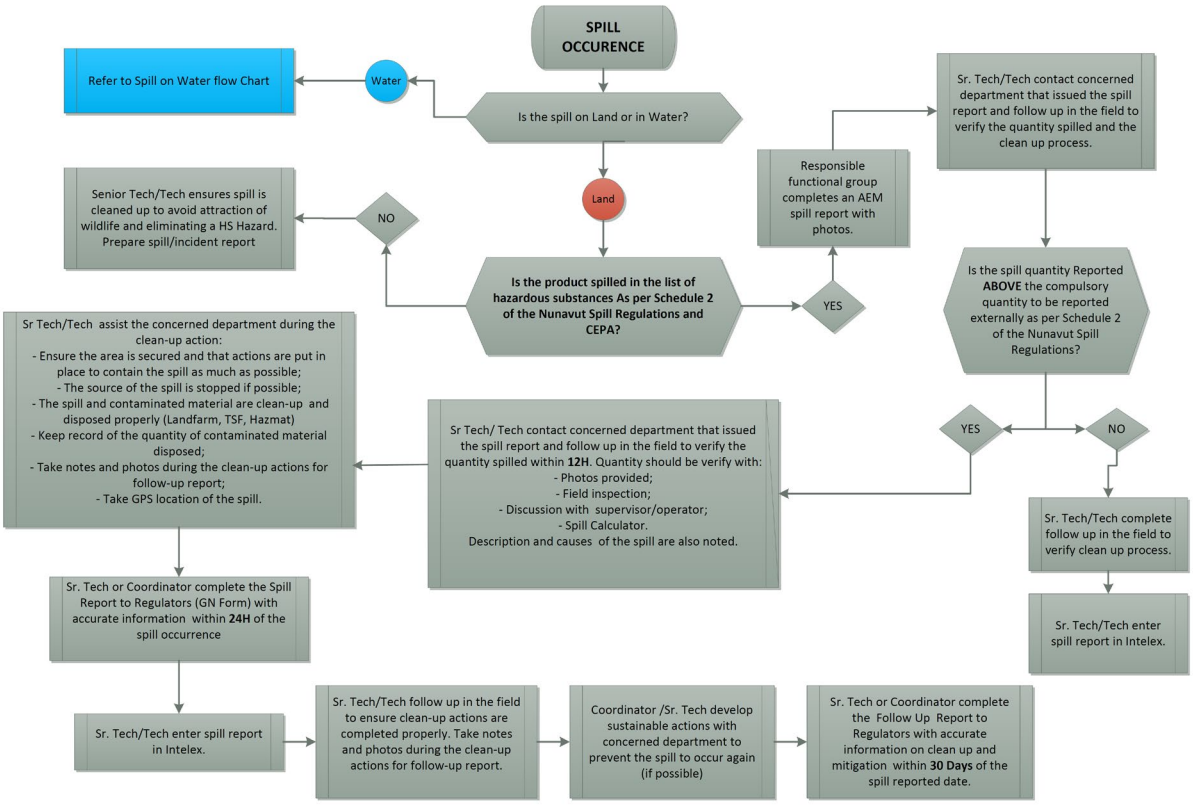

Figure 6-2 Flow Chart for Spill on Lands

6.3 Spills on Water

Response to spills on water includes the general procedures provided in the following section. The following elements are taken into consideration when conducting response operations:

- Type of waterbody or watercourse (lake, stream, river);
- Type of spilled material;
- Water depth and surface area;
- Wind speed and direction;
- Water flow and direction;
- Type of shoreline;
- Seasonal considerations (open-water, freeze-up, break-up, frozen); and
- Equipment and personnel available for first response.

Containment of an oil slick in water requires the deployment of mobile floating booms, maritime barriers to intercept, control, contain and concentrate (i.e., increase thickness) the floating oil. Saline effluent removal could include vacuum recovery, depending on the volume and location.

Measures are taken to protect sensitive and accessible shoreline. The spill is monitored to determine the direction of migration. In the absence of strong winds, the material will likely follow water flow direction. Measures are taken to block and concentrate the spilled material at the discharge of a waterbody using booms where it will subsequently be recovered.

In the case of spills in larger rivers, with fast moving currents, diversion booms are used to direct the spilled material ashore for recovery. Single or multiple booms (i.e., cascading) may be used for diversion. Typically, the booms are anchored across the river at an angle. The angle depends on the current velocity. Choosing a section of a river that is both wider (i.e., less current) and shallower makes boom deployment easier. Diversion booming may also be used to direct the spilled material away from a sensitive area to be protected.

Figure 6-3 illustrates the decision and action process for spill that occur on water.

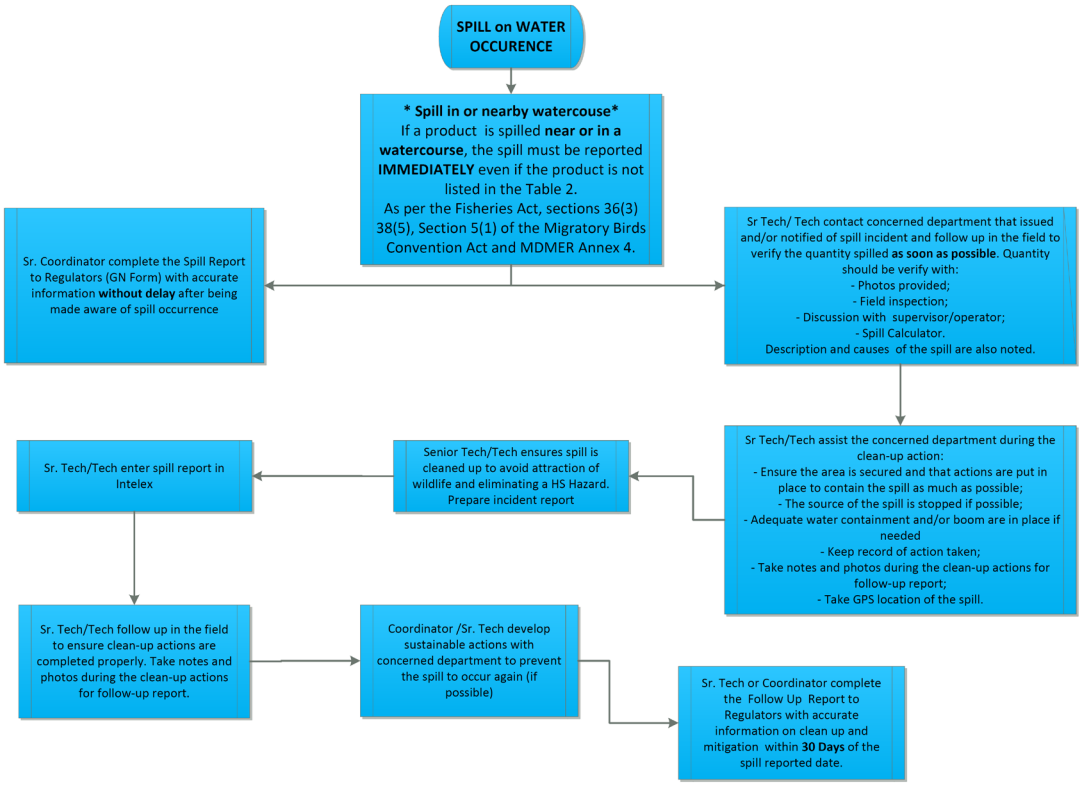

Figure 6-3 Flow Chart for Spills on Water

6.4 Spills on Snow and Ice

In general, snow and ice will slow the movement of hydrocarbons, saline effluent, or other spilled material. Snow is generally a good natural sorbent. Hydrocarbons have a tendency to be soaked up by snow through capillary action. However, the use of snow as a sorbent material is limited as much as possible. Snow and frozen ground also prevent spilled material from migrating down into soil or at least slow the migration process. Ice prevents seepage of spilled material into the water. On the other hand, the presence of snow may hide the spilled material (especially oil slicks) and make it more difficult to follow its progression.

Most response procedures for spills on land can be used for spills on snow and ice. The use of dikes (i.e., compacted snow berms lined with plastic sheeting) or trenches (dug in ice) slow the progression of the spilled material and serve as containment, to allow recovery of the material. Free-product is recovered using a vacuum, pump, or sorbent materials. Contaminated snow and ice are scraped up manually or with heavy equipment, depending on volumes. The contaminated snow and ice are disposed at the Landfarm and treated in spring with the oil and water separator.

In the event a hydrocarbon spill has occurred on a frozen river and the hydrocarbon has migrated under the ice a V trench can be installed downstream of the spill. This would involve a chainsaw cutting through the ice, if the ice is not too thick, and a V structure constructed such that the point of the V is the furthermost point of the structure downstream of the spill. This structure may allow hydrocarbons to accumulate along the sides of the V forcing the hydrocarbons to the point of the V where absorbents can be used to collect the product. This work should only be completed if it is safe to work on the ice and the ice is not too thick that a chainsaw can cut through the ice. This procedure may also be used for saline effluent spills over frozen rivers (if the waterline is operating during these conditions), and may support vacuum removal activities.

6.5 Disposal of Spilled Material

Contaminated materials are salvaged, put into appropriate containers (e.g., Quatrex bags/drums), and labelled for temporary storage. Water contaminated with oil or fuel is processed with the oil separator. Water contaminated with other products is placed in drums for shipment. Depending on the nature of the contamination, solid materials are treated on-site (landfarm), or shipped off-site to an approved disposal facility.

Soils contaminated with light hydrocarbons (such as gasoline or aviation fuel) are treated on-site in the Landfarms. Details on the design and operation of the Landfarm are provided in the Landfarm Management Plan.

In the event of a saline spill on land the necessity of cleanup will be determined for each incident. For instance, if a spill occurred on the AWAR, the saline in the water will act as a natural dust suppressant, binding to the road base material. In this situation digging up the saline water may be more detrimental than leaving the saline bound to the road. If the water migrates off of the AWAR or Bypass road, or a

saline leak from the waterlines, a vacuum truck or similar type of equipment should be used to pick up the residual saline water. If an area impacted with saline water needs to be cleaned up the leftover material is to be deposited with the Waste Rock or Overburden Material.

Soil and snow contaminated with sewage will be collected and placed in the Landfarm. Untreated sewage contains microorganisms that will aid in the breakdown of hydrocarbons in the Landfarm.

Soils contaminated with other spilled products are segregated, packaged and shipped to an external approved facility for proper treatment and disposal. In this, Agnico Eagle will adhere to the requirements under the *Transportation of Dangerous Goods Regulations*, particularly Part 5. All contaminated materials (dangerous goods) will be shipped in a means of containment required or permitted by Part 5 of the Regulations.

6.6 Seepage Management

Seepage from the tailings storage facility (TSF) and waste rock storage facilities (WRSF) are treated as actionable and reportable spills. In the event that seepage is observed, an action plan is implemented to address the problem. The action plan includes: cause identification, mitigation measures used to stop or control the seepage, clean-up actions, disposal of contaminated material if applicable and monitoring requirements.

6.7 Event Monitoring

The Event Monitoring (EM) program addresses the site specific monitoring that is required following any accidental release. A “release” may be caused by a spill or an emergency. The EM program is designed to verify whether contamination of the surface soil, nearby receiving environment and active zone has occurred as a result of an accidental release of a hazardous material or contaminated water, through monitoring of surface runoff and nearby receiving environment following remediation of any release. It is anticipated that owing to the presence of permafrost beneath most of the mine footprint, there will be minimum impact to groundwater.

The EM plan is developed on a site specific basis subsequent to a spill or accidental release, and considers the location, extent of the spill, type of product spilled, potential receptors and the potential for any remaining contamination after clean up. The plan is done in coordination with the Environmental Superintendent, or designate. In the event of an accidental release, the water quality of the downstream receptor and possibly upstream of the receiving point is to be sampled (during the ice-free season) and analyzed. Should the spill have happened over snow cover, water and possibly soil sampling should take place at the earliest feasible time after thaw to determine if there is any impact to the receiving water or soil quality. The specific parameters monitored as part of the EM program depends on the nature of the spill, and is determined for the specific hazardous material released.

This section addresses the emergency response machinery, equipment, tools and other resources that are made available on-site for spill recovery measures (see Tables 7-1, 7-2, and 7-3).

Table 7-1 Equipment for Spill Emergency Response

Mobile Equipment	
Excavators	Pickup trucks
Snowmobiles	Generator
ATV	Fire truck
Vacuum truck	Boats
Loaders	Fuel trucks
Backhoe	Haul truck
Bulldozer	Spill response trailer
Zoomboom	Bobcat
Water trucks	
Temporary Containment Systems	
Booms	Spill absorbent material
Drums Tanks	Packages/pads
Flexible bladder	Silt fencing
Temporary secondary Containment	Maritime barrier
Emergency Transportation	
Helicopter if available	Snow mobile
ATV	Boats
Sno Cat	
Communication Equipment	
Radio	Email
Phone	Wireless communication system

If required, additional on-site equipment is made available to assist with spill recovery. Temporary containment systems are also available on-site and at Itivia. If required, external resources available in Rankin Inlet, they are listed in Table 5-2 and Table 5-4.

Communication equipment on-site includes radios, telephones and other wireless communication systems that are available in the event of an emergency situation.

Spill response kits are strategically located where required on-site. Each department and work area is responsible for providing sufficient spill response kits in their respective work areas. The kits are kept in marked and accessible locations. The locations include all fuel storage areas and chemical storage areas.

All mobile equipment on-site (surface heavy equipment) are equipped with an emergency spill kit

and quarterly audit is performed by the Environment Department.

A mobile environmental emergency trailer, which is easily accessible and transportable, is located on-site and contains the items listed in Table 7-2.

Table 7-2 Contents of Mobile Environmental Emergency Trailer

Emergency Response Equipment	
Pump centrifugal (summer only)	White oil spill pads and roll
Pump accessories, Vacuum ends	Universal booms
Tubing or pipes for vacuum or pumping	Quatrex bags
Tyvek suit and glove	Wedge wood, Plug pattie
Diesel fuel jerry can (placed on a miniberm)	Hand shovel
Leak control Kit	Sledgehammer, Re- bars
Drum opener	Pipe patch kit
Wescott (to open empty drum screw)	Absorbent pellet bag
Drums	Crowbar
Absorbent booms	Secondary containment
Tarps	
Ropes	
Evac treatment system	
Yellow liner roll (Bags)	

Environmental emergency sea cans are located near the Meliadine River at km 7 and 18 along the AWAR as well as at Itivia. Each environmental emergency sea can contains material listed in Table 7-3.

Table 7-3 Environmental emergency sea can content

Quantity	Equipment/tool name
3	Empty drum (sealed)
2	Mini berm 36”x 36”
2	4 drums berm 4’x 8’
4	Tarp 20’x 30’
4	Tarp 30’x 50’
10	Oil spill absorbent pad
5	Universal absorbent boom 5”x 10’ (for hydro-soluble chemical)
5	Universal absorbent boom 8”x 10’ (for hydro-soluble chemical)
5	Petroleum base absorbent boom 5”x 10’ (for petroleum product)
3	Maritime barrier (baffle)
2	Cell-U-Sorb (absorbent)
2	Amerisorb peat moss (absorbent)
2	Oil gator absorbent
1	Plug pattie
4	Quatrex bag and liners
2	Fork lift wood pallet
4	Hand shovel
1	Crowbar chisel
1	Ice breaker chisel
1	Sledgehammer
15	Re- bar 4’
1	½ drum containment
1	Yellow liner roll
1	Toolbox
2	Silt fence
2	Silt bag
2	EVAC System
1	45-gallon Spill Kit
1	Yellow Nylon rope roll

TABLE 7-4 Spill kit Location

Area	Location	
	Easting	Northing
Fountain Tire Dome, Fuel Tank	541904	6989004
Jet-A Tank	541941	6988939
Orbit Dome	541861	6988932
Gas Station	541837	6988946
Fuel Farm	541222	6988453
DCP5	540468	6988747
DCP1	540144	6989255
Nuna Yard (beside Nuna Dome)	540048	6989058
Nuna Dome (2 SK available)	540019	6989058
Warehouse Dome	539900	6988854
Dome 1 (Brine shop)	539892	6988800
Fuel Tank Portal (Dome1)	539892	6988791
Mine Compressor Room	539838	6988848
Mine Gen Set	539834	6988853
Waste Rock Area	539806	6989147
Batch Plan Yard 1	539594	6989084
Batch Plan Yard 2	539577	6989067
Batch Plan Yard 3	539541	6989077
Batch Plan Yard 4	539539	6989060
A & K Dome	539198	6990190
A & K Industrial Pad	539138	6990034
BLAIS Industrial Pad	539027	6990361
TANGMAARVIK Industrial Pad	538917	6990253
Camp Gen Set Tank	542034	6989099
Camp Gen Set Building	542038	6989093
ANFO Plant Shop	539567	6988322
Crusher (Meliadine esker, 3 SK available)	539447	6990118
Emulsion Plant Shop	537626	6990745

8.1 Training

8.1.1 On-Site Personnel

A designated ERT consisting of on-site personnel is established. Agnico Eagle ensures that the ERT is trained and present at all times. All members of the team are trained and familiar with emergency and spill response resources, including their location and access, the Spill Contingency Plan, and appropriate emergency spill response methodologies. The ERT receive 4 hours of training per quarter.

The training includes the following:

- A review of the spill response plan and responsibilities of the ERT members;
- The nature, status and location of fuel and chemical storage facilities and waterlines;
- The on-site and off-site spill response equipment and how to use it;
- Operation of the leak detection system for the waterlines;
- Distribution of SDS sheets;
- Emergency contact lists;
- Worker health and safety during emergency interventions;
- Communication methods and signals;
- Desktop exercises of “worst case” scenarios;
- Emergency evacuation;
- Fires or explosions;
- Emergency equipment and use;
- Personal protective equipment and clothing;
- Marine shoreline recovery operations; and,
- Likely causes and possible effects of spills.

Every employee and contractor at the Meliadine site receives basic spill and waste management training during their online induction, enabling them to respond to small spills and raise the alarm if a larger response is required. The ERT members receive in-depth spill response training and learn how to respond while wearing PPE.

The Environment Department regularly attend tool-box sessions to provide information on spill response and reporting procedures. The Health and Safety Department, including the Health Center staff, are familiar with and have up-to-date SDS available.

SECTION 9 • POTENTIAL SPILL ANALYSIS – AWAR

To prepare for emergency spill response, potential spill analysis are conducted for a variety of potential worst case scenarios. The exercise serves to: identify potential risk areas, determines the fate of spilled products and predict environmental effects. The following example, of a tanker truck spill on the AWAR, is used to demonstrate the application of the spill response as part of the spill analysis.

Description of Incident: Rollover of fuel tanker due to poor road conditions. The rollover has resulted in approximately 1,000 L of fuel to the ground along the roadside.

Potential Causes: Vehicle accident, human error.

Hazardous Product(s) Spilled: Diesel fuel.

Maximum Potential Volume Spilled: 45,000 litres.

Immediate Receiving Medium: Land.

Distance and Direction to Nearest Receiving Body of Water: 500 metres.

Resources to Protect: Land and any nearby stream, river or waterbody.

Estimated Emergency Response Time: Maximum time is 90 minutes depending on location of spill (assuming truck driver is injured and cannot commence spill response). Minimum time to respond to a spill on the AWAR is 15 minutes, depending on the distance from the proposed Meliadine site.

Spill Response Procedures: Under this scenario, the truck driver was not injured, and therefore he acted as the first responder and immediately activated the Plan as defined in Section 6. The driver attempted to seal the leak. He tried to use the spill kit carried in the fuel truck and made all attempts to contain and recover the fuel on the ground using dikes, sumps or trenches as described in Section 6.2. A sorbent boom[2] was used to block the flow of the fuel towards the Lake. The first responder notified the Incident Coordinator, ERT and Environment Department by calling a Code 1 on radio. The mobile emergency response trailer was brought to the spill site by the ERT, who assisted in digging trenches to contain and collect free-product for temporary storage. Spilled material was recovered using pumps. The Environment Superintendent, or designate, immediately transmitted the information to the General Mine Manager or designate. The fuel remaining in the tanker was pumped into a temporary storage tank using appropriate equipment. The leak stopped as the tank volume was reduced below the leaking safety valve. Pumping continued until all of the fuel was removed. The empty tanker was righted up and brought back to the site. All soil was cleaned up thereafter and disposed of in the landfarm. The spill was reported to the NT/NU spill report line, KIA, and INAC. After the cleanup had been completed, the Environment Department collected soil samples to verify that no residual fuel remained at the spill

site. A follow-up of the spill causes results in the development of mitigation measures including:

- Fuel deliveries from Itivia to the mine site are suspended during poor weather or poor road conditions;
- Agnico Eagle sands the roads when road ice poses a safety risk to travel; and
- All Agnico Eagle vehicles carry basic spill response equipment and the drivers are trained in its use. This allows the truck driver to act as the first responder and attempt to contain the spill and recover any spilled product, if safe to do so.

These mitigation measures, combined with the procedures outlined in this Plan above, provide protection to Nipissar Lake.

SECTION • 10 • MDMER INFORMATION

The Fisheries Act prohibits the deposit of deleterious substances into fish frequented waters unless authorized by regulation. The Metal and Diamond Mining Effluent Regulations (MDMER) were promulgated under the Fisheries Act and exempts metal and diamond mining industry from subsection 36(3) general prohibition of the Act. The purpose of the MDMER is to improve metal mine effluent management and greater protection of fish, fish habitat and consumption of fish by humans. Being subject to the MDMER sets out limits and parameters that enable industries to deposit deleterious substances into waters frequented by fish. The MDMER includes effluent limits on releases of nine parameters: six metals (arsenic, copper, cyanide, lead, nickel and zinc), radium-226, total suspended solids (TSS), and unionized ammonia. The MDMER also imposes limits on the pH of effluent and prohibits the discharge of effluent that is acutely lethal to fish, even if it is determined that the eight MDMER parameters and pH effluent is in compliance. Total suspended solid is the parameter in the effluent discharge that is the most likely to give concern for the discharge in freshwater. To prevent this the Effluent Treatment Plant was put in place to treat the TSS.

The Final Discharge Point (FDP) means an identifiable discharge point of a mine beyond which the operator of the mine no longer exercises control over the quality of the effluent. For example, sampling within the tailings pond would not be classified as a legal sample as the mine still exercises control over the quality of the effluent within a tailings pond.

For the discharge to freshwater, before discharging occurs, required samples from the FDP are taken and analyzed to ensure they are compliant. Under the Nunavut Water Board water licence 2AM-MEL1631 Agnico Eagle also has to notify CIRNAC before starting the discharge. If analysis indicates a limit is exceeded or a field measurement indicates a trend towards non-compliance, discharge is stopped. Evaluation is done and if necessary, treatment occurs while re-circulating the water. Agnico Eagle will proceed the same way for the discharge to sea even if it's not regulated by the licence 2AM-MEL1631. Agnico Eagle is also required to report the effluent discharge to the Spills line and provide a written report no later than 30 days after the incident. If other potential seepages that enter fish bearing waters are discovered, mitigation measures are taken (building dikes, pumping stations, putting maritime barriers, etc.). As of now, seepage has not been discovered entering fish bearing waters.

For the discharge to freshwater, the FDP is located downstream of the Effluent Water Treatment Plant; beyond that point Agnico Eagle cannot exercise control over the quality of the effluent. FDP water quality is assessed with grab and composite samples; the sampling point is located at a valve along the discharge pipe in the Effluent Treatment Plant. For the discharge to sea, the FDP is located at a valve installed downstream of the storage tank near the Itivia Fuel Storage Facility at Rankin Inlet.

On August 22, 2016 Agnico Eagle, Meliadine Gold Project became subject to the MMER, under the Fisheries Act, as dewatering of the H17 pond into Meliadine Lake occurred at a flow rate greater than 50 m^3 per day. Water was pumped from the H17 pond to a physical filtration device (geotubes) and was then

discharged into Meliadine Lake using a 700m pipe. When required, water was treated for TSS through a chemical treatment unit. Water was released into Meliadine Lake via a diffuser, to control erosion and disturbance to bottom sediments. The diffuser was located 38 m offshore and in 4.5 m deep water at location 63°02'35.97'' N 92°13'10.98'' W. There was no routine cleaning procedures for the discharge pipe, as this was considered clean water. Discharge was stopped once dewatering of H17 was completed on September 25, 2016. The MMER final discharge point (FDP # 1 named "MEL-D-1") was located at 63°02'16.12'' N 92°13'20.98''. The water collected at FDP #1 MEL-D-1 was located downstream of the chemical treatment plant and beyond Agnico Eagle's control of effluent quality. On January 3, 2017 EO DIDHAM was informed that the MMER FDP MEL-D-1 had been dismantled and will not be used again. The last report in RISS was the 4th quarter of 2016. The last discharge day for MMER FDP MEL-D-1 was October 1st 2016.

On June 20, 2017, Agnico Eagle Meliadine commissioned a second FDP in Meliadine Lake at 63°01'45.97'' N 92°09'18.12, 100 m from shore. Water is pumped from CP-1 to the Effluent Water Treatment Plant (EWTP). The final control sampling point is located in the EWTP at 'MEL-14' (63°02'15.46'' N 92°13'06.24). When water quality meets Total Suspended Solids compliance standards, water is discharged past MEL-14 into Meliadine Lake. The FDP consists of a diffuser to control erosion and disturbance to bottom sediments. Water from other sources (lake H19, H20) may also be discharged through this FDP when TSS treatment from the EWTP is required.

MDMER came into effect on June 1, 2018. On June 24, 2018 MEL-14 FDP was first discharged and finished discharging on Sept 3, 2018.

On April 29, 2019, Agnico Eagle submitted an application to the MDMER regulation for a new final discharge point at the Meliadine project. Agnico Eagle commenced discharging water to sea in 2019. Groundwater is in surface ponds at the Mine site, separate from other water. The groundwater is treated at the Mine site so that it is safe to discharge into the ocean. The MDMER final discharge point in Itivia Harbour (MEL-26) is located at 62°48'01,99"N 92°06'00,05" W. The effluent is then be released in Itivia Harbour via a submerged diffuser. The location of the diffuser is provided in Figure 3.

Figure 1: Location of the Effluent Water Treatment Plant (EWTP), which contains the sample port MEL-14 (63° 2'11.60"N, 92°12'59.70"W zone 15V).

Figure 2: Zoom in image of the EWTP and photos of the MEL-14 sampling port inside the building (end of the yellow hose).

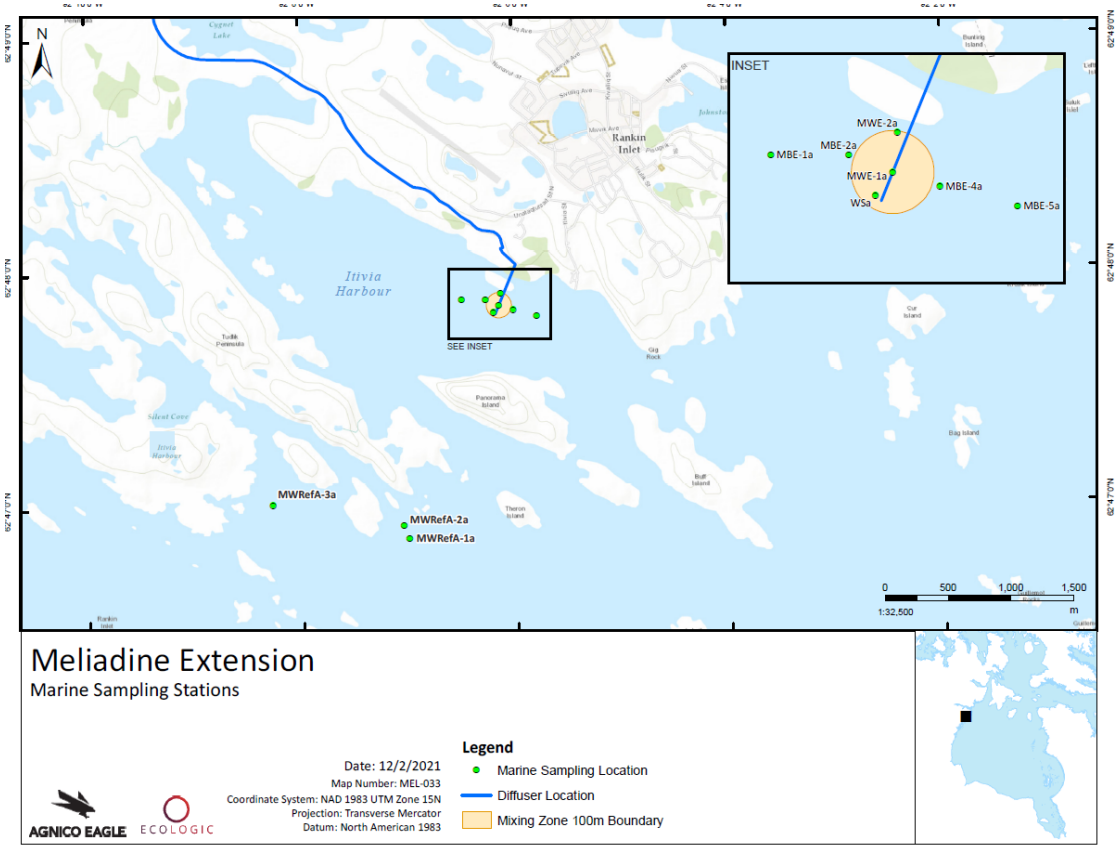

Figure 3: Marine Discharge and Sampling locations

Figure 4: A photo of the sampling port for MEL-26 at Itivia. The port is located inside the blue seacan, indicated in Figure 1.

Agnico Eagle (Agnico Eagle Mines Limited). 2014. Oil Pollution Emergency Plan (OPEP), Final Environmental Impact Statement, Meliadine Gold Project, Nunavut, Volume 8, Support Document 8-2.

INAC (Aboriginal Affairs and Northern Development Canada). 2010. Guidelines for Spill Contingency Planning. Last modified- 2010/09/15 http://www.aadnc-INAC.gc.ca/eng/1100100024236/1100100024253#sub1A_6

NWB (Nunavut Water Board). 2010. Guide 4 – Completing and Submitting a Water Licence Application for a New Licence and the Supplemental Information Guide for Mining and Milling (SIG-MM3 Guide).

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

Northwest Territories | Nunavut | Canada

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR	REPORT TIME	☐ ORIGINAL SPILL REPORT, OR	REPORT NUMBER
B	OCCURRENCE DATE: MONTH – DAY – YEAR	OCCURRENCE TIME	☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	
C	LAND USE PERMIT NUMBER (IF APPLICABLE)	WATER LICENCE NUMBER (IF APPLICABLE)		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION	REGION ☐ NWT ☐ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES MINUTES SECONDS	LONGITUDE DEGREES MINUTES SECONDS		
F	RESPONSIBLE PARTY OR VESSEL NAME	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION		
G	ANY CONTRACTOR INVOLVED	CONTRACTOR ADDRESS OR OFFICE LOCATION		
H	PRODUCT SPILLED	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF APPLICABLE)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER	
I	SPILL SOURCE	SPILL CAUSE	AREA OF CONTAMINATION IN SQUARE METRES	
J	FACTORS AFFECTING SPILL OR RECOVERY	DESCRIBE ANY ASSISTANCE REQUIRED	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS			

L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130

LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ NAC ☐ NEB ☐ TC | SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN | FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			

PAGE 1 OF _____

B.1 Ammonium Nitrate

The first step to prevent potential spills and associated hazards is the application of proper storage procedures for bulk ammonium nitrate, including the following:

- Ensure good housekeeping of the storage facility to prevent spilling and/ cross-contamination of materials;
- Store ammonium nitrate away from combustible materials, fuels, and other blasting accessories (i.e., boosters, delays, detonating cords, and detonators);
- Post proper signage restricting the use/exposure of ammonium nitrate to ignition sources (e.g., no hot work, smoking or vehicle maintenance);
- Ensure the storage facility is well ventilated; and
- Ensure the storage facility is locked at all times with only authorized personnel allowed access.

The following is a general spill response procedure for ammonium nitrate. Consult the SDS to determine whether deviations from the general guidance are required.

For an **ammonium nitrate spill** (solid):

1) Isolate and evacuate the spill area.

2) Contact your Supervisor, who will contact the Incident Coordinator and coordinate appropriate spill response (assemble ERT members and the appropriate spill response materials). **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

3) Put on appropriate personal protective equipment. For an ammonium nitrate spill, this includes:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Protective eyeglasses or chemical safety goggles or face shield as recommended by the SDS;

    c. Lab coat, coveralls or Tyvek™ coveralls as recommended by the SDS; and

    d. Half mask air-purifying respirator with cartridges and/filters as recommended by the SDS or respirator manufacturer.

4) Ventilate (open windows/doors to outdoor) closed spaces before entering.

5) Remove all sources of heat and ignition (no smoking, flares, sparks, or flames in immediate area) and remove uncontaminated combustible materials and organic compounds (wood, paper, oil, etc.) from spill area.

6) For spills on land, protect the spill area from water runoff by constructing a ditch or dike using suitable absorbent materials, soil or other appropriate barrier.

7) AN dissolves quickly in water or snow so it is critical to minimize its interaction with water or snow. If the material is spilled on snow the area should be cleaned up as soon as possible to minimize the amount of AN that gets dissolved. If the spill occurs when it is raining, it may be advantageous to cover the material with an impermeable tarp to minimize the interaction with the rain until the spill is cleaned up.

8) Vacuum or sweep the spill residue using non-metal, non-sparking tools and place the residue in a labelled plastic container (plastic pail with lid or double heavy-duty plastic bags) for re-use or off-site disposal at a licensed disposal facility.

    Note: Recovered solid, if generally free from impurities, may be suitable for its intended use. In this case, place solid in suitable container with lid and clearly label the container per WHMIS Guidelines.

    Note: Minimize dust generation during the operation.

9) Remove and bag PPE for cleaning or disposal at a licensed facility. Thoroughly wash potential skin contact locations after handling.

B.2 Ammonium Nitrate Fuel Oil

Proper storage, handling and disposal of ammonium nitrate fuel oil (ANFO) are an important first step in preventing spills and associated hazards.

The proper storage procedures are as follows:

- Use ANFO under the supervision of authorized trained personnel;
- Keep ANFO away from heat, sparks, and flames, as well as initiating explosives, oxidizing agents, combustibles, and other sources of heat; and
- Protect containers from physical damage and store them in dry, well ventilated conditions.

Explosives that have been identified as deteriorated or damaged need to be disposed of or destroyed. The appropriate method of disposal or destruction and subsequent course of action is determined by authorized personnel or the explosive supplier.

Transportation of explosives-related compounds and materials is in accordance with Section 14 of the *Mine Health and Safety Act* and associated regulations, and the *Transportation of Dangerous Goods Act*. Transport vehicles will be in sound mechanical condition and equipped with proper safety equipment. Loaded vehicles will not be left unattended, and only authorized personnel are responsible for the security of the explosives under their control.

The following is a general spill response procedure for ANFO. The following procedure does not apply to emulsions or other explosives. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For an **ANFO spill** (solid):

1) Isolate and evacuate the spill area.

2) **IF SAFE TO DO SO,** immediately extinguish any open flames and remove ignition sources (no smoking, flares, sparks in immediate area). **Fires involving large quantities of ANFO should not be fought.**

3) Contact the Incident Coordinator who will assemble ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

4) Put on appropriate personal protective equipment. For an ANFO spill this includes:

    a. Gloves as recommended by the SDS or glove manufacturer;

b. Protective eyeglasses or chemical safety goggles or face shield as recommended by the SDS;

c. Lab coat, coveralls or Tyvek™ coveralls as recommended by the SDS;

d. Shoe covers or rubber boots; and

e. Half mask air-purifying respirator with cartridges and/filters as recommended by the SDS or respirator manufacturer.

5) If the spill occurred outdoors, stay upwind and avoid low lying areas. Ventilate (open windows/doors to outdoors) closed spaces before entering. Ensure adequate explosion proof ventilation for cleanup.

6) Remove all sources of heat and ignition (no smoking, flares, sparks or flames in immediate area) and remove uncontaminated combustible materials and organic compounds (wood, paper, oil, etc.) from spill area.

7) Do not operate radio transmitters within 100 m of electric detonators.

8) For a spill on land, protect the spill area from water runoff by constructing a ditch or dike using suitable absorbent materials, soil or other appropriate barrier. For a spill to water, utilize damming, and/or water diversion to minimize the spread of contamination. ANFO dissolves quickly in water so the material should be covered up with a tarp if it is raining out and if cleanup is delayed. If an ANFO spill occurs on snow this area should be cleaned up as quick as possible as the ANFO will dissolve in the snow.

9) Collect, sweep or shovel spilled material and the other contaminated material/soil using non-metallic, spark-proof tools and place residue into a labelled plastic waste container (plastic pail with lid or double heavy duty plastic bags) for off-site disposal at a licensed disposal facility.

   Note: Recovered solid, if generally free from impurities, may be suitable for its intended use. In this case, place solid in suitable container with lid, and clearly label the container per WHMIS Guidelines.

   Note: The drums/containers/residues are to be stored in ventilated areas away from incompatible materials for eventual off-site disposal at a licensed disposal facility.

10) Remove and bag PPE for cleaning or disposal at a licensed disposal facility. After handling thoroughly wash potential skin contact locations with soap. Properly dispose of contaminated leather articles including shoes that cannot be decontaminated.

The following is a general spill response procedure for compressed gases. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a **compressed (inert and flammable) gas** leak:

1) **IF SAFE TO DO SO** and if it will stop the gas leak, turn off cylinder valve.

2) If the leak cannot be stopped by closing the cylinder valve and it is **an inert atmospheric gas** (e.g., nitrogen, carbon dioxide, etc.), isolate and evacuate the affected area. If the leak is a **flammable gas** and the leak is outside of a ventilated building enclosure that will contain the gas, immediately activate the fire alarm system and evacuate the area/building.

3) Contact the Incident Coordinator who will assemble ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

4) If possible and if safety permits, adjust leaking cylinder so that gas escapes rather than liquid.

5) If possible and if safety permits, eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area) and turn off electrical equipment.

6) If a spill has occurred outdoors, stay upwind and avoid low lying areas. If the spill has occurred inside a building, prevent spread of vapour throughout the building by closing doors to other rooms and hallways. If the room's air exchange system distributes air throughout the building, it may also be necessary to have it shut-down. Allow vapours to ventilate outdoors by opening windows and doors to the exterior.

7) Isolate area until gas has dispersed. Incident Coordinator to verify safe conditions.

APPENDIX D • GENERAL RESPONSE PROCEDURES FOR SPILLED FLAMMABLE OR COMBUSTABLE LIQUIDS

The following is a general spill response procedure for flammable or combustible liquids, particularly petroleum hydrocarbon products. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a spill of flammable or combustible petroleum hydrocarbon product (liquid):

1) Isolate and evacuate the spill area.

2) **IF SAFE TO DO SO**, immediately extinguishes any open flames and remove ignition sources (no smoking, flares, sparks in immediate area).

3) **IF SAFE TO DO SO**, stop leak and contain spill (**see Step 9**).

4) Contact the Incident Coordinator who will assemble ERT members if required and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

5) Put on appropriate PPE. Depending on the scale of the spill and properties of the spilled substance, this can include:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Splash goggles or face shield;

    c. Shoe covers or rubber boots;

    d. Lab coat or Tyvek™ coveralls; and

    e. Half mask air-purifying respirator with **organic vapour or combination cartridges**, or as otherwise recommended by the SDS or respirator manufacturer.

6) If the spill has occurred outdoors, stay upwind and avoid low lying areas. If the spill has occurred inside a building, prevent spread of vapour throughout the building by closing doors to other rooms and hallways. If the room's air exchange system distributes air throughout the building, it may also be necessary to have it shut-down.

7) Ventilate (open windows/doors to outdoors) closed spaces before entering. Ensure adequate explosion-proof ventilation for cleanup. A vapour suppressing foam or water spray may be used to reduce vapours.

8) Remove all sources of ignition (no smoking, flares, sparks or flames in immediate area) and combustible materials (wood, paper, oil, etc.) from within the spill area.

9) Contain spill by using spill absorbent, spill pads or pillows, soil or snow by constructing a dike that will limit flow and prevent entry to sewer, waterways or onto ice. For spills to land, excavation of trenches/pits to capture spill flow may also be appropriate. If possible, compact soil or snow dikes, and place plastic tarps over the dike and at its foot to allow the product to pool on the plastic for easy recovery.

   Note: Do not use paper towels to absorb spill as this increases the rate of evaporation and vapour concentration in the air.

   Note: Do not flush with water into drainage areas or ditches as this will spread spill.

   Note: Snow works well as a natural absorbent to collect and contain spilled petroleum hydrocarbons. However, its use in containing a spill will result in a water-contaminant mixture that may be more difficult to manage. It is important to scrape up the contaminated snow and ice as soon as possible.

10) Carefully cover the spill area with spill absorbent, spill pads, soil or snow, starting at the outside and working inward. Do not touch or walk through spilled material.

11) Sweep up or shovel the residue using non-metallic, spark-proof tools and place the residue into a labelled plastic waste container (plastic pail with lid or double heavy duty plastic bags). For larger spills to land, excavate impacted absorbent material and soil, place in lined and bermed temporary storage area or directly into sealed drums/containers.

   Note: The drums/containers/residues are to be stored in ventilated areas away from incompatible materials for eventual treatment at the on-site landfarm facility or off-site disposal at a licensed disposal facility. Electrically ground all containers and transporting equipment.

   Note: Larger pools of product may be pumped into empty storage tanks or drums.

12) If a spill is indoors, mop the affected area using detergent and water. Dispose of this water to drums for eventual off-site disposal at a licensed disposal facility. Spills to land may require further excavation or remediation of contaminated soil until acceptable soil quality is achieved. The Incident Coordinator and/or Environment Superintendent, or designate will assess this requirement.

13) For spills to water, immediately limit the area of the spill on water using absorbent pads and booms and similar materials to capture small spills on water. Deploy and slowly draw in absorbent booms to encircle and absorb the spilled product. Recover larger spills on water with floating skimmers and pumps, as required, and discharge recovered product to drums or tanks.

   Note: Petroleum hydrocarbons are generally hydrophobic, and as such, do not readily dissolves in water. They typically tend to float on the water's surface. Absorbent booms are often relied on to recover hydrocarbons that escape land containment and enter water.

   Note: Antifreeze sinks and mixes with water. If released to water, attempt to isolate/confine the spill by damming or diverting the spill. Pump contaminated water to tanks or drums.

14) Remove and bag PPE for cleaning, inform laundry personnel of contaminant hazards, or dispose at a licensed disposal facility. Thoroughly wash with soap potential skin contact locations after handling. Properly dispose of contaminated leather articles (including boots and shoes) that cannot be decontaminated.

E.1 Liquids

The following is a general spill response procedure for liquid oxidizer compounds. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a **liquid oxidizer** spill:

1) Isolate and evacuate the spill area.

2) **IF SAFE TO DO SO**, stop leak and contain spill (**see Step 8**).

3) Contact the Incident Coordinator who will assemble, if required, ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

4) Put on the appropriate PPE. Depending on the scale of the spill and properties of the spilled substance, this can include:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Splash goggles or face shield;

    c. Shoe covers or rubber boots;

    d. Lab coat, coveralls or Tyvek™ coveralls as recommended by the SDS; and

    e. Half mask air-purifying respirator with cartridges and/or filters as recommended by the SDS or respirator manufacturer.

5) Ventilate closed spaces before entering. Ensure adequate explosion-proof ventilation for cleanup.

6) Remove and/or moisten with water any combustible material (wood, paper, oil, etc.) affected by the spill.

7) Use water spray to reduce vapours or divert vapour cloud drift, if required.

8) Contain spill by using non-combustible spill absorbent, soil or snow to construct a dike that limits flow and prevents entry to sewer, waterways or onto ice. For spills to land, excavation of trenches/pits to capture spill flow may also be appropriate.

    Note: Flushing area with flooding quantities of water may also be appropriate assuming this does not make cleanup and waste management more difficult – refer to the SDS.

9) Carefully cover the spill area with chemical spill absorbent, soil or snow, starting at the outside and working inward. Use non-combustible absorbent. Do not touch or walk through spilled material.

10) Sweep up or shovel the spill residue using non-metal, non-sparking tools and place the residue into a labelled plastic waste container (plastic pail with lid or double heavy-duty plastic bags) for off-site disposal at a licensed disposal facility.

11) For indoor spills, mop the affected area using detergent and water. Flushing area with flooding quantities of water may also be appropriate – refer to the SDS. Dispose of this water to the sanitary sewer, process stream or waste drums as appropriate. Spills to land may require further excavation or remediation of contaminated soil until acceptable soil quality is achieved. The Incident Coordinator and/or Environment Superintendent or designate will assess this requirement.

12) Remove and bag PPE for cleaning, inform laundry personnel of contaminant hazards, or dispose at a licensed disposal facility. Thoroughly wash with soap potential skin contact locations after handling. Properly dispose of contaminated clothing that cannot be decontaminated.

E.2 Solids

The following is a general spill response procedure for solid oxidizer compounds. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a **solid oxidizer** spill:

1) Isolate and evacuate the spill area.

2) Contact the Incident Coordinator who will assemble, if required, ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

3) Put on the appropriate PPE. Depending on the scale of the spill and properties of the spilled substance, this can include:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Safety glasses or goggles;

    c. Lab coat; and

    d. Half mask air-purifying respirator with **N95 or greater protection** particulate filter or as recommended by the SDS or respirator manufacturer.

4) Remove all sources of heat and ignition (no smoking, flares, sparks or flames in immediate area) and remove uncontaminated combustible materials and organic compounds (wood, paper, oil, etc.) from spill area.

5) For spills to land, protect the spill area from water runoff by constructing a ditch or dike using suitable non-combustible absorbent materials, soil or other appropriate barrier. For spills to water, utilize damming and/or water diversion to minimize the spread of contamination.

6) Vacuum, sweep, or shovel the spill residue using non-metal, non-sparking tools, and place the residue into a labelled plastic container (plastic pail with lid or double heavy-duty plastic bags) for re-use or off-site disposal at a licensed disposal facility.

    Note: Recovered solid, if generally free from impurities, may be suitable for its intended use. In this case, place solid in suitable container with lid, and clearly label the container per WHMIS Guidelines.

    Note: Minimize dust generation.

7) If there is still oxidizer residue left in the spill area, neutralize with appropriate agent as recommended by the SDS, or for spills to land, continue to excavate until no visible spilled solid remains. Use non-combustible chemical spill absorbent or soil to absorb the neutralized residue. Place in suitable drums/containers for disposal at a licensed facility.

8) For indoor spills, mop the affected area using detergent and water. Dispose of this water to the sanitary sewer (if the quantity is not too large), process stream or waste drums as appropriate.

9) Remove and bag PPE for cleaning, inform laundry personnel of contaminant hazards, or dispose at a licensed disposal facility. Thoroughly wash with soap potential skin contact locations after handling. Properly dispose of contaminated clothing that cannot be decontaminated.

APPENDIX F • GENERAL RESPONSE PROCEDURES FOR SPILLED POISONOUS AND TOXIC SUBSTANCES

F.1 Sodium Cyanide

The following is a general spill response procedure for solid Sodium Cyanide.

For a **Sodium Cyanide (solid)** spill:

1) Isolate and evacuate the spill area.

2) Contact the Incident Coordinator who will assemble ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

3) Put on the appropriate PPE. Depending on the scale of the spill and properties of the spilled substance, this can include:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Safety glasses or goggles;

    c. Lab coat; and

    d. Half mask air-purifying respirator as recommended by the SDS or respirator manufacturer.

    Note: For worker safety, maintain readily accessible supply of cyanide antidote kits on-site.

4) Ventilate area of spill or leak.

5) Avoid exposure to acids, water or weak alkalis, which can react to form toxic Hydrogen Cyanide gas.

6) Contain spill to prevent release to sewer, waterway or onto ice. For spills to land, protect the spill area from water runoff by constructing a ditch or dike using absorbent materials, soil or other appropriate barrier. If raining, cover spill area with tarp or plastic to minimize contact with water and prevent subsequent runoff. For spill to water, utilize damming, and/or water diversion to minimize the spread of contamination.

7) Shovel the spilled material into labelled drums, containers or plastic bags for re-use or off-site disposal at a licensed disposal facility.

    Note: Recovered solid, if generally free from impurities, may be suitable for its intended use. In this case, place solid in suitable container with lid and clearly label the container per WHMIS Guidelines.

    Note: Minimize dust generation.

8) If there residue from the Sodium Cyanide spill remaining in the spill area, neutralize with appropriate agent **as recommended by the SDS** (Sodium or Calcium Hypochlorite solution), or for spills to land, continue to excavate until no visible spilled solid remains. Use suitable spill absorbent or soil to absorb the neutralized residue. Place in suitable drums/containers for disposal to a licensed facility. Collect material and place in a closed container for recovery or disposal.

9) For indoor spills, mop the affected area using detergent and water. Dispose of this water to waste drums/containers for disposal to a licensed facility.

10) Remove and bag PPE for disposal at a licensed disposal facility. Thoroughly wash with soap potential skin contact locations after handling. Properly dispose of contaminated clothing that cannot be decontaminated.

G.1 Acids, Liquids

The following is a general spill response procedure for liquid acid compounds. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a **liquid acid** spill:

1) Isolate and evacuate the spill area.

2) **IF SAFE TO DO SO**, stop leak and contain spill (**see Step 8**).

3) Contact the Incident Coordinator who will assemble, if required, ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

4) Put on appropriate PPE. Depending on the scale of the spill and properties of the spilled substance, this can include:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Splash goggles or face shield;

    c. Shoe covers or rubber boots;

    d. Lab coat or Tyvek™ coveralls; and

    e. Half mask air-purifying respirator with **acid gas or combination** cartridges, or as otherwise recommended by the SDS or respirator manufacturer.

5) If the spill has occurred outdoors, stay upwind and stay out of low areas. If the spill has occurred inside a building, prevent spread of vapour throughout the building by closing doors to other rooms and hallways. If the room's air exchange system distributes air throughout the building, it may also be necessary to have it shut-down.

6) Ventilate (open windows/doors to outdoors) closed spaces before entering.

7) Remove all sources of ignition (no smoking, flares, sparks or flames in immediate area).

8) Contain spill by using chemical spill absorbent, spill pads or pillows, or dry soil to construct a dike that limits flow and prevents entry to sewer, waterways or onto ice. For spills to land, excavation of trenches/pits to capture spill flow may also be appropriate. Ideally, use spill absorbent that contains a mild neutralizing agent as recommended by the SDS.

Note: Many acids, particularly concentrated acids, react violently in the presence of water. Do not flush spill area with water unless the SDS indicates acceptable.

Note: Nitric Acid reacts violently and explosively with organic chemicals and organic material such as wood, cotton and paper; therefore, do not use organic absorbent material on Nitric Acid.

Note: Hydrofluoric Acid will fume during neutralization. Provide adequate ventilation and approach from upwind. Neutralize carefully with Sodium Bicarbonate, soda ash or lime. Use water spray to disperse the gas/vapour if required. Remove all sources of ignition.

9) Carefully cover the spill area with chemical spill absorbent, spill pads or dry soil, starting at the outside and working inward. If practical, neutralize spill using SDS-recommended or commercially available neutralizers. Use pH indicator paper to determine if spill is neutralized (pH 7).

   Note: Use caution as neutralization reactions generate heat.

10) Sweep or shovel the neutralized spill residue using non-metal, non-sparking tools and place the residue into a labelled plastic waste container (plastic pail with lid or double heavy-duty plastic bags) for off-site disposal at a licensed disposal facility.

11) Check the pH of the spill area. If it is less than pH 6, then further neutralize with a dilute solution of a suitable reagent as identified on the SDS, or for spills to land, continue to excavate contaminated soil.

12) For indoor spills, mop the affected area using detergent and water. Dispose of this water to the sanitary sewer (if the quantity is not too large, process stream or waste drums as appropriate.

13) Remove and bag PPE for cleaning, inform laundry personnel of contaminant hazards, or dispose at a licensed disposal facility. Thoroughly wash with soap potential skin contact locations after handling. Properly dispose of contaminated clothing that cannot be decontaminated.

14) After the spill has been cleaned up, the area should be free of vapours. However, if personnel note odours or irritation, isolate the spill area, re-clean the area as per Steps 11 and 12 or wait at least 1 hour before re-entering or until considered safe by the Incident Coordinator or Environment Superintendent or designate.

G.2 Acids, Solids

The following is a general spill response procedure for solid acid compounds. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a **solid acid** spill:

1) Isolate and evacuate the spill area.

2) Contact the Incident Coordinator who will assemble, if required, ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

3) Put on the appropriate PPE. Depending on the scale of the spill and properties of the spilled substance, this can include:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Safety glasses or goggles;

    c. Lab coat; and

    d. Half mask air-purifying respirator with **N95 or greater protection** particulate filter, or as otherwise recommended by the SDS or respirator manufacturer.

4) Contain spill to prevent release to sewer, waterway or onto ice. For spills to land, protect the spill area from water runoff by constructing a ditch or dike using absorbent materials, dry soil or other appropriate barrier. If raining, cover spill area with tarp or plastic to minimize contact with water and prevent reaction and/or subsequent runoff. For spills to water, utilize damming, and/or water diversion to minimize the spread of contamination.

5) If necessary to minimize dust production, slightly moisten the solid. Use water, or if the material is water reactive, another inert liquid as recommended by the SDS.

6) Sweep up or shovel the residue using non-metallic, spark-proof tools and place the residue into a labelled plastic waste container (plastic pail with lid or double heavy-duty plastic bags) for reuse or off-site disposal at a licensed disposal facility.

    Note: Recovered solid, if generally free from impurities, may be suitable for its intended use. In this case, place solid in suitable container with lid and clearly label the container per WHMIS Guidelines.

7) Remaining solid acid residue may be neutralized using a dilute solution of appropriate agent as recommended by the SDS (e.g., Sodium Bicarbonate - baking soda) or, for spills to land

continue to excavate until no visible spilled solid remains. Check the pH of the spill area; the final pH should be between pH 6 and 10. Use spill absorbent, spill pads or dry soil to absorb the neutralized residue.

Note: Use caution as neutralization reactions generate heat.

8) For indoor spills, mop the affected area using detergent and water. Dispose of this water to the sanitary sewer (if the quantity is not too large, process stream or waste drums as appropriate.

9) Remove and bag PPE for cleaning, inform laundry personnel of contaminant hazards, or dispose at a licensed disposal facility. Thoroughly wash with soap potential skin contact locations after handling. Properly dispose of contaminated clothing that cannot be decontaminated.

G. 3 Bases/Alkali,Liquids

The following is a general spill response procedure for liquid alkali or base compounds. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a **liquid alkali or base** spill:

1) Isolate and evacuate the spill area.

2) **IF SAFE TO DO SO**, stop leak and contain spill (**see Step 8**).

3) Contact the Incident Coordinator who will assemble ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

4) Put on the appropriate PPE. Depending on the scale of the spill and properties of the spilled substance, this can include:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Splash goggles or face shield;

    c. Shoe covers or rubber boots;

    d. Lab coat or Tyvek™ coveralls; and

    e. Half mask air-purifying respirator with cartridges/filters as recommended by the SDS or respirator manufacturer.

5) If the spill has occurred outdoors, stay upwind and stay out of low areas. If the spill has occurred inside a building, prevent spread of vapour throughout the building by closing doors to other rooms and hallways. If the room's air exchange system distributes air throughout the building, it may also be necessary to have it shutdown.

6) Ventilate (open doors/windows to outdoors) closed spaces before entering.

7) Remove all sources of ignition (no smoking, flares, sparks or flames in immediate area) and combustible materials (wood, paper, oil, etc.).

8) Contain spill by using spill absorbent, spill pads or pillows, or dry soil to construct a dike that limits flow and prevents entry to sewer, waterways or onto ice. For spills to land, excavation of trenches/pits to capture spill flow may also be appropriate. Ideally, use chemical spill absorbent that contains a mild neutralizing agent as recommended by SDS.

Note: Use caution as neutralization reactions generate heat.

9) Carefully cover the spill area with chemical spill absorbent, spill pads or dry soil, starting at the outside and working inward. If practical, neutralize spill using SDS-recommended or commercially available neutralizers. Use pH indicator paper to determine if spill is neutralized (pH 7).

   Note: Use caution as neutralization reactions generate heat.

10) Sweep or shovel the neutralized spill residue using non-metal, non-sparking tools and place the residue into a labelled plastic waste container (plastic pail with lid or double heavy-duty plastic bags) for off-site disposal at a licensed disposal facility.

11) Check the pH of the spill area. If it is greater than pH 10, then further neutralize with a dilute solution of a suitable reagent as identified on the SDS, or for spills to land, continue to excavate contaminated soil.

12) For indoor spills, mop the affected area using detergent and water. Dispose of this water to the sanitary sewer (if the quantity is not too large, process stream or waste drums as appropriate.

13) Remove and bag PPE for cleaning, inform laundry personnel of contaminant hazards, or dispose at a licensed disposal facility. Thoroughly wash with soap potential skin contact locations after handling. Properly dispose of contaminated clothing that cannot be decontaminated.

14) After the spill is cleaned up, the area should be free of vapours. However, if personnel note odours or irritation, isolate the spill area, re-clean as per Steps 11 and 12 or wait at least 1 hour before re-entering or until it is considered to be safe by the Incident Coordinator or Environment Superintendent or designate.

G.4 Bases/Alkali,Solids

The following is a general spill response procedure for solid alkali or base compounds. Consult the SDS for the specific spilled compound to determine whether deviations from the general guidance are required.

For a **solid alkali or base** spill:

1) Isolate and evacuate the spill area.

2) Contact the Incident Coordinator who will assemble, if required, ERT members and the appropriate spill response materials outside the spill area. **Obtain and read the SDS** for the substance to determine the chemical-specific hazards and to identify any special precautions that must be taken.

3) Put on the appropriate PPE. Depending on the scale of the spill and properties of the spilled substance, this can include:

    a. Gloves as recommended by the SDS or glove manufacturer;

    b. Safety glasses or goggles;

    c. Lab coat; and

    d. Half mask air-purifying respirator with **N95 or greater protection** particulate filter or as recommended by the SDS or respirator manufacturer.

4) Contain spill to prevent release to sewer, waterway or onto ice. For spills to land, protect the spill area from water runoff by constructing a ditch or dike using absorbent materials, dry soil or other appropriate barrier. If raining, cover spill area with tarp or plastic to minimize contact with water and prevent reaction and/or subsequent runoff. For spills to water, utilize damming, and/or water diversion to minimize the spread of contamination.

5) If necessary to minimize dust production, slightly moisten the solid. Use water or, if the material is water reactive, another inert liquid as recommended by the SDS.

    Note: Do not use water to flush bases in powdered form, such as Calcium Oxide (lime), as this material is not very soluble.

6) Sweep or shovel the residue using non-metallic, spark-proof tools and place the residue into a labelled plastic waste container (plastic pail with lid or double heavy-duty plastic bags) for off-site disposal at a licensed disposal facility.

    Note: Recovered solid, if generally free from impurities, may be suitable for its intended use. In this case, place solid in suitable container with lid and clearly label the container per WHMIS Guidelines.

7) Remaining solid alkali or base residue may be neutralized using a dilute solution of appropriate acid. Check the pH of the spill area; the final pH should be between pH 6 and 10. Use chemical spill absorbent, spill pads or dry soil to absorb the neutralized residue.

8) For indoor spills, mop the affected area using detergent and water. Dispose of this water to the sanitary sewer (if the quantity is not too large, process stream or waste drums as appropriate.

9) Remove and bag PPE for cleaning, inform laundry personnel of contaminant hazards, or dispose at a licensed disposal facility. Thoroughly wash with soap potential skin contact locations after handling. Properly dispose of contaminated clothing that cannot be decontaminated.

The following is a general spill response procedure for saline water. It must be noted that the location and volume of the spill will dictate the types of mitigation practices that will occur.

For a spill of saline water:

1) When the leak detection system is triggered, confirm the location of the leak and shut down the waterline
2) Suspend discharge from a waterline if a leak has been identified until the leak is resolved
3) Isolate the spill area.
4) **IF SAFE TO DO SO**, stop leak and contain spill **(see step 7)**.
5) Contact the Incident Coordinator who will assemble ERT members if required and the appropriate spill response materials outside the spill area.
6) Put on standard PPE;
    a. Nitrile gloves
    b. Protective eyeglasses
    c. Safety boots
    d. Hard hat
    e. High Visibility Clothing
7) For saline spills to land, the mitigation techniques will depend on the location and quantity of the spilled material. These will be divided into 3 general locations with each location having specific requirements:
    a. Spills at the Meladine Mine Site
        - Saline spills on the Meladine Mine Site will be cleaned up or mitigated depending on the quantity and the location that a spill occurs. If a saline spill occurrs in an area that could potentially impact the water quality of a water body such as CP1 or Meladine Lake then the spill will be mitigated such that no saline water enters these water bodies. If there is concern that leaching from the spill may cause an impact to the water then the contaminated soil may be removed and placed into the Waste Rock/Overburden Facilities where the potential leachate is collected at CP4. The effluent from CP4 can then be treated at one of the existing treatment facilities.
        - Saline spills on the Meladine Mine site which occur at a location which does not have a negative impact may not be cleaned up. For instance a spill which occurs upstream of the P area will not cause an impact to the site as any leachate generated will flow towards the P area and this effluent can then be treated by one of the existing

treatment facilities.

- Since Calcium Chloride ($CaCl_2$) is one of the accepted dust suppressants that is used on site, a small amount of Saline Water that is spilled on the ground should not cause an impact to the site provided that the water does not leave the site or enter a water body which could be impacted. Saline water will have a lower Total Dissolved Solids (TDS) and $CaCl_2$ composition than the dust suppresant which is presently used.

b. Spills on the AWAR and/or Bypass Road

- Calcium Chloride and water is approved to be used on the AWAR as a dust suppressant during the summer months. If there is a spill of saline water that is being trucked to Itivia on the AWAR, the location and magnitude of the spill will determine the mitigation techniques deployed. For instance, if the spilled saline water stayed on the road or if there was no chance of impacting surface water the cleanup process may be more detrimental to the environment than leaving it as is. If a spill occurred close to Nipissar Lake, then every effort should be made to contain the spill and minimize impact to the lake. This is reviewed on a case-by-case basis and decided by the Environmental Superintendent or designate.

c. Spills on the AWAR and/or Bypass Road due to Waterline Leak

- In the case of accidental spills or leaks from the waterlines appropriate procedures for collecting spilled product (e.g., vacuum recovery, or removal of any affected standing water combined with flushing in the summer with freshwater) will be employed to avoid any detectable environmental change.
- During operations regular internal visual inspections of the above ground waterline with a special attention to water crossings.
- To be protective to caribou, any notification from the leak detection system would result in an immediate shutdown of that waterline, when caribou are in the vicinity of the AWAR, until it can be confirmed whether a leak has occurred.
- Additional measures to prevent caribou from accessing the area would depend on the time of year and extent of spill but regardless of the degree, the area would be isolated until it is safe for caribou to return.

d. Spills at Itivia during saline effluent release into Melvin Bay

- If there is a spill of saline effluent during the release to Melvin Bay the location and magnitude of the spill will determine mitigation techniques deployed. If the spilled saline water is flowing to Melvin Bay, then mitigation techniques should be applied to stop the discharge of the water. In addition, techniques should be applied to slow the flow of the water and to try to contain the water from entering the Bay. It is not believed that the saline effluent will cause an impact to the water in the Bay rather it is the sediment which may be picked up as the water flows into the Bay. It is imperative that the velocity of the flow be mitigated such that minimal erosion occurs from the spill. To cleanup, saline effluent which has not been released into Melvin Bay is reviewed on a case-by-case basis and decided by the Environmental

Superintendent or designate

8) If a saline spill occurs on land which may have a detrimental impact to the land or any nearby water bodies then the spill should be contained using; spill absorbents, spill pads or pillows, dike construction (made of soil or snow), or excavation of trenches/pits to capture spill. If possible, compact soil or snow dikes, and place plastic tarps over the dike and at its foot to allow the product to pool on the plastic for easy recovery. The first priority is to limit saline water entry into ditches, freshwater systems or onto ice (if saline water enters a freshwater system see step 12). After all pathways from the spill to surrounding freshwater systems, ditches and ice are controlled, contain the other areas of the spill.

   Note: Do not flush with water into drainage areas or ditches, as this will spread spill.

   Note: It is important to scrape up the contaminated snow and ice as soon as possible.

9) If there is a large quantity of saline water and it has been captured in dykes, trenches etc. then it may be possible to collect the water with the vacuum truck. This water will then be discharged to one of the ponds such as SP1, SP2, or P3. If the volume of saline water is not substantial then the spilled area may be cleaned up using spill absorbents, spill pads, soil or snow, starting at the outside and working inward. Do not touch or walk through spilled material.

10) Sweep up or shovel the residue into a labelled plastic waste container (plastic pail with lid or double heavy-duty plastic bags). For larger spills to land, excavate impacted absorbent material and soil, place in lined and bermed temporary storage area or directly into sealed drums/containers. This solid material may also be placed into the Waste Rock/Overburden Facility such that any leachate that is generated will be captured in CP4 and may be treated in one of the Treatment Facilities.

    Note: Larger pools of product may be pumped into empty storage tanks or drums and taken to SP1, SP2 or P3 if appropriate.

11) Spills to land may require further excavation or remediation of contaminated soil until acceptable soil quality is achieved. The Incident Coordinator and/or Environment Superintendent or designate will assess this requirement.

12) For spills to water, a follow up study will be performed if deemed necessary by the Environmental Superintendent or designate. Post spill monitoring will be dependent upon volume of substance spilled, size of freshwater system affected and presence/ absence of fish. If the spill is believed to have caused an impact then water samples will be taken upstream and downstream of the incident to confirm any potential impact.

Act	Regulation	Guideline
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)	CCME - 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)		
Migratory Birds Convention Act (1994 c.22)	*Migratory Birds Regulations* (C.R.C., c. 1035)	
Canada Water Act (1985 c.11)		
Arctic Waters Pollution Prevention Act (R.S.C., 1985, c. A-12)		
Canada Shipping Act, 2001 (S.C. 2001, c. 26)	*Response Organizations and Oil Handling Facilities Regulations* (SOR/95-405)	
Navigable Waters Protection Act (R.S. 1985 c. N-22)	*Navigable Waters Works Regulations* (C.R.C., c. 1232) *Navigable Waters Bridges Regulations* (C.R.C., c. 1231)	
Marine Liability Act (A.C. 2001, c.6)	*Marine Liability Regulations* (SOR/2002-307)	
Fisheries Act (1985, c. F-14)	*Metal and Diamond Mining Effluent Regulations* SOR/2002-2222)	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
Transport of Dangerous Goods Act (1992, c. 34)	*Transportation of Dangerous Goods Regulations* (SOR/2001-286)	

Act	Regulation	Guideline
Explosives Act (1985 c.E-17)	*Ammonium Nitrate and Fuel Oil Order* (C.R.C., c. 598)	
	Explosives Regulations (C.R.C., c. 599)	
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)		
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., c. 1524) *Territorial Quarrying Regulations* (C.R.C. c. 1527)	
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)	
N*unavut Land Claims Agreement Act* (1993, c. 29)		
Territorial		
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 will require the registration with the Government of Nunavut, Department of Environment as a waste generator as well as carrier (if applicable) prior to transport.]	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

Act	Regulation	Guideline
		Paint Guideline for the Management of Waste Solvents Guideline for Industrial Projects on Commissioner's Land
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 (RSNTW (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) *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)	

Act	Regulation	Guideline
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) *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)	

Act	Regulation	Guideline
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)	

AGNICO EAGLE

Mock Spill Itivia 2019

AEM, Meliadine project

2019/07/15

Authored by Daphne Morin

Reviewed by Bethany Hodgins & Terry Ternes

INTRODUCTION

On July 12, 2019 the Agnico Eagle Environment Department conducted a mock spill event at the Itivia refueling station and tank farm as per regulation. A representative of Agnico Eagle emergency response (ERT), Agnico Eagle warehouse staff, Agnico Eagle environment staff, Petro-Nav Inc. ships captain, Intertek personnel, Sarliaq operators and the Rankin Inlet Fire Chief and crew attended the event.

The mock spill verbal scenario involved a compromised expansion joint. The broken expansion joint is exterior to the fuel tank containment berm. The fuel leaked 10 liters per minute for 50 minutes, for a total of 500 L of diesel spilled. Without spill intervention, this volume of diesel would be a hazard to Melvin Bay. Generally, expansion joints are identified as one of the weakest points on a welded fuel line. There is high potential that a small leak, such as this scenario, would not be detected as a pressure drop at the ship. Intertek completes hourly inspections of the fuel line; it is feasible that a spill of this caliber could go undetected for 50 minutes.

Figure 1 - Discussion of the Contents in the Emergency Sea Cans

PRESENTATION OF MATERIAL AND RECOMMENDATIONS PRIOR TO VERBAL SCENARIO

11:15 The Environment Department reviewed the contents of the sea cans and it was found that the First Aid Kit and one sledgehammer were missing. These items have since been replaced.

15:20 All attendees were welcomed and the event was initiated.

15:26 The Environment General Supervisor explained all the equipment available in the sea cans. The following items were reviewed with attendees:

- Floating Hydrocarbon Booms
- Hydrocarbon Rolls
- Hydrocarbon Pads
- Lined Quatrex Bags
- Empty 205 L TDG drums
- Spill Trays
- Personal Protective Equipment
- Oil Skimmer
- Containment Booms
- Hand Tools

Figure 2 - Review of Items in the Emergency Sea Cans

15:39 Intertek proposed to leave the seacans open during fuel transfer and asked for the sea cans to be closer to potential spill origins. They also requested the sea cans to be turned towards the shore, this would ensure a fast response if needed. Agnico Eagle will leave the sea cans open during the fuel offloading and will evaluate alternate locations for the sea cans.

15:40 Intertek requested to pump out the water from the berm situated under the main valve to prevent overflowing. This was completed and a rain cover is to be installed.

15:42 The Environment General Supervisor asked for Intertek and ship personnel to have radios programed with Meliadine channels. This will ensure rapid communication when needed. This action item has been communicated to the Energy and Infrastructure Department (E&I). E&I will supply a radio to Intertek but not to the boat, as Intertek and the boat will have their own internal radio communication.

16:00 Intertek suggested to revisit the position of the marine boom sea can. They would prefer the sea can is closer to shore. This will help responders deploy the marine boom efficiently.

16:03 The Environment Coordinator informed the group the marine boom sea can was placed using a crane and may need to be moved in winter when the ground is frozen. This request has been communicated to E&I, who are assessing the feasibility of relocating the sea can.

MOCK DRILL VERBAL SCENARIO

16:07 Spill occurs (500 L of leaking fuel on the road). An Intertek personnel spotted the incident.

16:08 Intertek personnel called the ship's captain and requested an emergency stop of fuel transfer. Intertek called "CODE 1" to Rankin Inlet dispatch and requested environmental personnel to contact ERT on the radio for assistance. ERT indicated that it would be a minimum

of 1 hour to mobilize the Meliadine ERT to Melvin Bay. Due to the sensitive time frame, calls would be made to the contractors in Rankin Inlet to secure additional help.

16:12 Intertek stated they would attempt to dig a trench to contain the spill in the area contaminated, to avoid fuel flowing into the bay. It was noted the ground was very hard and manual digging may not be possible. It would be beneficial to have a pallet of full sand bags to create a berm when needed. Agnico Eagle will evaluate this option.

16:20 Intertek called warehouse for equipment to assist with spill containment such as an excavator. It was brought to the group's attention that wires or pipes may be installed under the road. It would be valuable to have an as-built plan of the area. No trenching is to occur if there is a chance of hitting a buried line. It was noted that a loader is in close proximity to Itivia, loose material from the area could be collected and a berm constructed that would minimize any fuel movement.

16:25 Mark Wyatt Rankin Inlet Fire Chief informed the group the fire department is available at all times for assistance. They can be reached at 867-645-2525. Local contractors can be called to assist with equipment and labor if required.

16:26 Richard Connolly from Sarliaq informed the group there is a Sarliaq security individual present at Itivia beach 24/7 during the summer. They are located in the blue gatehouse and are available to help with spill response. Sarliaq could potentially supply some equipment and labor on short notice.

16:30 The verbal scenario was concluded, it was determined all group members had a sufficient understanding of the roles responsibilities of all spill responders.

16:33 Terry Ternes reviewed the environmental ship to shore procedure with the group.

ACTIONS ITEMS

- Sea cans to be moved closer to potential spill origins and turned towards the shore. This is to be evaluated by Agnico Eagle; the best location for sea cans will be determined.
- Pump out the water under the main valve containment berm, this action item has been completed.
- Radios to be program with Meliadine channels for Intertek and ship. It was decided that only Intertek needs a radio as Intertek communicates to the boat on different channels. E&I to supply radio to Intertek.
- Marine boom sea can to be moved closer to shore if possible. This will allow better access for the marine booms to be attached to a boat and pulled into the Melvin Bay. This will be evaluated by Agnico Eagle.
- Add a pallet of full sand bags to emergency spill sea cans. This will be evaluated by Agnico Eagle.
- Have an as-built plan of Itivia Area area available. This will be evaluated by Agnico Eagle.
- Respond to Intertek questions;

  – Have the expansion values and pressure been tested? If they have been tested was a pig put in the line to check if they are in working condition? Intertek noted the lines sounded empty, but they believe it should be full. These items will be discussed by E&I and Intertek.

  - How is the maximum capacity of a tank monitoring during fuel transfer?
  - Who is going to manipulate the valves? Intertek will manipulate the valves according to their contract.
- Follow up with Sarliaq if Agnico Eagle would like to rent stand lights for fuel transfers. Logistics indicated that there are light towers at the Itivia Yard that can be used if there is a spill.

Figure 3 – Marine Boom Use Review

Figure 4 – Discussion of Mock Spill

Figure 5 – Demonstration of Quatrex Bag Set-Up

AGNICO EAGLE
MELIADINE

Mock Spill Training Event

LOCATION : Itivia **DATE :** July 12 2019

MEETING (DÉTAILS) :

NAMES (PRINT)	SIGNATURE	NAMES (PRINT)	SIGNATURE
Bethany Hodgins	B Hodg		
Dan Gorton	[illegible]		
STEVE EASTERBY	[illegible]		
Richard Nakoolak	[illegible]		
Kieran Connelly	[illegible]		
Damon Wilcox	[illegible]		
[illegible] Makpah	[illegible]		
Simeon Dion	[illegible]		
Chris Connelly	[illegible]		
Leo Kaludjak	[illegible]		
MARVIN DION	[illegible]		
CHRYSTIAN DAVIAN	Chrys [illegible]		
Mario Bonentant	[illegible]		
MARK WYATT	[illegible]		
PAM PILAKAPSI	Pamela [illegible]		
OZZY INNUKSHUK	OZZY INNUKSHUK		
QAMAK ECCLES	Qaumak Eccles		
GAVIN MACKENZIE	Gavin Mackenzie		
Terry Teers	[illegible]		
Daphné Morin	Daphné Morin		

Emergency Contact Numbers

Last update: Jan 15, 2017 Version D

Radio: Channel 1; call "CODE 1, CODE 1, CODE 1"

AGNICO EAGLE
MELIADINE

Agnico-Eagle Mines (AEM) Meliadine Project
25 km north-north-west of Rankin Inlet
63.027400 (N), - 92.171700 (W) (Helipad)

Meliadine Site Telephone Number: **819-759-3555**
Rankin Office: (Ext:3199) 867-645-2920

Onsite Health Care Professional: 3911

Medical Emergency		
Rankin Inlet Health Center Head Nurse: Gracy Dcunha	Monday - Friday 8h30 to 17h00 AFTER HOURS EMERGENCY	**(867) 645-8300** **(867) 645-6700**
Rankin Inlet Ambulance Service (Fire Dept.)	**Emergency**	**(867) 645-2525**
Rankin Inlet Search and Rescue		(867) 645-3300
& Poison Control Centre (Qikiqtani General Hospital, Iqaluit)	Emergencies General inquiries	(867) 979-7350 (867) 979-7300
Law Enforcement, Rescue, Wildlife		
RCMP in Rankin Inlet (Death on camp or for Search & Rescue) (0123 = General Information, 1111 for emergency, 24H)		(867) 645-1111 (867) 645-0123
Workers' Safety and Compensation Commission (WSCC) Mine Inspector: Lex Lovatt		(800) 661-0792 **Hot Line** (867) 920-3849
Coroner		(867) 975-7292 (867) 975-1063 cell
Conservation & Wildlife officer in Rankin Inlet Officer Johanne Coutut Autut		(867) 645-8084 (867) 645-8085
Hazmat & Spills		
CANUTEC		(613) 996-6666
Spills Hotline	Phone	(867) 920-8130
Agnico-Eagle Mines (AEM)		
Program Manager: Martin Plante martin.plante@agnico-eagle.com	Office	(819) 759-3555 ext:4608058 (819)
Others		
Health & Safety Superintendent: Dominic Richard dominic.richard@agnicoeagle.com Environment Superintendent: Nancy Harvey nancy.harvey@agnicoeagle.com Human Resources Superintendent : Sandra Marseille sandra.marseille@agnicoeagle.com		(819) 856-4104 Cell (819) 856-4385 Cell (819) 860-3723 Cell
FM Radio Frequencies		
Channel 1 – CAMP (Emergency call Channel)		Rx & Tx: 167.43000
Channel 2 – CONSTRUCTION		Rx & Tx: 163.32000
Channel 3 – EXPLORATION		Rx: 163.57500 Tx: 168.70500
Channel 8 – ROAD Meliadine		Rx: 162.54000 Tx: 165.57000
Channel 9 – ROAD Rankin		Rx: 162.66000 Tx: 167.64000
Channel 10 – UG OPERATION		
Channel 11 – UG Spare		

MDMER Cross-reference table for section 30(1) to 30(5)

MDMER reference	Information required	Location of information in this emergency plan
s. 30(1)	The owner or operator of a mine shall prepare an emergency response plan that describes the measures to be taken in respect of a deleterious substance within the meaning of subsection 34(1) of the Act to prevent any unauthorized deposit of such a substance or to mitigate the effects of such a deposit.	- Spill Contingency Plan
s. 30(2)	The emergency response plan shall include the following elements:	
s. 30(2)(a)	the identification of any unauthorized deposit that can reasonably be expected to occur at the mine and that can reasonably be expected to result in damage or danger to fish habitat or fish or the use by man of fish, and the identification of the damage or danger;	- Spill Contingency Plan Section 3
s. 30(2)(b)	a description of the measures to be used to prevent, prepare for, respond to and recover from a deposit identified under paragraph (a);	- Spill Contingency Plan Section 4 and 5
s. 30(2)(c)	a list of the individuals who are to implement the plan in the event of an unauthorized deposit, and a description of their roles and responsibilities;	- Spill Contingency Plan Section 5 table 5-2
s. 30(2)(d)	the identification of the emergency response training required for each of the individuals listed under paragraph (c);	- Spill Contingency Plan Section 8
s. 30(2)(e)	a list of the emergency response equipment included as part of the plan, and the equipment's location; and	- Spill Contingency Plan Section 7
s. 30(2)(f)	alerting and notification procedures including the measures to be taken to notify members of the public who may be adversely affected by a deposit identified under paragraph (a).	- Spill Contingency Plan Section 5.11
s. 30(3)	The owner or operator shall complete the emergency response plan and have it available for inspection no later than 60 days after the mine becomes subject to this section.	- Spill Contingency Plan
s. 30(4)	The owner or operator shall update and test the emergency response plan at least once each year to ensure that the plan continues to meet the requirements of subsection (2).	- Spill Contingency Plan Appendix I
s. 30(4.1)	The owner or operator of a mine shall, each time the emergency response plan is tested, record the following information	- Spill Contingency Plan Appendix I

	and keep the record for at least five years: (a) a summary of the test; (b) the test results; and (c) any modifications that are made to the plan as a consequence of the test.	
s. 30(4.2)	The owner or operator of a mine shall ensure that a copy of the most recent version of the emergency response plan is kept at the mine in a location that is readily available to the individuals who are responsible for implementing the plan.	- Spill Contingency Plan Sent to all people and available on the Public server
s. 30(5)	If a mine has not been subject to the requirements of this section for more than one year, a new emergency response plan shall be prepared and completed no later than 60 days after the day on which the mine again becomes subject to this section.	N/A