AGNICO EAGLE

MELIADINE GOLD MINE

Hazardous Materials Management Plan

November 2021
VERSION 6_NIRB

ᓇᐃᓈᖅᓯᒪᔪᖅ

ᐊᕙᑎᒧᑦ ᐊᒻᒪ ᐱᖁᑎᓄᑦ ᐊᖓᔪᖅᑳᖅ ᓯᕗᓪᓕᖅᐸᐅᑉᓗᓂ ᐱᔭᒃᓴᐅᑎᖃᕐᓂᐊᖅᑐᖅ ᑲᒪᒋᖃᑦᑕᕐᓗᒋᑦ ᐱᔭᐅᓂᖏᓐᓄᑦ, ᖃᐅᔨᓴᐃᓂᕐᓄᑦ, ᐊᒻᒪ ᑎᑎᕋᐅᓯᐅᓂᖏᓐᓄᑦ ᐱᖁᑎᒋᔭᐅᔪᒃᑖᑦ ᐃᓂᐅᔪᒥᑦ. ᐊᕕᒃᑐᖅᓯᒪᔪᓂᑦ ᐊᐅᓚᑦᑎᔨᐅᔪᑦ ᐋᖅᑭᒃᓱᖃᑦᑕᕐᓂᐊᖅᑕᖏᑦ ᑲᑎᓗᒃᑖᖅᓱᒋᑦ ᑎᑭᓴᖅᑕᐅᔪᑦ. ᖃᑉᓯᐅᓂᖏᑦ ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᐱᔭᐅᔪᑦ, ᐊᑐᖅᑕᐅᔪᑦ, ᐊᒻᒪ ᐱᔭᐅᓯᒪᔪᑦ ᐱᓕᕆᔨᐅᔪᓄᑦ ᑎᑎᕋᐅᓯᐅᖃᑦᑕᕐᓂᐊᖅᑐᑦ ᐊᕕᒃᑐᖅᓯᒪᔫᑎᖓᓄᑦ.

ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᐱᔭᐅᔮᖓᓚᑕ ᐱᓕᕆᕝᕕᐅᔪᒥᑦ, ᒪᓕᒐᖀᒃᑲᓐᓃᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᑦ. ᑲᓇᑕᒥᑦ *ᐱᓕᕆᕝᕕᖕᒥᑦ ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᓄᑦ ᑐᑭᓯᐅᒪᔾᔮᑎᓄᑦ ᐋᖅᑭᐅᒪᔪᖅ ᐊᑎᓕᖅᑐᐃᑦᑎᐊᖃᑦᑕᕐᖁᔨᔪᖅ ᐱᖁᑎᓂᒃ,*

ᒪᓂᒪᓂᖓᓂᒃ ᐱᖁᑎᒋᔭᐅᔪᖅ ᑕᑕᑎᕆᐊᓕᖕᒥᑦ ᐊᑐᖅᑕᐅᔪᑦ ᐊᑦᑕᕐᓇᖅᑐᖃᙱᓐᓂᕐᒧᑦ ᓈᓴᐅᑎᓄᑦ/ᑎᑎᖅᑲᓄᑦ ᐊᓕᓚᔪᕐᒧᑦ (MSDS)-ᖑᓂᕋᖅᑕᐅᔪᕐᒧᑦ, ᐊᒻᒪ ᐱᓕᕆᔾᔨᐅᔪᑦ ᐊᔾᔨᖕᓃᖅᓴᖅᑕᐅᓯᒪᓂᖏᓐᓄᑦ ᖃᓄᖅ ᐃᓕᑕᖅᓯᓂᕐᒧᑦ ᐊᒻᒪ ᑲᒪᔭᖃᕆᐊᖃᕐᓂᐅᔪᓂᒃ ᐅᓗᕆᐊᓇᖅᑐᓂᒃ. ᐊᒡᓃᑯᒃᑯᑦ ᒪᓕᒃᑕᐅᔭᕆᐊᖃᖅᑐᓕᐅᕐᓂᐊᖅᑐᑦ ᐱᓂᐊᕐᓗᑎᒃ MSDS-ᒥᒃ ᓄᑖᓄᑦ ᐱᖁᑎᓄᑦ ᐊᒡᔭᖅᑐᖅᑕᐅᔪᓄᑦ, ᑲᒪᒋᓗᒍ ᒫᓐᓇᐅᔪᖅ MSDS (ᓲᕐᓗ, ᐱᖓᓱᑦ ᐅᑭᐅᑦ ᐅᖓᑖᓄᑦ ᓄᑕᐅᙱᑎᑎᔪᖅᑕᖃᙱᓪᓗᓂ), ᐊᒻᒪ ᒪᓂᒪᑎᓪᓗᒋᑦ ᐱᓕᕆᔾᔪᒃᑖᓄᑦ. ᐱᐅᖏᑦᑐᑦ ᓇᒧᙵᐅᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᖃᐅᔨᒪᔭᐅᓂᐊᕐᓂᖏᓐᓄᑦ ᐋᖅᑭᐅᒪᔪᕐᒥᑦ ᓴᖅᑭᑎᓂᐊᕐᒥᔪᑦ.

ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᓗᒃᑖᑦ ᑐᖅᑯᖅᑕᐅᓯᒪᓂᐊᖅᑐᑦ ᒥᐊᓂᖅᓯᓂᖃᖅᑐᒥᑦ ᐱᓕᕆᐊᖑᕐᖁᓇᒋᑦ, ᐊᒻᒪ ᐱᑎᑕᐅᔪᖕᓇᙱᑦᑐᓄᑦ ᐱᓕᕆᔾᔪᓄᑦ ᐱᔭᐅᕐᖁᓇᒋᑦ. ᐃᑲᔪᕐᓗᒍ ᐳᔪᕐᓗᒃᑕᖅᑕᐃᓕᑎᑦᑎᓂᖅ, ᐊᒡᓃᑯᒃᑯᑦ ᓴᖅᑭᑦᑎᓂᐊᖅᑐᑦ ᒪᓕᒃᑕᐅᔪᒃᓴᓂᒃ ᖃᐅᔨᓴᐃᖃᑦᑕᕐᓂᕐᒧᑦ ᑐᖅᑯᖅᓯᓯᒪᕝᕕᖕᓂᑦ ᐊᒻᒪ ᐃᒡᓗᕐᔪᐊᓇᐅᔭᐅᔪᓂᒃ. ᐋᖅᑭᐅᒪᙱᑦᑐᒥᒃ ᖃᐅᔨᔭᐅᔪᖃᖅᐸᑦ, ᐋᖅᑭᒋᐊᖅᓯᓂᐊᖅᑐᑦ ᐊᒻᒪ ᑎᑎᕋᖅᓯᐅᓗᑎᒃ.

ᐊᑐᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᐊᒃᑕᑯᙳᖅᑐᑦ ᑐᖅᑯᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪ/ᐅᕝᕙᓘᓐᓂᑦ ᐃᒋᑕᐅᓗᑎᒃ ᒪᓕᒡᓗᒋᑦ ᑕᒪᒃᑯᓄᙵ ᒐᕙᒪᒃᑯᑦ ᒪᓕᒐᕋᖏᓐᓂᒃ ᐊᒻᒪ ᒪᓕᒃᑕᐅᔭᕆᐊᖃᖅᑐᓂᑦ. ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᒋᐊᖃᖅᑕᖅᑐᑦ ᐊᐅᓚᓂᖏᓐᓂᒃ ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᒃᑕᑰᖅᑕᐅᔪᑦ, ᔭᓄᓈᑕᒥᙶᖅᓗᑎᒃ ᑭᖑᓪᓕᖅᐹᒃᑯᑦ ᐃᒋᑕᐅᓂᖏᓐᓄᑦ, ᐊᑐᖅᓗᑎᒃ ᓇᒧᙵᐅᓂᖏᓐᓄᑦ ᖃᐅᔨᒪᔭᐅᓂᕐᒧᑦ ᑎᑎᖅᑲᒥᒃ ᑕᐃᔭᐅᔪᖅ ᐊᒃᑕᑰᖅᑕᐅᔪᓕᕆᔾᔪᑎ. ᑕᐃᒪᓐᓇᒧᑦ, ᐊᒃᑕᑰᖅᑕᐅᔪᓕᕆᔾᔪᑎ ᐃᓚᐅᖃᑦᑕᕐᓂᐊᖅᑐᖅ ᓅᓐᓂᓇᔭᕐᒥᑦᑕ

ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᒃᑕᓘᖅᑕᐅᔪᑦ ᑖᑉᓱᒧᖓ ᐱᓕᕆᐊᕐᒧᑦ.

ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᒃᑕᓘᖅᑕᐅᔪᑦ ᐃᑎᕕᐊᓂ ᑐᓚᒃᑕᕐᕕᖕᒥᑦ ᑲᖏᖅᓯᓂᕐᒥᑦ ᐊᐅᓚᑕᐅᓂᐊᖅᑐᖅ ᒪᓕᒡᓗᒋᑦ ᒪᓕᒐᕋᓛᑦ ᑕᒪᒃᑯᓄᖓ. ᑐᑭᓯᐅᒪᔾᔪᑎᒃᑲᓐᓃᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ ᐊᐅᓚᖅᑎᑦᑎᖃᑦᑕᕐᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᐸᕐᓇᐅᑎᒥᑦ ᐱᔾᔪᑎᖃᖅᑐᑦ ᐊᒃᑕᓘᑎᖏᓐᓂᒃ ᐅᒥᐊᕐᔪᑦ. ᐅᒃᑯᐊᖅᓯᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐅᑎᖅᑎᑎᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᓯᕗᓪᓕᖅᐸᐅᔪᖅ ᑐᓂᓯᔪᖅ ᑐᑭᓯᐅᒪᔾᔪᑎᒃᑲᓐᓂᕐᓂᒃ ᐱᔾᔪᑎᖃᖅᑐᓂᒃ ᐊᑐᖅᑕᐅᓯᒪᙱᑦᑐᓂᒃ ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᔪᓂᒃ ᐱᐊᓂᒃᑎᓪᓗᒍ ᐱᓕᕆᐊᕐᒥᑦ ᖃᓄᐃᓕᐅᕐᓂᐅᔪᑦ.

ᐱᔾᔪᑎᒋᑉᓗᒋᑦ ᐃᖏᕐᕋᔭᖕᓂᕐᒧᑦ ᑭᓪᓕᖃᕐᓂᐅᔪᑦ, ᐅᑭᐅᓗᒃᑖᕐᒧᑦ ᐅᖅᓱᐅᓗᕆᔭᐅᓂᐊᖅᑐᖅ ᐊᒡᔭᖅᑕᐅᓂᐊᖅᑐᖅ ᑐᖅᑯᖅᑕᐅᓗᓂᓗ ᐊᑐᖅᑕᐅᓂᐊᕐᓗᓂ ᐱᓕᕆᐊᖅ ᐊᐅᓛᕐᓂᕆᔭᖓᓄᑦ. ᐊᐅᔭᐅᑎᓪᓗᒍ, ᐅᖅᓱᐊᓗᒃ ᐊᒡᔭᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᖅ ᑲᓇᖕᓇᖓᓂᙴᖅᑐᓂᑦ ᐃᒃᓴᕐᕕᐅᔪᓂᑦ ᑲᖏᖅᓯᓂᕐᒧᑦ, ᑕᐃᑲᓂ ᓅᑕᐅᓂᐊᕐᓗᓂ ᐅᖅᓱᐊᓘᓯᕕᖕᓄᑦ ᐃᑎᕕᐊᓂᑦ. ᐅᖅᓱᐊᓘᓯᕖᑦ ᐊᑕᐅᓯᐅᖓᔪᒥᑦ ᓴᓂᕋᖅᑐᑦ, ᓴᓇᔭᐅᓯᒪᔪᑦ ᓂᐱᐅᓯᖅᑐᖅᑕᐅᓯᒪᑉᓗᑎᒃ ᓴᕖᑦ, ᐊᒻᒪᓗ ᑎᑭᐅᑎᓯᒪᔪᑦ ᑲᓇᑕᒥᑦ ᑲᑎᒪᔩᐅᔪᑦ ᒥᓂᔅᑕᐅᑎᓄᑦ ᐊᕙᑎᓕᕆᔨᒃᑯᓐᓄᑦ ᒪᓕᒃᑕᐅᔪᒃᓴᐃᑦ ᐅᑯᓄᖓ *ᓄᓇᑉ ᖄᖓᓃᑦᑐᓄᑦ ᐅᖅᓱᐊᓘᓯᕕᖕᓄᑦ ᐋᖅᑭᐅᒪᔪᑦ ᐅᖅᓱᐊᓗᖃᖅᓱᑎᒃ ᐅᖅᓱᐊᓗᒃᓴᖕᓂᒡᓗ.* ᐃᓗᐹᕈᑕᓕᖅᑕᐅᓯᒪᔪᖅ ᐅᖅᓱᐊᓘᓯᕖᑦ ᐊᑖᓃᔅᓱᑎᒃ ᐊᒻᒪᓗ ᑭᓪᓕᒋᔭᐅᔪᒦᔅᓱᑎᒃ ᐊᕙᓗᒋᔭᐅᔫᑉ. ᐅᖅᓱᐊᓗᖃᐅᓯᕐᕕᒃ ᐅᖅᓱᐊᓗᖃᕈᓐᓇᖅᑐᖅ 110%-ᖑᓂᑦ ᐊᖏᓛᖑᔫᑉ ᐅᖅᓱᐊᓗᓯᕐᕕᐅᑉ. ᐊᓪᓃᑯᒃᑯᑦ ᐃᑎᕕᐊᓂ ᐅᖅᓱᐊᓗᖃᐅᓯᕐᕕᖓᓐᓂᑦ, ᐅᖅᓱᐊᓗᒃ ᐊᒡᔭᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᖅ ᖃᐅᑕᒫᑦ ᐅᔭᕐᑕᑲᓇᐊᕐᕕᐅᔪᓕᒪᑦ ᐊᐸᕐᑯᑎᒃᑰᕐᓗᑎᒃ ᐊᒻᒪᓗ ᐅᑭᐅᓗᒃᑖᖅ ᐊᐸᕐᑯᑎᒋᔭᐅᔫᒃᑰᕐᓗᑎᒃ.

ᓱᓇᑐᐃᓐᓇᓄᑦ ᒪᓕᒃᑕᐅᔪᒃᓴᐃᑦ ᐱᓕᕆᐊᖑᓂᖓᓐᓄᑦ ᐅᖅᓱᐊᓗᐃᑦ ᓅᑕᐅᑎᓪᓗᒋᑦ ᑎᑭᐅᑎᓂᐊᖅᑐᑦ ᐊᑐᖅᑐᓄᑦ ᒪᓕᒐᕆᔭᐅᔪᓄᑦ ᐃᓚᐅᑉᓗᑎᒃ TDGA. ᒪᓕᒃᑕᐅᔪᒃᓴᓂᑦ ᐃᓚᐅᓂᐊᖅᑐᑦ ᓇᓗᓇᐃᖅᓯᓗᑎᒃ ᐃᒪᓐᓇ:

- ᓅᑦᑎᓂᕐᒧᑦ ᐅᖅᓱᐊᓗᖕᒥᑦ ᓱᑉᓗᓕᓗᒃᑖᑦ ᑲᑎᓐᓂᖃᑦᑎᐊᖅᑐᑦ ᓱᑲᑎᖅᑕᐅᓯᒪᑦᑎᐊᖅᓱᑎᓪᓗ;
- ᓅᑦᑎᓂᕐᒧᑦ ᓱᑉᓗᓖᑦ ᑕᑯᒃᓴᐅᔪᖃᙱᑦᑐᑦ ᓱᕋᒃᓯᒪᓂᖓᓐᓄᑦ;
- ᓅᑦᑎᓂᕐᒧᑦ ᐅᖅᓱᐊᓗᖕᒥᑦ ᐱᓕᕆᔨᐅᔪᑦ ᖃᐅᔨᒪᔪᑦ ᒪᓕᒃᑕᐅᔪᒃᓴᐅᔪᓂᒃ;
- ᐅᖅᓱᐊᓗᓕᕆᔨᐅᔪᑦ ᑕᐃᒪᐅᖃᑦᑕᖅᑐᑦ ᑕᒪᐃᓐᓂᑦ ᐅᖅᓱᖅᑕᐅᑎᓂᒃ/ᐅᒥᐊᕐᔪᐊᕐᒥᑦ ᐊᒻᒪᓗ ᐅᖅᓱᐊᓘᓯᕝᕙᖕᓂᑦ ᓅᑎᔾᔪᑎᓂᑦ ᐊᒻᒪᓗ ᐊᒡᒐᖕᒧᑦ ᓄᖅᑲᖅᑎᑕᐅᔪᖕᓇᖅᓱᓂ ᐅᖅᓯᖅ ᑯᕕᑎᓪᓗᒍ;
- ᐊᖏᔪᒥᒃ ᐃᒪᖃᖅᑐᓄᑦ ᓄᖅᑲᖅᑎᑦᑎᔾᔪᑎᒥᒃ ᐃᓕᓯᒪᔪᖃᖅᐸᑦ ᐊᔾᔭᖅᑐᐃᔪᒥᑦ ᐅᖅᓱᐅᓘᓯᕝᕙᖕᒥᑦ, ᓇᓗᓇᐃᖅᑕᐅᖃᑦᑕᖅᑐᖅ ᓄᖅᑲᖅᑎᑦᑎᔾᔪᑎ ᐊᐅᓛᕈᖕᓇᑦᑎᐊᕋᓗᐊᕐᒪᖕᒌᑦ ᐊᑐᖅᑕᐅᓂᑕᒫᑦ; ᐊᒻᒪᓗ
- ᐅᖅᓱᐊᓗᖕᒥᑦ ᓅᑦᑎᖃᑦᑕᖅᑐᑦ ᐊᑐᖅᓱᒋᑦ ᓅᑦᑎᓂᕐᒧᑦ ᒪᓕᒃᑕᐅᔪᒃᓴᖏᑦ ᑳᓐᑐᕌᒃᑲᖅᑑᑉ.

ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᐅᖅᓱᐊᓗᖕᒥᒃ ᑐᖅᑯᖅᓯᓯᒪᓂᕐᒧᑦ ᐃᑎᕕᐊᓂᑦ ᐊᒻᒪᓗ ᐅᔭᕋᒃᑕᕆᐊᕐᕕᐅᔪᒪᔪᕐᒥᑦ ᐃᓚᐅᔪᑦ ᑕᐅᑐᒃᓱᓂ ᐊᒻᒪᓗ ᐊᐅᓚᖅᑎᑦᑎᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᓃᑦ, ᐃᒪᐅᑉ ᖄᖓᓂᑦ ᐆᒃᑐᕋᐃᓂᖃᐃᖕᓇᐅᔭᖅᑐᑦ ᐊᐅᓚᓐᓂᐊᕐᓗᒍ ᐊᒻᒪᓗ ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᐊᕐᓗᒍ ᐱᐅᓂᕆᔭᖓ ᐃᒪᐅᑉ, ᐊᒻᒪᓗ ᖃᓄᐃᓕᔪᖃᖅᐸᑦ ᖃᐅᔨᒋᐊᖃᑦᑕᕐᓂᖅ (ᑯᕕᔪᖃᖅᐸᑦ ᑐᐊᕕᓇᖅᑐᓕᕆᓂᕐᒧᑦ).

ᐱᓂᕐᓗᐊᕿᓂᖅᑕᖃᖅᐸᑦ ᐅᕝᕙᓘᓐᓃᑦ ᑯᕕᔪᖃᖅᐸᑦ ᐅᖃᐅᓯᐅᒃᑲᐅᑎᒋᓂᐊᖅᑐᑦ ᐃᓱᒪᑕᕆᔭᐅᔪᒧᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐊᕙᑎᓕᕆᒃᑯᓐᓄᑦ. ᑐᐊᕕᓇᖅᑐᒧᑦ ᐅᐸᓗᐊᓂᕐᒧᑦ ᒪᓕᒃᑕᐅᔪᒃᓴᐃᑦ ᑯᕕᔪᕐᕕᐅᔪᓄᑦ ᓂᕆᐅᓇᙱᑦᑐᒥᑦ ᑯᕕᔪᖃᖅᐸᑦ ᐸᕐᓇᐅᑎ, ᐅᓗᕆᐊᓇᖅᑐᖃᖅᐸᑦ ᐸᕐᓇᐅᑎ ᐊᒻᒪᓗ ᑐᐅᕕᓇᖅᑐᓄᑦ ᐅᐸᓗᐊᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ, ᐊᒻᒪᓗ ᐅᖅᓯᑎᕈᑎᒥᒃ ᐱᐅᖕᒋᑦᑐᒃᓴᓂᕐᒧᑦ ᑐᐊᕕᓇᖅᑐᓕᕆᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᐱᓕᕆᐊᕐᒧᑦ. ᑖᑉᑯᐊ ᒪᓕᒃᑕᐅᔪᒃᓴᓂᑦ ᑎᑎᕋᖅᓯᒪᔪᖃᖅᑐᖅ ᐅᐸᓗᐊᓂᕐᒧᑦ ᐅᖅᓱᐊᓗᖕᒥᒃ ᐱᓂᕐᓗᐊᕿᓂᐅᔪᓄᑦ ᑯᕕᔪᓄᓪᓘᓐᓃᑦ ᐅᓗᕆᐊᓇᖅᑐᓕᖕᓃᑦ ᐊᑐᖅᑕᐅᔪᓃᑦ ᒥᑭᓛᒃᑰᖅᑎᑦᑐᒪᑉᓗᒍ ᐋᓐᓂᐊᖅᑕᐃᓕᒪᓂᕐᒧᑦ ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᒻᒪᓗ ᐊᕙᑎᒥᒃ ᖃᓄᐃᖕᒐᓕᖅᑎᑦᑎᓂᖅᑭᖕᓇᖅᑐᑦ. ᐃᓚᐅᖃᑕᐅᔪᑦ ᒪᓕᒃᑕᐅᔪᒃᓴᐃᑦ ᐱᓕᕆᕝᕕᖕᒦᑦᑐᖕᓃᖅᑎᑦᑎᓂᖅ ᐱᓕᕆᔨᓂᒃ, ᐊᑦᑕᕐᓇᖅᑐᖃᖅᑕᐃᓕᑎᑦᑎᓂᖅ, ᓴᓗᒻᒪᖅᓴᐃᓂᖅ ᐊᒻᒪᓗ ᓱᕐᑯᓯᐊᔪᖕᓃᖅᑎᑦᑎᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕐᓂᐅᔪᑦ, ᑐᐊᕕᓇᖅᑐᖃᖅᐸᑦ ᖃᐅᔨᒋᐊᕐᕕᐅᓴᕆᐊᖃᖅᑐᑦ, ᐃᓗᐊᓂᑦ ᐊᒻᒪᓗ ᓯᓚᑖᓂᑦ ᖃᐅᔨᒃᑲᐃᓂᑦ ᒪᓕᒐᓕᕆᔨᐅᔪᓄᑦ, ᐊᒻᒪᓗ ᖃᓄᐃᓕᔪᖃᖅᐸᑦ ᑎᑎᕋᐅᓯᕆᓃᑦ.

ᐱᓕᕆᔨᓗᒃᑖᑦ ᐊᒻᒪᓗ ᑳᓐᑐᕌᒃᑲᖅᑐᑦ ᐱᓕᕆᐊᕐᒥᑦ ᐊᔪᕈᖕᓃᖅᓴᖅᑕᐅᓂᐊᖅᑐᑦ ᐱᓕᕆᐊᒃᓴᓂᐊᕐᓗᑎᒃ ᐅᓗᕆᐊᓇᖅᑐᓂᒃ ᐊᑐᖅᑕᐅᒃᑲᓐᓂᖅᑐᑦ ᒥᒃᓵᓄᑦ.

EXECUTIVE SUMMARY

A hazardous material is one that, as a result of its physical, chemical, or other properties, poses a hazard to human health or the environment when it is improperly handled, used, stored, disposed of, or otherwise managed. In combination with the Risk Management and Emergency Response Plan, and the Spill Contingency Plan, this Hazardous Materials Management Plan (Plan) provides instruction on the prevention, detection, containment, response, and mitigation of accidents that could result from handling hazardous materials.

The Meliadine Gold Project (Project) uses of the following types of classified hazardous materials:

- Petroleum Products and Lubricants – diesel fuel, oil, grease, anti-freeze, and solvents used for equipment operation and maintenance;
- Process Plant Consumables – chemicals for mineral extraction;
- Water Treatment Consumable – chemicals;
- Explosives – emulsion, caps, explosives, surfactants, and sodium nitrate used for blasting in the mine;
- Laboratory Wastes – various by-products classified as hazardous waste and chemicals used in the assay laboratory; and
- Other – batteries, paints, compressed gases, materials used and generated at the Health Care Centre, etc.

Agnico Eagle Mines Limited (Agnico Eagle) is committed to the safe and appropriate storage of fuels, hazardous materials, and hazardous wastes. This Plan outlines the guidelines on product supply, transportation, storage, handling, recycling, and waste disposal.

Commercial carriers in accordance with the requirements of the Canadian Transportation of Dangerous Goods Act (TDGA) will deliver all hazardous materials to site. A contracted expediting company arranges all deliveries from the Itivia docking site to the mine site. All required permits, licences, and certificates of compliance are the responsibility of the carriers. All shipments are properly identified and labelled. Shipping papers will be accessible and include information describing the substance, immediate health hazards, fire and explosion risks, immediate precautions, fire-fighting information, procedures for handling leaks or spills, first aid measures, and emergency response telephone numbers. Each transportation company is required to develop a spill prevention and countermeasures plan to address the materials they are transporting.

The quantity of hazardous materials received, used, and stored on site will be recorded by appropriate Departments.

Once hazardous materials are received at the workplace, additional regulations will be applied. The federal *Workplace Hazardous Materials Information System* requires proper labelling of products, the availability of product information in the form of Material Safety Data Sheets (MSDS), and employee training on how to identify and handle hazardous products. Agnico Eagle has established procedures

for obtaining MSDS with new product deliveries, maintaining current MSDS (i.e., no older than three years), and ensuring that they are readily accessible to all employees. A chemical tracking system has also be established.

All hazardous materials are stored in secure areas to prevent tampering, as well as access by unauthorized personnel. In support of pollution prevention, Agnico Eagle has established procedures for the regular inspections of storage containers and facilities. If deficient conditions are identified, appropriate corrective actions are taken and documented.

Materials that become waste are stored and/or disposed of in accordance with specific government regulations and guidelines. The Environment Department monitors the movement of hazardous waste, from the generator to final disposal, off site, through use of a tracking document known as a Waste Manifest. Accordingly, a Waste Manifest will accompany movements of hazardous wastes off site to companies in the South.

Hazardous wastes at the Itivia docking site in Rankin Inlet are managed according to the appropriate regulation(s). More information can be found in the Shipping Management Plan regarding waste generated on-board ships. The Interim Closure and Reclamation Plan provides additional information regarding unused hazardous materials upon completion of Project activities.

Due to transportation restrictions, a full year's supply of diesel fuel will be transported and stored to support the Project's operation. During the summer months, diesel will be shipped from eastern ports to Rankin Inlet, where it will be transferred into storage tanks at the Itivia Oil Handling Facility. Diesel tanks are single-walled, constructed of welded steel, and meet the Canadian Council of Ministers of the Environment guidelines for *Aboveground Storage Tank Systems Containing Petroleum and Allied Petroleum Products*. A continuous liner is installed under the tanks and within the perimeter berm. The containment area is be sized to hold 110% of the volume of the largest tank. From the Agnico Eagle's Itivia Oil Handling Facility, fuel will be transported daily to the mine site via the bypass road and All-weather Access Road.

General procedures will ensure that the handling of fuel during bulk transfer meets the applicable legislation that includes the TDGA. The procedures will include verifying that:

- all fuel transfer hoses are connected properly and couplings are tight;
- transfer hoses are not obviously damaged;
- fuel transfer personnel are familiar with procedures;
- personnel are located at both the fuel delivery truck/ship and fuel transfer tank(s) and can manually shutoff the flow of fuel;
- if a high liquid level shutoff device is installed at the delivery tank, verify that the shutoff is operating correctly each time it is used; and
- Fuel transfer proceeds per the established procedures of the contract supplier.

An environmental monitoring plan for fuel storage at the Itivia Oil Handling Facility and at the proposed

mine site will include visual and operational inspections, routine surface water sampling to control and monitor the quality of the contact water, and event monitoring (in the case of a spill emergency or occurrence).

Any accident or spill will be reported immediately to the Supervisor or Environment Department. Emergency response procedures for spilled materials are provided in the Spill Contingency Plan, the Risk Management and Emergency Response Plan, and the Oil Pollution Emergency Plan for the Project. These procedures outline the response to accidental spills or releases of hazardous materials to minimize health risks and environmental effects. Included are procedures for evacuating personnel, maintaining safety, clean-up and neutralization activities, emergency contacts, internal and external notifications to regulatory authorities, and incident documentation.

Contents

DOCUMENT CONTROL

Version	Date	Section	Page	Revision	Author
1	November 2012			First draft of the Hazardous Materials Management Plan	Mélanie Roy, Env. Coord., AEM
2	March 2013	3.1 3.2 3.2 3.4 9	7 7 7 8 31	Env. and health hazards control Shipping containers Air transportation (none to rare) Details; hazardous waste mgmt. at Rankin Inlet and upon closure Purchasing controls	John Witteman, Env. Consultant, AEM
3	April 2014	1.2 3.2 3.3 3.4 3.5 5.3 6.6	2 7 8 8 9 13 20	Reference to TDGR Reference to Nunavut's Environmental Guideline for Contaminated Site Remediation	John Witteman, Env. Consultant, AEM Stéphane Robert, Env. Manager, AEM
4	April 2015			Update entire plan for Class A Water Licence Application	John Witteman, Env. Consultant, Agnico Eagle
5	January 2019			Annual review	Randy Schwandt, Env. Tech. Meliadine
6_NIRB	November 2021			Updated to address Meliadine Extension application submission to NIRB for review and approval	Permitting Department

ACRONYMS

Agnico Eagle	Agnico Eagle Mines Limited
AWAR	All-weather Access Road
CCME	Canadian Council of Ministers of the Environment
IBC	Intermediate Bulk Container
ICMC	International Cyanide Management Code
MSDS	Material Safety Data Sheet
Plan	Hazardous Materials Management Plan
PPE	Personal Protective Equipment
SCP	Spill Contingency Plan
TDG	Transportation of Dangerous Goods
TDGA	Canadian *Transportation of Dangerous Goods Act*
TDGR	*Transportation of Dangerous Goods Regulations*
WHMIS	Workplace Hazardous Materials Information System

SECTION 1 • INTRODUCTION

1.1 Purpose and Scope of the Plan

The purpose of the Hazardous Materials Management Plan (Plan) is to provide a consolidated source of information on the safe and environmentally sound transportation, storage, and handling of the major hazardous products that may be used at the Meliadine Gold Project (Project) and will be applicable to the Meliadine Extension, which extends the mine life to 2043. A hazardous material is one that, as a result of its physical, chemical, or other properties, poses a hazard to human health or the environment when it is improperly handled, used, stored, disposed of, or otherwise managed. It can take many forms, for example, hydrocarbon contaminated soil, snow or water; fuel; lubricants; process reagents; chemical reagents; solvents and paint; medical wastes batteries; etc. In combination with the Risk Management and Emergency Response Plan, Spill Contingency Plan (SCP), and Oil Pollution Emergency Plan, this Plan provides instruction on the prevention, detection, containment, response, and mitigation of accidents that could result from handling hazardous materials.

This Plan is based on the following principles of best practice management for hazardous materials:

- identify and prepare materials and waste inventories;
- characterize potential environmental hazards posed by hazardous materials;
- allocate clear responsibility for managing hazardous materials;
- describe methods for transport, storage, handling, and use;
- identify means of long-term storage and disposal;
- prepare contingency and emergency response plans;

All hazardous materials that are used at the project are manufactured, delivered, stored, and handled in compliance with all applicable federal and territorial laws and regulations. Agnico Eagle is committed to preventing, to the greatest extent possible, both the inadvertent release of these substances to the environment, and accidents resulting from mishandling or mishap.

As with all other aspects of Agnico Eagle's approach to sustainability at the Project, all employees are expected to comply with all applicable precautions and handling procedures with regard to hazardous materials. Employees are also be expected to report any concerns to their supervisors, the Occupational Health and Safety Committee, the Environment Department, or senior site management. All staff are encouraged to bring forward suggestions for improvements to hazardous materials management that can be incorporated into procedure revisions, as appropriate.

1.2 Applicable Legislation

Both federal and territorial legislation regulate the management of hazardous materials in Nunavut. Copies of relevant legal documents are be kept on file at the Project site. Agnico Eagle regularly updates this Plan with respect to applicable legislation, and ensures that current legislation documents are available at the Project site.

Management and the safety department are providing an overview of the applicable regulations to all employees as part of their initiation and ongoing training.

The *Transportation of Dangerous Goods Act* (TDGA) established classes of dangerous goods as per the schedule in the Act. Hazardous materials are classified into the following nine main classes according to an internationally recognized system:

Class 1 – Explosives

Class 2 – Gases

Class 3 – Flammable liquids

Class 4 – Flammable solids

Class 5 – Oxidizing substances and organic products

Class 6 – Poisonous (toxic) and infectious substances

Class 7 – Nuclear substances, within the meaning of the *Nuclear Safety and Control Act*, which are radioactive

Class 8 – Corrosives

Class 9 – Miscellaneous products or substances

The *Transportation of Dangerous Goods Regulations* (TDGR) also applies to the Project and Agnico Eagle will comply with all applicable requirements.

SECTION 2 • OVERVIEW OF HAZARDOUS MATERIALS

2.1 Hazardous Materials and Fuel Storage Locations

Comprehensive lists of all hazardous materials and the estimated quantities that could be stored for the Project are presented in the following sections. Figures 2-1 and 2-2 identify the fuel storage location at Itivia in Rankin Inlet. Figures 2-3 and 2-4 identify the fuel storage location at the Project.

Petroleum products, explosives, sodium cyanide, and miscellaneous hazardous materials will be stored in facilities that contain no open drains, and in concrete berm areas or within sea cans. Storage tanks on-site will be regularly inspected and maintained.

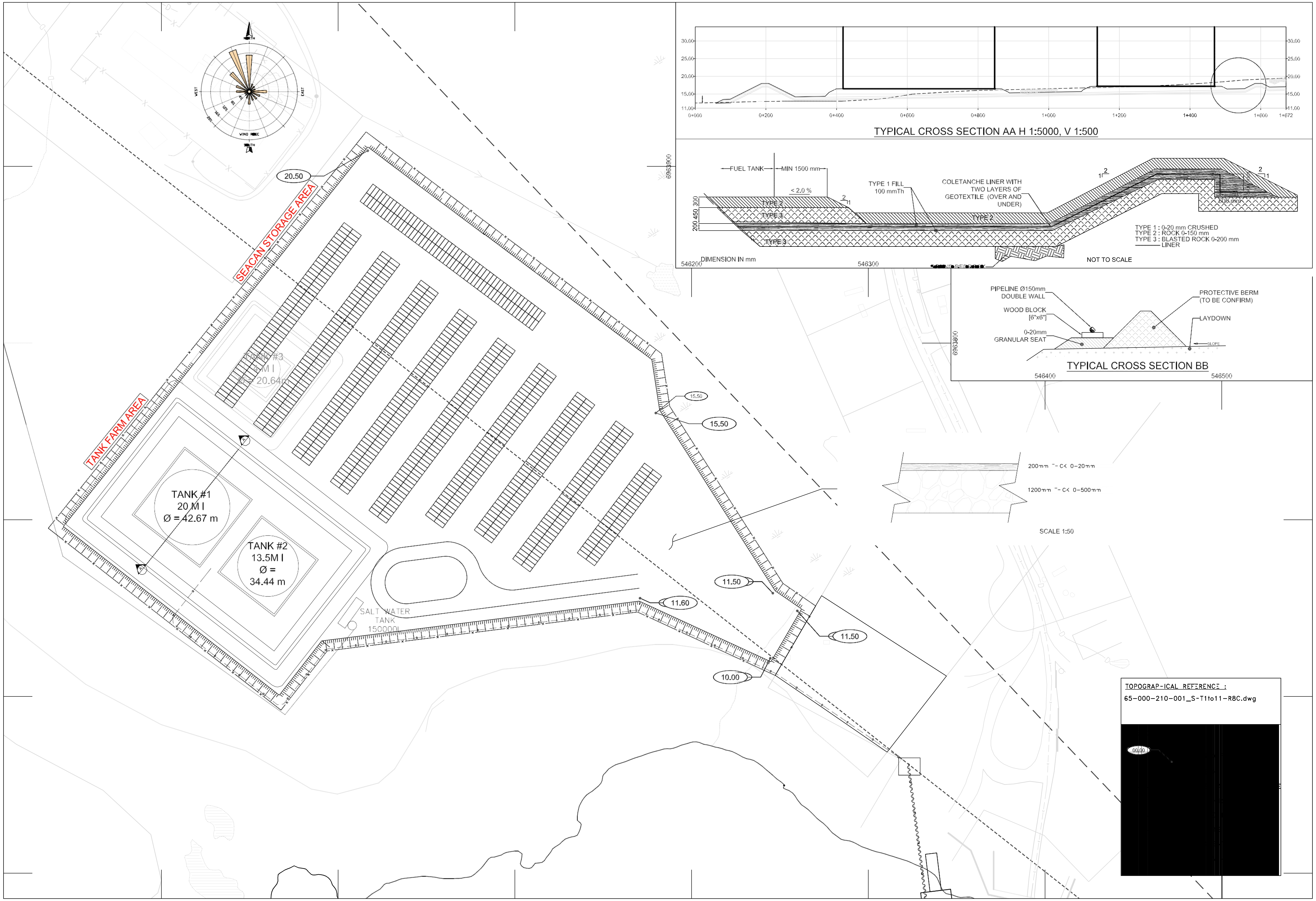
The permanent storage areas are clearly marked and only authorized personnel are allowed access. These areas are ventilated to prevent the build-up of toxic fumes or dust, which could harm both the personnel present and the environment.

2.1 Types of Hazardous Materials

The Project requires the use of the following types of hazardous materials:

- Petroleum products and lubricants – diesel fuel, oil, grease, anti-freeze, and solvents used for equipment operation and maintenance;
- Process Plant consumables – chemicals for mineral extraction;
- Water treatment consumables – chemicals;
- Explosives – emulsion, caps, explosives, surfactants, and sodium nitrate used for blasting; and
- Laboratory consumable and wastes – various by-products classified as hazardous waste and chemicals used in the assay laboratory.

Sections 5 and 6 contain general information and safe handling procedures regarding petroleum products and chemicals used in the process plant and water treatment. Details concerning explosives are available in the Explosives Management Plan. Laboratory wastes are very limited in quantity and they are only handled by specialized lab technicians. These wastes are pumped to the grinding circuit in the process plant for recycle and eventually become part of the dry stack tailings disposal system. As such, they are not addressed separately in this Plan.



PLAN CLÉ
KEY PLAN

SCALE
ECHELLE : 1:15000

NOTES GÉNÉRAL / GENERAL NOTES

DESSINS EN RÉFÉRENCE / REFERENCE DRAWINGS

TITRE / TITLE	# DWG

AGNICO EAGLE

REV.	DATE	DESCRIPTION	PAR/BY	APP.	CLIENT

REVISIONS

ISSUED FOR PERMITTING

AGNICO EAGLE DATE : 2015-03-05

TITRE / TITLE

AGNICO EAGLE–MELIADINE DIVISION
130 – FUEL TANK FARM (RANKIN)
GENERAL EARTHWORK
SITE PLAN
ITIVIA OIL HANDLING FACILITY LOCATION

Figure 2-1

DESSINÉ PAR / DRAWN BY	JOCELYN CRETE	DATE 2014-10-06
VERIFIÉ PAR / CHECKED BY	DANY LAFLAMME	2014-10-06
APPROUVÉ PAR / APPROVED BY	DANY LAFLAMME	2014-10-08
ÉCHELLE / SCALE 1:1000	DATE 2014-10-06	
NO. DESSIN / DRAWING NO.	6509-130-230-001	
NO. PROJET / PROJECT NO. 6509	REVISION 0	FEUILLE / SHT 1 / 1

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Figure 2-2 Fuel Storage at Itivia Oil Handling Facility

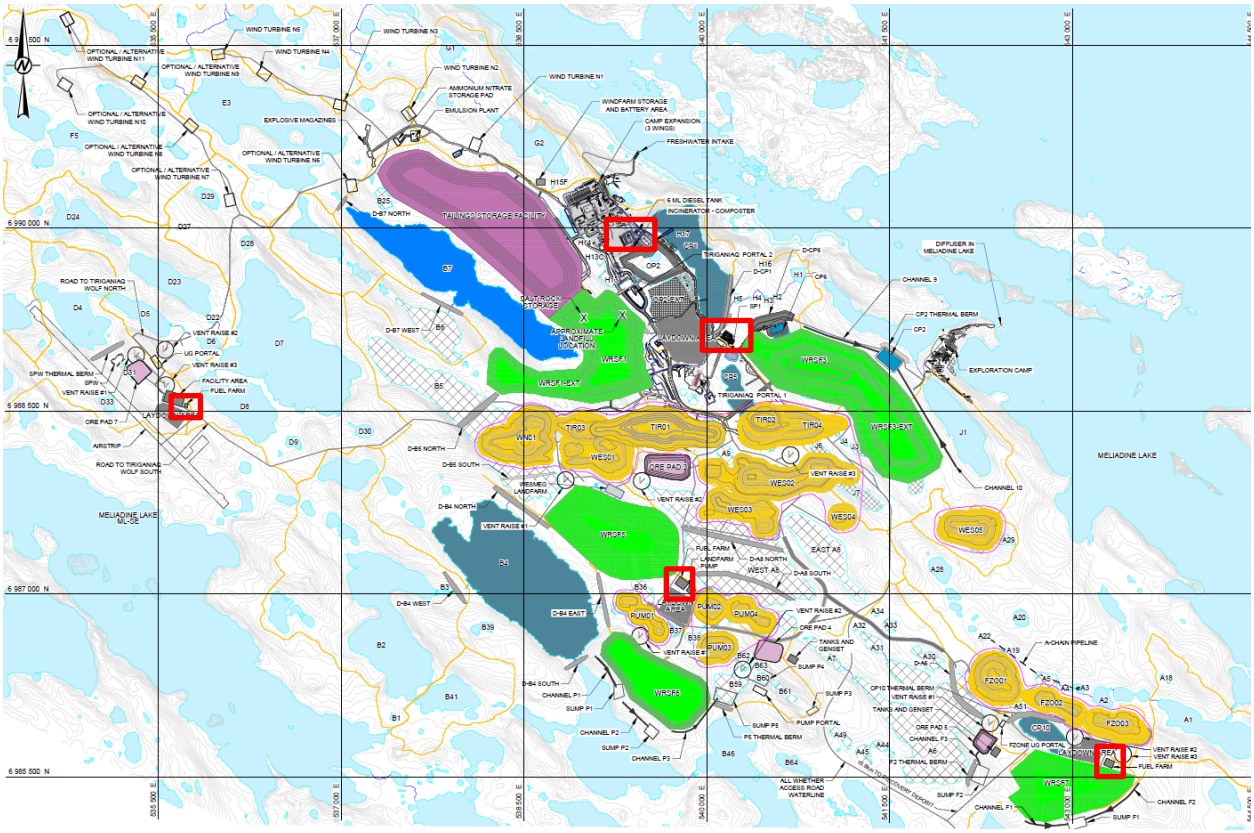

Figure 2-3 Project Fuel Storage Locations at Meliadine Main Site

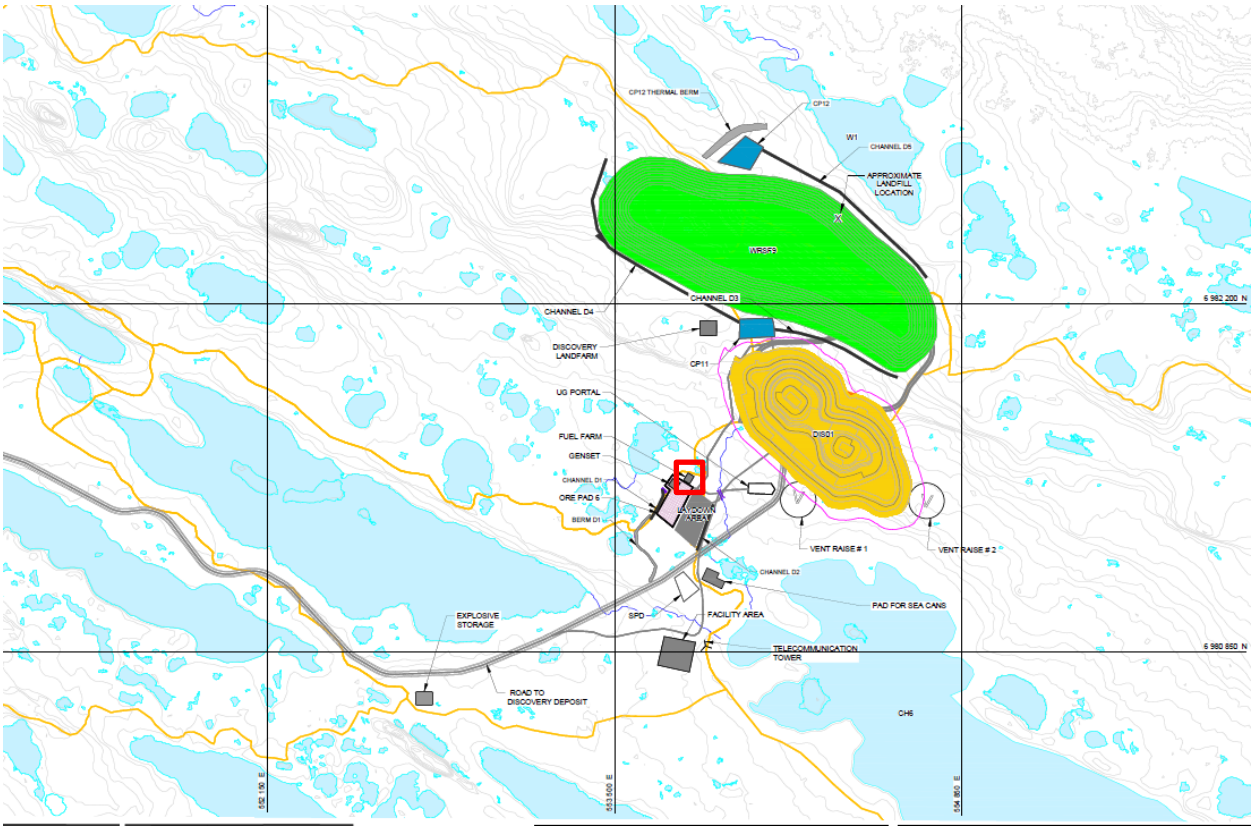

Figure 2-4 Project Fuel Storage Locations at Discovery Deposit

2.2 General Hazardous Materials Storage Guidelines

Agnico Eagle is committed to the safe and appropriate storage of fuels, hazardous materials, and hazardous wastes. The following sections outline Agnico Eagle's general guidelines for storing fuels, hazardous materials, and hazardous wastes. Agnico Eagle follows the Government of Nunavut (2010) Environmental Guidelines for the General Management of Hazardous Wastes (Appendix A).

2.3.1 General Guidelines for Storage Drums/Containers

Hazardous materials and wastes are stored in quatrex bags, drums, or sea cans according to the following guidelines:

- In the original containers, where possible, or in containers compatible with the material being stored to prevent corrosion or chemical interaction that could lead to leaks or fires.
- Storage containers are in good condition, sealable, and not damaged or leaking.
- Drums containing hazardous materials or wastes expected to be in storage for more than six months are placed on pallets or other appropriate foundation to prevent corrosion.
- Each container is clearly labelled to identify the substance being stored according to the requirements of the Workplace Hazardous Materials Information System (WHMIS) and MSDS

(Material Safety Data Sheet).

- Containers shall be kept closed except when adding or removing product.
- Containers with product shall be kept in the upright position. Empty drums can be placed horizontally.
- Containers are arranged to prevent damage from falling or dislodging.

2.3.2 General Guidelines for Storage Areas

To assist in the safe and secure storage of fuels, hazardous materials, and hazardous wastes, the following general guidelines for storage areas/facilities will be followed:

- Design of storage areas will be in compliance with the *National Fire Code*, where appropriate.
- Compliance with the Canadian Council of Ministers of the Environment (CCME) publication, *"Environmental Code of Good Practice for Above Ground Storage Tank Systems Containing Petroleum Products"*. This CCME code deals with inventory control, inspections, corrosion protection, records, and monitoring. Environment Canada's *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* outline registration and documentation requirements for storage tanks.
- Storage areas will have controlled access. Only authorized and trained personnel will have access to storage areas.
- Storage areas will be adequately signed indicating that hazardous materials/wastes are stored therein.
- Storage locations will be clearly defined and marked to prevent damage of storage drums and containers in the event they are covered by snow.
- Incompatible materials will be segregated by chemical compatibility within the storage area to prevent contact of incompatible materials in the event of a release.
- Storage areas will be located at least 31 meters from surface waters.
- Storage areas will be readily accessible for firefighting and other emergency procedures.
- Storage areas will be adequately ventilated to prevent the build-up of noxious or toxic vapours.
- Secondary containment will be installed to allow for the containment of at least 110 % of the largest container or tank volume within the contained area.
- Storage areas will be constructed, or provided with barriers, to protect containers from physical damage.
- Adequate spill and emergency response equipment will be installed at each storage area (i.e., spill control, fire protection, etc.). A list of spill control equipment is provided in the SCP.

SECTION 3 • HAZARDOUS MATERIALS LIFE CYCLE MANAGEMENT

3.1 Life Cycle Management

"Life cycle management" implies the assessment of a particular product over its entire life, from the time a material need is identified, to the time the product is fully consumed or disposed of as waste. Life cycle management is important to managing and minimizing the potential environmental and health hazards posed by hazardous materials. It covers product supply, transportation, storage, handling, recycling, and waste disposal. Agnico Eagle is committed to ensuring proper life cycle management of all products used at the Project, including hazardous materials. Agnico Eagle and its contractors deal only with reputable, certified suppliers, transporters, expediters, and hazardous waste recycling and treatment facilities.

3.2 Delivery

All hazardous materials is delivered to the project site by commercial carriers in accordance with the requirements of the Canadian *TDGR, Part 3* and are properly documented. Air transportation is not used for the transfer of hazardous materials, with the exception of a rare emergency situation. Carriers are licensed and inspected as required by Transport Canada. All required permits, licenses, and certificates of compliance are the responsibility of the carrier.

Purchasing controls ensure that no excess hazardous materials are purchased beyond that requested by the Project for the upcoming year. The hazardous materials are shipped in approved containers housed in a sea can. All shipments are properly identified and labelled. Shipping papers are accessible and include information describing the substance, immediate health hazards, fire and explosion risks, immediate precautions, fire-fighting information, procedures for handling leaks or spills, first aid measures, and emergency response telephone numbers.

Each transportation company are required to develop a spill prevention, control, and countermeasures plan to address the materials they are importing. In the event of a release during transport, the commercial transportation company is responsible for first response and clean-up. Agnico Eagle intends to annually verify the qualifications of transport companies, their personnel, and the existence of their spill prevention, control, and countermeasures plan.

Appropriate measures are in place to minimize impacts to surface water, groundwater, and soil from potential vehicle accidents when transporting hazardous materials to the site. Details on spill response are presented in the SCP. The following general precautions will be taken:

- a maximum speed on the All-weather Access Road (AWAR) for loaded and empty vehicles will be 50 kilometers per hour;
- a maximum speed on the Hamlet Bypass Road will be 30 kilometers per hour;
- all Agnico Eagle and contractor's using the roads are expected to carry spill response equipment;
- trucks are equipped with a reliable radio; and,

- Agnico Eagle commits to being prepared to respond to spills resulting from vehicle accidents in a timely and efficient manner.

3.3 On-Site Handling

Once hazardous materials are received by Agnico Eagle, additional regulations are applied: the federal WHMIS calls for the proper labelling of products, the availability of product information in the form of MSDS, and employee education on how to identify and handle hazardous products. Agnico Eagle has established procedures for obtaining MSDS for new product deliveries, maintaining current MSDS (i.e., no older than three years), and maintaining a system of hardcopy and/or electronic MSDS that is readily accessible by all employees. A chemical tracking system is also established.

All hazardous materials are stored in secured areas to prevent access by unauthorized personnel or tampering (See appendix 12 for new hazardous waste management laydown). All tanks used for the storage of diesel fuel are double walled. There are some exceptions where single walled tanks exist, but all are equipped with secondary containment areas sized to hold at least 110 % of the volume of the largest tank. Tanks and vessels in the process plant will be installed on concrete surfaces sloping to interior sumps that will route spilled solutions to lined collection areas. Additional guidelines for the storage of hazardous materials are provided in Section 2.3.

In support of pollution prevention, Agnico Eagle has established procedures for the regular inspection of storage containers and facilities. If deficient conditions are identified, appropriate corrective actions are taken and documented. Additional details for the inspection of storage areas are provided in Section 8.

Emergency response procedures for spilled chemical substances are provided in the SCP, and the Risk Management and Emergency Response Plan. These procedures outline the response to accidental spills or releases of hazardous materials to minimize health risks and environmental effects. Included are procedures for evacuating personnel, maintaining safety, clean-up and neutralization activities, emergency contacts, internal and external notifications to regulatory authorities, and incident documentation.

In the case of accidental release or imminent accidental release, Agnico Eagle will also comply with the reporting requirements listed in Part 8 of the *TDGR*.

3.4 Waste Management

Waste materials are stored and/or disposed of in accordance with specific government regulations and guidelines. This includes hazardous wastes that may be generated at the Rankin Inlet fuel storage, port facility, and laydown area.

Agnico Eagle is storing hazardous waste materials in sea cans at the project mine site until they can be transported for recycling or disposal. Likewise, any unused hazardous materials upon completion of Project activities will be inventoried and transported to a licensed waste disposal facility for recycling or disposal.

The Government of Nunavut Department of Environment, Environment Protection Service monitors the movement of hazardous waste, from the generator to final disposal, through use of a tracking document known as a Waste Manifest. Accordingly, a Waste Manifest will accompany movements of hazardous wastes for the Project. Agnico Eagle is registered with the Government of Nunavut Department of Environment, Environment Protection Service as a waste generator, and employs only registered waste carriers to transport waste to registered/approved waste receivers. A copy of the completed manifest will be maintained for a period of two years after the hazardous waste is received by the authorized waste disposal facility.

Process plant tailings is passing through a treatment plant for cyanide destruction using the standard SO2/air process before being dried and stacked. The cyanide weak acid dissociable content of the tailings material is reduced as specified in the International Cyanide Management Code (ICMC). Agnico Eagle will integrate practices to respect the ICMC. The current regulatory requirement for cyanide content in liquids released to the environment is 1 milligrams per litre (mg/L) for a single grab sample as specified in the Metal and Diamond Mining Effluent Regulations (2021), or no greater than a 0.5 mg/L for the monthly mean concentration.

3.5 Empty Product Containers

Many empty chemical containers are not safe for direct disposal and require handling precautions identical to those for full containers and may be subject to TDGR. Chemical users must be familiar with the safe waste handling and storage procedures described in the MSDS. When prescribed, the containers are to be backhauled to the Rankin Inlet laydown area for transport to an approved facility for disposal. These containers are stored and hauled south via sealift.

SECTION 4 • SODIUM CYANIDE

The Project operation uses sodium cyanide. Due to transportation restrictions, about a full year's supply of sodium cyanide has been transported and stored on-site during the shipping season. This product has been transported, stored, handled, transferred, and used in compliance with appropriate legislation and applying principles and standards of practice as specified in the ICMC.

4.1 Physical Properties

Cyanide is one of only a few chemical reagents that dissolve in water. Gold mining operations use very dilute solutions of sodium cyanide, typically in the range between 0.01 and 0.05 % cyanide (100 ppm and 500 ppm). Unlike many synthetic chemicals, cyanide oxidizes and decomposes when exposed to air or other oxidants, and does not persist in the environment. As such, it does not give rise to chronic health or environmental problems when present in low concentrations.

4.2 Cyanide Production

Cyanide production and handling is highly regulated, and its risk management is well documented. Both the manufacturer and Agnico Eagle employ stringent risk management systems to prevent injury or environmental damage from the use of cyanide.

4.3 Cyanide Transport

Sodium cyanide for the Project has been shipped in briquette form, and packaged in water-resistant super sac 4 millimeter bags inside an Intermediate Bulk Container (IBC). The IBC will hold 1,000 kilograms of cyanide, and have the following approximate dimensions: 1.1 m x 1.1 m x 1.1 m. For shipment, there are normally 20 IBCs in a sea can. This method of cyanide transport provides three levels of containment. The cyanide is contained within plastic bags. In the event one of the bags ruptures, the cyanide is contained within the IBC. In the event the IBC container breaks, the cyanide is contained within the sea can, which provides a tertiary precautionary containment measure for minimizing the impact of a potential spill.

Cyanide producers audit purchasers and transportation systems. They design special packaging for the transport of cyanide and inventory all shipments against delivery records to ensure proper surveillance at all times. All shipments are accompanied by MSDS that provide the chemistry and toxicity of sodium cyanide, instructions in case of accidents, and emergency telephone numbers for assistance.

Truck, rail, and ship transporters screen their employees, carefully inventory packages, and establish and maintain systems for loading and unloading cyanide products. Product handling and transportation are in accordance with protocols set by the industries and in compliance with national and international regulations.

For the Project, IBCs are properly stacked in sea cans and transported by ship from eastern ports to Rankin Inlet. At Rankin Inlet, the containers are transferred from ship to truck for transport to the project mine site. At no point during transport is the sea can or IBCs be opened. From the point of cyanide packaging onwards, the bags are only opened on-site, when use of cyanide is required.

4.4 On-Site Storage and Handling

The cyanide is stored on-site in a dark, cool, dry, location. It has been stored within a sealed sea cans until cyanide is needed for ore processing. The cyanide storage area is located close to the process plant. Only authorized personnel have access to the cyanide storage area.

Only the quantity of cyanide required for immediate use is removed from storage. The cyanide bag is lifted by its straps (the straps are provided by the manufacturer as part of packaging) using a forklift. An overhead crane will be used to lower the bag onto a specially designed knife slitter that cuts the bag. The contents of the bag drops into a mixing tank. Cyanide is not to be handled physically at any time by project personal.

The IBCs are properly decontaminated and disposed of according to all applicable regulations to prevent environmental impact. Before disposal, the bags are visually inspected to ensure they're empty, and then flushed, triple rinsed, and drained to dissolve any residual cyanide left in the bag. Rinse water from the flushing process is pumped into the cyanide mixing tank and used in the gold recovery plant.

All personnel potentially exposed to cyanide, including contractors and visitors, receives appropriate training (refer to Section 9).

4.5 Spills

In the event a spill occurs, the cyanide is promptly cleaned-up to minimize exposure to humans and the environment. A dry spill will be swept-up and disposed of in a drum or other suitable container. In the event of a wet spill, spill procedures will be carried out to prevent environmental contamination and the appropriate authorities will be contacted. For more information on spills handling and containment, see the SCP and Risk Management and Emergency Response Plan.

After cleaning-up as much cyanide as possible, the area will be decontaminated using a small amount of caustic solution (i.e., 1 ounce per 5 gallon hypochlorite solution). This will help keep the pH in the 10 to 11 range and suppress the formation of potentially lethal hydrogen cyanide gas.

4.6 International Cyanide Management Code

Agnico Eagle is a signatory to the ICMC for the manufacture, transport, and use of cyanide in the production of gold. The ICMC is administered by a non-profit institute consisting of participants from the gold mining industry, governments, non-governmental organizations, labour, cyanide producers, and other interested parties.

The ICMC represents a voluntary commitment on the part of all signatories to identify and follow basic principles and guidelines for safe cyanide use at gold mining operations. This is the first such generic international code in the history of the mining industry. Under the ICMC, gold mines are required to manage their cyanide from source to site, thus assuming "full life cycle" responsibility for all cyanide used at their operation.

SECTION 5 • PETROLEUM PRODUCTS

5.1 Product Description

During operations, the Project uses fuel and lubricants (petroleum products) listed in Table 5-1. These products are transported, stored, handled, transferred, and used in compliance with appropriate legislation.

Table 5-1 Project Fuel Products, Hazard Classes, and Potential Impacts

Material	TDGA Class	Potential Environmental Impact
Diesel	3	Water and soil contamination
Motor oil	Not regulated	Water and soil contamination
Aviation fuel	3	Water and soil contamination
Hydraulic fluid	Not regulated	Low risk to water and soil with proper handling
Solvent	3	Water and soil contamination
Automotive grease	Not regulated	Low risk to water and soil with proper handling
Ethylene glycol	Not regulated	Toxic by ingestion; could potentially be consumed by wildlife

5.2 Diesel Fuel Storage in Rankin Inlet and at the Project Site

Agnico Eagle's Itivia Oil Handling Facility consist of one 20 million L tank, one 13.5 million L tank, and one 4 million L tank, for a total capacity of up to 37.5 million L's of diesel fuel. Tanker trucks transfer the fuel from Agnico Eagle's Itivia Oil Handling Facility in Rankin Inlet to the tanks located at the project mine site. The main storage tanks at the project mine site include one 6 and one 3 million L tank. There are also a number of storage tanks with capacities varying between 1,000 and 250,000 L (Table 5-2). The total diesel fuel storage capacity at the mine site is in the range of 9.7 million L's.

For the Meliadine Extension, it is anticipated that additional fuel storage will be needed at Pump, F Zone, and Discovery deposits. Each site will consist of four 75,000 L and one 50,000 L tanks for a total of 350,000 L per site (i.e., Pump, F Zone, and Discovery); for a combined total of 1,050,000 L. An additional 6 ML tank will be added adjacent to the existing fuel tanks on-site in the industrial pad area.

The large diesel tanks at the mine and at Itivia are double-walled, constructed of welded steel, and designed, constructed, and located to meet the CCME guidelines for *Aboveground Storage Tank Systems Containing Petroleum and Allied Petroleum Products*. A continuous 60 millimeter high-density, polyethylene liner sheet is installed under the diesel tanks and within the sides of the perimeter berm. The containment area is sized to hold 110 % of the volume of the largest tank.

Table 5-2 Fuel Products – Storage Location

Product	Use/Location	Maximum Amount Anticipated	Maximum Amount by Unit
Diesel	**Itivia**		
	1- Itivia Oil Handling Facility	20 ML	20 ML tank
	2- Itivia Oil Handling Facility	13.5 ML	13.5 ML tank
	3- Itivia Oil Handling Facility (Sustaining)	4 ML	4 ML tank
	Industrial site Tank Farm		
	4- Site Main Fuel Tank	6 ML	6 ML tank
	5- Site Fuel Tank summer	250,000 L	250 000 L
	6- Powerhouse	50,000 L	25,000 L/tank
	7- Process Plant	10,000 L	10 000 L/tank
	8- Mechanical shop (Oil)	10,000 L	1,000 L/tank
	Portal #1 Mine Site Tank Farm		
	9- Site Main Fuel Tank	3 ML	3 ML
	10- Site Fuel Tank summer	250,000 L	250,000 L/tank
	11- Site Fuel Tank Measure for UG	2,000 L	2,000 L/tank
	12- Site Fuel Tank UG heating Intake West	25,000 L	25,000 L/tank
	13- Site Fuel Tank UG heating Intake East	25,000 L	25,000 L/tank
	Underground		
	14- UG Fuel Tank UG level 325	50,000 L	10,000 L/tank
	15- UG Fuel Tank (Sustaining)	10,000 L	10,000 L/tank
	Meliadine Extension		
	Pump deposit	350,000 L	75,000 L/tank x4; 50,000 L/tank
	F Zone deposit	350,000 L	75,000 L/tank x4; 50,000 L/tank
	Discovery deposit	350,000 L	75,000 L/tank x4; 50,000 L/tank
	Additional main site fuel tank	6 ML	6 ML tank
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

5.3 Fuel Management Plan

The transportation of fuel from Itivia to the mine site and around the mine site will be subject to TDGR, Part 5.

5.3.1 Storage, Delivery to Site, and Safe Handling

With the exception of diesel fuel, most petroleum fuel and lubricant products are delivered to site and stored in the original packing container from the manufacturer. These types of containers include a variety of sealed drums, pails, 1-ton super sac, bulk cubs, cans, and tubes.

Due to transportation restrictions, a full year's supply of petroleum fuel and lubricants products are transported and stored at the mine during the shipping season. During the summer months, diesel is shipped from eastern ports to Rankin Inlet, where it is transferred into storage tanks at the Itivia Oil Handling Facility. From the Itivia storage tanks, fuel is transported daily to the Meliadine mine site via the bypass road and AWAR. Table 5-2 provides the varieties and volumes of petroleum products that is stored on-site, and the corresponding storage locations.

Safe handling procedures and personal protective equipment (PPE) regarding fuel products are presented in Table 5-3 and Table 5-4, respectively.

Table 5-3 Fuel Products – Safe Handling Procedures

Product	Handling Procedures
Diesel	Avoid contact with eyes, skin, or clothing. Avoid breathing vapours, mist, fume, or dust. Do not swallow. May be aspirated into lungs. Wear PPE and/or garments if exposure conditions warrant. Wash thoroughly after handling. Launder contaminated clothing before reuse. Use with adequate ventilation. Keep away from heat, sparks, and flames. Store in a well-ventilated area. Store in a closed container. Bond and ground during transfer.
Motor oil	Wear protective clothing and impervious gloves when working with used motor oils. To be handled generally consistent with other petroleum hydrocarbons.
Hydraulic fluid	Keep container closed until ready for use.
Ethylene glycol	Ensure adequate ventilation. Wear protective gloves and chemical safety goggles. Keep in tightly closed container, stored in a cool, dry, ventilated area. Separate from acids and oxidizing materials. Empty containers of this product, retain product residues; may be hazardous.

Table 5-4 Fuel Products – Personal Protective Equipment

Product	Personal Protective Equipment		
	Eyes	Skin	Respiration
Diesel	Chemical goggles	Neoprene or nitrile gloves; protective garments	None usually required
Motor oil	Chemical goggles	Neoprene or nitrile gloves; protective garments	None usually required
Hydraulic fluid	Chemical goggles	None usually required	None usually required
Ethylene glycol	Chemical goggles	Neoprene or nitrile gloves; protective garments	None usually required; ensure adequate ventilation

5.3.2 Fuel Truck Transfer Procedures

A contract supplier fills the storage tanks in the Itivia Oil Handling Facility as outlined in the Oil Pollution Emergency Plan. General procedures ensure that the handling of fuel meet the applicable legislation that includes the *TDGA.* The general procedures to be followed are listed below. Similar procedures would be followed for fueling remote station tanks.

Before fuel transfer, verify that:

- all fuel transfer hoses are connected properly and couplings are tight;
- transfer hoses are not obviously damaged;
- fuel transfer personnel are familiar with procedures;
- personnel are located at both the fuel delivery truck/ship and fuel transfer tank(s), and can communicate with each other and manually shutoff the flow of fuel;
- if a high liquid level shutoff device is installed at the transfer tank, verify that the shutoff is operating correctly each time it is used; and
- Fuel transfer proceeds per the established procedures of the contract supplier.

Any accident or spill must be reported immediately to the Supervisor or Environment Department. Notification and response procedures are detailed in the SCP and the Oil Pollution Emergency Plan.

5.3.3 Fuel Tank Performance Monitoring

The following section outlines the monitoring plan to be prepared and implemented, prior to construction, to evaluate the environmental performance of the bulk fuel storage facilities. The environmental performance monitoring plan is a tiered approach with an emphasis on visual and operational inspections, routine surface water sampling to control and monitor the quality of the contact water, and event monitoring (in the case of a spill emergency or occurrence). Fuel transfer and activities should be monitored by Agnico Eagle to follow the plan. E&I is conducting a daily inspection – ENV to finalize KPI and work with warehouse and E&I for planning – 1 month

Visual and Operational Inspections

Visual and operational inspections are a central component of performance monitoring. Visual inspections are conducted once per week by operations staff. Staff will inspect the facilities for:

- Tank and piping condition;
- Secondary containment berm structure and integrity;
- Indicators of liner damage;
  Precipitation and snow accumulation;
- Evidence of tampering or misuse;
- Any structural abnormalities; and
- Visible sheens on contact water pools and crush material inside the secondary containment.

Visual inspections of the secondary containment structure are important because if the integrity of the berm walls or liner is compromised, this presents the greatest risk of leaks or seepage to the environment.

Environmental staff follow-up with operations staff and conduct periodic visual inspections during routine-mine environmental conformity inspections. As licensed, a weekly written log is completed and held on file at the Project site to be provided to appropriate authorities upon request.

Routine Contact Water Monitoring

Due to melting snow that accumulates over the winter and precipitation, contact water will unavoidably collect inside the secondary containment berm. During visual inspections, the quantity of contact water collected inside the secondary containment berm will be evaluated. If there is a visible sheen on the contact water or if water withdrawal is deemed necessary, water samples will be collected and analyzed. Accumulated water will only be released to the receiving environment if it meets discharge criteria.

Event Monitoring

The SCP will be followed in the event of a spill occurrence at a bulk fuel storage tank. If deemed necessary, the environmental staff will conduct an environmental assessment as a follow-up to a spill response to evaluate the extent of impacts to the nearby environment. This may include the identification of potential environmental pathways of concern that may result in impacts to surface water, soil, or groundwater.

5.4 Contaminated Material

Contaminated material, for example spill pads, resulting from the storage and handling of fuels and lubricants are salvaged, put into appropriate containers, and labelled for temporary storage. Depending on the nature of the contamination, material is either: treated on-site in the landfarm, incinerated, disposed of on-site if appropriate, or shipped off-site to an approved disposal facility.

5.5 Used Petroleum Products

Used oil that is no longer suitable for its intended use is classified as a hazardous waste. The discharge of used oil into the environment, including but not limited to landfills, sewers, and waterbodies, is prohibited. Agnico Eagle manages used oil and waste fuel according to the *Used Oil and Waste Fuel Management Regulations* (refer to the Incinerator and Composter Waste Management Plan).

SECTION 6 • PROCESS PLANT AND WATER TREATMENT REAGENTS AND CONSUMABLES

6.1 Product Description

The process plant uses a number of chemicals and reagents to treat the ore and recover entrained gold. The Water Treatment Plant also uses a number of chemicals and reagents to treat water. Water treatment chemicals would be used over a three to four month period during frost-free months only.

The following tables present specific descriptions for each reagent at the time that the document was drafted, however current MSDS should be referred to prior to use of any reagent:

- Table 6-1 and Table 6-2 present the average annual consumption of reagents during the operation and in which format they will be delivered;
- Table 6-3 presents hazard classes and potential environmental impacts for each reagent;
- Table 6-4 presents handling procedures for each reagent; and
- Table 6-5 presents the Personal Protective Equipment for each reagent.

Table 6-1 Process Plant Reagents – Use and Consumption for Processing

Product	Use/Location	Maximum Amount Anticipated On-Site	Maximum Amount by Unit
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
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)

Product	Use/Location	Maximum Amount Anticipated On-Site	Maximum Amount by Unit
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

Table 6-2 Water Treatment Reagents and Others – Use and Consumption

Product	**Use/Location**	**Maximum Amount Anticipated on-site**	**Maximum Amount by Unit**
Ferric sulfate	Water Treatment Plant	260 t	1t/bag
Lime	Water Treatment Plant	320 t	1,743 kg/bag
Flocculent	Water Treatment Plant	5 bags	750 kg/bag (15 t/sea can)
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	

Table 6-3 Process Plant, Water Treatment Reagents, and Others – Hazard Classes and Potential Environmental Impacts

Material	**Class**	**Potential Impact**
Acetylene	2.1	Generally not hazardous for water
Activated carbon	4.2	No information available
Anti-scaling agent	Not classified	Negligible with proper handling
Borax	Not classified	Presents no health hazards
Copper sulfate	9	Harmful to aquatic life
Sodium cyanide	6.1	Expected to be very toxic to aquatic life and to terrestrial life

Material	Class	Potential Impact
Flocculent	Not classified	Acute fish, invertebrate, algae and bacteria toxicity
Ferric sulfate	8	Ecological impact has not been determined
Hydrochloric acid	8	Extremely toxic to aquatic life by lowering the pH below 5.5. When released into the soil, this material may leach into permafrost
Lead nitrate	5.1	Very toxic to aquatic organisms, may cause long-term effects in the aquatic environment
Lead acid batteries	8	Limited information available. Negligible with proper handling
Lime	8	This material is alkaline and if released into water or moist soil will cause an increase in pH
Paints	Not classified	Limited information available. Negligible with proper handling
Solvents	Not classified	Harmful to aquatic life with long lasting effect
Silica	Not classified	Generally not hazardous for water
Sodium hydroxide	8	Ecological impact has not been determined
Sodium metabisulfite	Not classified	Ecological impact has been determined
Sodium nitrate	5.1	Possibly hazardous; short-term degradation products are not likely. However, long-term degradation products may arise. The products of degradation are less toxic than the product itself
Sulfur prills	9	No information available (insoluble in water)

Table 6-4 Process Plant and Water Treatment Reagents – Safe Handling Procedures

Product	Handling Procedures
Acetylene	Do not mix with air or oxygen above atmospheric pressure. Store away from oxidizing agents. Open and handle cylinder with care. Keep ignition sources away - Do not smoke. Protect from heat. Protect against electrostatic charges. Pressurized container: protect from sunlight, store in a cool location and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Prevent impact and friction. Store in accordance with local fire code and/or building code or any pertaining regulations.
Activated carbon	Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Activated carbon, especially when wet, can deplete oxygen from air in enclosed spaces, and dangerously low levels of oxygen may result. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.
Anti-scaling agent	Used in extremely small quantities. Can cause mild to moderate irritation of eyes, skin, and upper respiratory tract. Wash thoroughly after handling. Use sensible industrial hygiene and housekeeping products. Not flammable. Keep containers tightly closed
Borax	No special steps required.
Copper sulfate	Avoid contact with skin and eyes. DO NOT breathe dust. Always wash hands thoroughly after contact. Store and use only in dry, well-ventilated areas. Keep container tightly closed.

Product	Handling Procedures
Flocculent	Dust generated in handling of this product can be explosive if sufficient quantities are mixed in air, in which case ignition sources should be avoided. Employ grounding, venting and explosion relief provisions in accordance with accepted engineering practices in process operations capable of generating dust/or static electricity. Handle in accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid contact with eyes and prolonged or repeated skin contact. Avoid continuous or repetitive breathing of dust. Use only with adequate ventilation. Remove contaminated clothing; launder or dry-clean before reuse. Wash thoroughly with soap and water after using. For industrial use only. Material is slippery when wet. Store in the original container, securely closed, in a cool and dry location. Avoid extremes of temperature and ignition sources.
Ferric sulfate	Store and handle in corrosion-proof materials (and area). Use FRP or PVC pipes. Be cautious of substance residue in empty containers. Act according to precautions and warnings set forth.
Lead nitrate	Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as combustible materials and organic materials.
Lead acid (batteries)	Keep containers tightly closed when not in use. If battery case is broken, avoid contact with internal components. Do not handle near heat, sparks, or open flames. Protect containers from physical damage to avoid leaks and spills. Place cardboard between layers of stacked batteries to avoid damage and short circuits. Do not allow conductive material to touch the battery terminals. A dangerous short-circuit may occur and cause battery failure and fire. Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water.
Lime	Avoid contact with skin and eyes. Do not breathe dust. Wear suitable protective clothing, gloves and eye/face protection. In case of insufficient ventilation, wear suitable respiratory equipment. Hydrated lime should be stored in a cool protected place away from moisture, strong oxidants or acids and to minimize dust emissions. Storage in steel or concrete bins and silos, or plastic lined bags, is appropriate. An alkaline material that reacts vigorously with acids, generating some heat. May absorb carbon dioxide from the atmosphere, forming calcium carbonate. Soluble in glycerol, aqueous solution of sucrose, and ammonium chloride. Incompatible with maleic anhydride, nitroparaffins, and phosphorus.
Hydrochloric acid	Do not get in eyes, on skin, or on clothing. Wear protective clothing. Avoid breathing vapours or fumes. Store in cool, dry, ventilated area with acid-resistant floors. Keep container closed, out of direct sunlight, and away from heat, water, and incompatible materials. When diluting, add acid slowly to water and in small amounts. Never use hot water and never add water to acid. When opening metal drum, use non-sparking tools because hydrogen gas may be present. Do not wash out container and use for other purposes. Empty containers retain product residues and may be hazardous.
Paints	No special steps required.
Solvents	Use only with adequate ventilation. Wash thoroughly after handling. Observe good industrial hygiene practices. Keep container tightly closed and in a well-ventilated place. Store in closed original container at room temperature. Store away from incompatible materials.

Product	Handling Procedures
Silica	Prevent formation of dust. This product is not flammable. When pouring into a container of flammable liquid, ground both containers electrically to prevent static electric spark. Keep containers tightly sealed.
Sodium cyanide	Highly toxic, corrosive to eyes, skin, and respiratory tract. Can be fatal if swallowed, inhaled, or absorbed through skin. Keep cyanide antidote kit available in any cyanide work area. Wear personal protective clothing at all times. Keep in tightly closed container in cool, dry, ventilated area. Protect against physical damage to containers. Do not store under sprinkler systems. Do not wash out container and use for other purposes. Empty containers retain product residues and may be hazardous.
Sodium hydroxide (caustic soda)	Can cause severe injury to eyes, skin, and respiratory tract. Use PPE at all times and DO NOT contact product directly. Wash thoroughly after handling. Store in dry, well-ventilated area. Keep in original container, tightly closed. Empty containers retain product residues and may be hazardous.
Sodium metabisulfite	May cause irritation to eyes, skin, and respiratory tract with prolonged exposure. Sulfite-sensitive individuals may experience severe allergic reaction to dust. Releases sulfur dioxide gas when mixed with water. Wear PPE and wash thoroughly after handling. Store in dry, well-ventilated area away from heat, acids, and oxidizers. Keep container tightly closed. Use vacuum to clean up dust.
Sodium nitrate	Keep away from heat. Keep away from sources of ignition. Keep away from combustible materials. Empty containers pose a fire risk; evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, and acids. Keep container dry. Keep in a cool place. Keep container tightly closed. Keep in a cool and well-ventilated area. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.
Sulfur prills	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. May form flammable dust-air mixtures. Avoid contact with skin, eyes and clothing. Empty containers contain product residue (liquid and/or vapour), and can be dangerous. Keep containers tightly closed. Avoid contact with heat, sparks, and flame. Use with adequate ventilation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat spark, or open flames. Store away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances (oxidizing agents).

Table 6-5 Process Plant, Water Treatment Reagents, and Others – Personal Protective Equipment

Product	Personal Protective Equipment		
	Eyes	Skin	Respiration
Acetylene	Tightly sealed goggles	Protective gloves	Use atmosphere-supplying respirators (e.g. supplied-air: demand, pressure-demand, or continuous-flow or self-contained breathing apparatus: demand or pressure-demand or combination supplied-air with auxiliary self-contained air supply atmosphere-supplying respirator in case of insufficient ventilation)
Activated carbon	None required	None required	None required
Anti-scaling agent	For splash protection use chemical goggles or full face shield	Rubber or neoprene gloves; impervious apron or coveralls and boots	Not normally needed
Borax	Avoid eye contact	None required	None required
Copper sulfate	Chemical goggles or full face shield	Rubber or neoprene gloves; impervious apron or coveralls and boots	Dust mask; NIOSH/MSHA approved respirator, if required
Flocculent	For splash protection use chemical goggles or full face shield	Rubber or neoprene gloves; impervious apron or coveralls and boots	Dust mask
Ferric sulfate	Splash goggles	Lab coat; gloves	Dust respirator. Be sure to use an approved/certified respirator or equivalent
Lead nitrate	Splash goggles	Lab coat; gloves	Dust respirator. Be sure to use an approved/certified respirator or equivalent
Lead acid (batteries)	Wear protective glasses with side shields or goggles.	Wear chemical resistant gloves as a standard procedure to prevent skin contact	Not required for normal conditions of use.
Lime	Safety goggles	Wear impervious gloves, shoes and protective clothing to prevent skin contact	NIOSH/MSHA approved respirator, if required

Table 6-5 Process Plant, Water Treatment Reagents, and Others – Personal Protective Equipment

Product	Personal Protective Equipment		
	Eyes	**Skin**	**Respiration**
Hydrochloric acid	For splash protection use chemical goggles or full face shield	Rubber or neoprene gloves; impervious apron or coveralls and boots	NIOSH/MSHA approved respirator
Paints	None required	None required	None required
Solvents	Use approved safety goggles or face shield	Wear appropriate chemical resistant clothing to prevent any possibility of skin contact	In case of inadequate ventilation, use respiratory protection
Silica	Safety goggles	Wear impervious gloves, shoes and protective clothing to prevent skin contact	NIOSH/MSHA approved respirator, if required
Sodium cyanide	For dust and splash protection use chemical goggles or full face shield	Rubber or neoprene gloves; impervious lab coat, apron, or coveralls and boots	NIOSH/MSHA approved respirator, if required
Sodium hydroxide (caustic soda)	Tight-fitting goggles if dust is generated. For splash protection use chemical goggles or full face shield	Gauntlet type rubber or neoprene gloves; impervious apron or coveralls and boots	NIOSH/MSHA approved respirator
Sodium metabisulfite	Chemical safety goggles	Cotton gloves adequate for handling dry product. For solutions, use rubber or neoprene gloves; impervious apron or overalls and boots	NIOSH/MSHA approved respirator
Sodium nitrate	Contact lenses should not be worn; they may contribute to severe eye injury	Impervious gloves of chemically resistant material (rubber or PVC), body suits, aprons, and/or coveralls of chemical resistant material and impervious boots of chemically resistant material should be worn at all times	For dusty or misty conditions, wear NIOSH-approved dust or mist respirator. In case of spill or leak resulting in unknown concentration, use NIOSH approved supplied air respirator
Sulfur prills	Chemical safety goggles	Wear impervious gloves, shoes and protective clothing to prevent skin contact	NIOSH/MSHA approved respirator, if required

SECTION 7 • MISCELLANEOUS HAZARDOUS/TOXIC MATERIALS

7.1 Product Description

Acids such as nitric acid, as well as emulsifiers and ammonium nitrate, are used at the project mine site. Gases such as propane, oxygen, and acetylene, solvents, water/effluent treatment chemicals, and various additives are also to be utilized.

The release or spillage of any of these substances would possibly result in environmental impacts and pose a potentially hazardous situation for those personnel exposed to these materials. It is essential that materials deemed to be potentially hazardous be dealt with in a cautious manner and in strict adherence to recommended regulations outlined in the legislation, whether the substance is provided in large or small quantities. This will prevent serious repercussions should an accidental release of material happen.

7.2 Storage Facilities of Hazardous/Toxic Chemicals

All explosive related chemicals are stored as discussed in the Explosives Management Plan. All other chemicals and gases are stored in appropriate locations.

These storage facilities ensure that chemicals that could interact and cause a serious incident are kept segregated.

SECTION 8 • INVENTORY, INSPECTION, AND RECORDS

A contract expediting company arranges all deliveries from the Itivia docking site to the project mine site. This will include the hazardous materials discussed in this Plan. The Environment & Infrastructure Superintendent has ultimate responsibility for supervising the receipt, inspection, and recording of all material inventories at site. The Division Managers reconcile total amounts received against amounts ordered. Purchasing controls ensures that no excess hazardous materials are purchased beyond that requested by the Project for the coming year.

8.1 Petroleum Products

8.1.1 Inventory Management

Diesel fuel use will be automatically metered when it is pumped from the bulk tanks. The metered volumes will be summarized weekly and reconciled against tank levels determined manually with a dipstick from the top of the tanks. Diesel fuel consumption for the power generators will be recorded weekly.

8.1.2 Inspection

The Environment Department will perform regularly scheduled inspections of all fuel and lubricant storage areas. The inspection schedule and procedure to be followed are summarized in Table 8-1. All inspections will be logged with the date and time of inspection, facility inspected, and name of the person completing the inspection.

Table 8-1 Inspection of Petroleum Storage Sites

Site	Inspection
Fuel Tanks	*Schedule* – Weekly by Site Services Fuel Operator; weekly by Environment Technician; quarterly by Environment Coordinator. *Procedure* – Locate leak(s) and report promptly. Inspections will be reported annually and filed with the General Mine Manager or Site Services Superintendent and Environment Superintendent.
Diesel Power Generating Plant	*Schedule* – Daily by powerhouse operator; weekly by Environment Technician as part of regular internal environmental inspections. *Procedure* – Inspections will be reported annually and filed as above.
Other Fueling Stations	*Schedule* – Daily by Site Services Supervisor; weekly by Environment Technician as part of regular internal environmental inspections. *Procedure* – Inspections will be reported annually and filed as above.
Spill Kits	*Schedule* – Monthly by Environment Technician; quarterly by Environment Coordinator. *Procedure* – Inspections will be reported annually and filed as above.
Other Hazardous Material Storage Areas	*Schedule* – Weekly by Environment Technician when materials are on-site. *Procedure* – Inspections will be reported annually and filed as above.

The condition of hazardous materials storage areas, containers, tanks, connectors, and associated plumbing is checked on a regular basis. Observations on their condition will be logged, dated, and kept near the corresponding storage area. Drums/containers will be inspected for the following:

- The presence and legibility of symbols, words, or other marks identifying the contents;
- Signs of deterioration or damage such as corrosion, rust, leaks at seams; or,
- Signs that the drum/container is under pressure such as bulging and swelling, spillage, or discoloration on the top or sides.

If a leak or deterioration is encountered, it will be noted and addressed in a timely manner.

The hazardous materials area's secondary containment is inspected and the condition of the secondary containment will be noted. Arrangements will be made for repairs if necessary.

Any accidental damage to containment structures will be inspected immediately and appropriate repairs undertaken. The extent of damage will be reported in writing to the General Mine Manager, Environment Superintendent and the General supervisor of Environment. The report will note any remedial repairs that have/may be made, the date of any repairs, and the need for any follow-up inspection.

8.1.3 Records

Records pertaining to storage, use, and loss of fuels and lubricants are required by CCME and the Fire Marshal (under the *National Fire Code).* The following records will be prepared by the Procurement and Logistics and Environment & Infrastructure Departments:

- Reconciliation of bulk inventory from resupply logs;
- Weekly use summaries;
- Weekly reconciliation for each storage tank;
- Overfill alarm tests;
- Pressure tests (if applicable);
- Inspections and maintenance checks of the storage tank, piping, and delivery systems;
- Any alteration to the systems;
- Reports of leaks or losses;
- Reports of spill responses; and
- Records of training.

8.2 Miscellaneous Hazardous/Toxic Materials

8.2.1 Inventory Management

Quantities of all hazardous chemicals are reconciled against orders on receipt. The appropriate department responsible for the miscellaneous chemicals are responsible for reconciling the resupply inventory.

8.2.2 Inspection

During operations, the appropriate department responsible for storage and handling of the miscellaneous chemicals regularly inspects all areas where such hazardous materials are used and stored. Any problems are noted and reported to the Department Manager. The Department Manager is responsible for weekly or monthly inspections of miscellaneous hazardous materials and storage areas.

8.2.3 Records

The quantity of hazardous materials received, used, and in possession of personnel are recorded by appropriate departments. The departments comply with the environmental regulations.

SECTION 9 • TRAINING

9.1 General

Mine employees receive additional training in mine safety as specified by the *Mine Health and Safety Act* and regulations. Agnico Eagle ensures compliance with the training requirements specified in the Act and regulations.

Plant employees receive additional training specific to their area of work and duties, including safe operating practices, safe handling and storage of chemicals, and use of PPE. Other training will include cyanide, chemical awareness/specific chemicals for Tasks and mill induction training. This training is the responsibility of Agnico Eagle.

A record of training received is maintained for each employee and contractors.

9.2 Petroleum Products Handlers

Personnel who handle petroleum products are expected to be conversant with relevant MSDS information. As well, these personnel are given training in the following:

- Transportation of Dangerous Goods (TDG);
- Agnico Eagle's fuel handling procedures (outlined in Section 5);
- Spill response and clean-up procedures for petroleum (see the SCP); and
- Emergency response, especially firefighting procedures (see the Risk Management and Emergency Response Plan).

9.3 Plant Employees

Plant operators may receive TDG training, if appropriate. All plant employees are trained in spill and emergency response procedures. Emergency response procedures for spilled chemical substances are provided in the SCP.

9.4 Third Party Contractors

It is expected that third party contractors receive adequate and comprehensive training to conduct their work tasks from their employer. Agnico Eagle intends to review the general qualifications of third party contractors prior to having them work at the site. In addition, the contractor companies may also be requested to confirm the qualifications of specific individuals they have working at the site.

SECTION 10 • PLAN EVALUATION, AUDIT AND IMPROVEMENT

As part of Agnico Eagle's commitment to attain certification under the ICMC, every three years Agnico Eagle will sponsor audits by Institute-approved, third-party professionals to verify its compliance with the Code's principles and standards of practice with regard to cyanide handling.

The Plan will be reviewed annually and updated if there are changes in operations and/or technology.

REFERENCES

Government of Nunavut. 2010. Environmental Guideline for the General Management of Hazardous Waste. Nunavut Department of Environment, Environmental Protection Service. Available online: http://env.gov.nu.ca/sites/default/files/Guideline%20-%20General%20Management%20of%20Hazardous%20Waste%20(revised%20Oct%202010).pdf

APPENDIX A • ENVIRONMENTAL GUIDELINE FOR THE GENERAL MANAGEMENT OF HAZARDOUS WASTE

Environmental Guideline for the

General Management of Hazardous Waste

Department of Environment
Government of Nunavut

GUIDELINE: GENERAL MANAGEMENT OF HAZARDOUS WASTE

Original: April 1999
Revised: January 2002
April 2010
October 2010

This Guideline has been prepared by the Department of Environment's Environmental Protection Division and approved by the Minister of Environment under the authority of Section 2.2 of the *Environmental Protection Act.*

This Guideline is not an official statement of the law and is provided for guidance only. Its intent is to increase the awareness and understanding of the risks and hazards associated with hazardous waste and to assist in its proper management. This Guideline does not replace the need for the owner or person in charge, management or control of a hazardous waste to comply with all applicable legislation and to consult with Nunavut's Department of Environment, other regulatory authorities and qualified persons with expertise in the management of hazardous waste.

Copies of this Guideline are available upon request from:

Department of Environment
Government of Nunavut
P.O. Box 1000, Station 1360, Iqaluit, NU, X0A 0H0
Electronic version of the Guideline is available at http://env.gov.nu.ca/programareas/environmentprotection

Cover Photos: E. Paquin

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Introduction

'Waste' is a term used to describe materials that are no longer wanted or are unusable for their original intended purpose. Many different types of waste are generated each day in Nunavut by industry and small business, hospitals and health centers, schools and individuals during the normal course of carrying out daily activities. Some types of waste pose greater risks than others because of their chemical, physical and biological properties. These wastes are generally referred to as being a 'hazardous waste'. Examples of hazardous waste include discarded paint, used solvents, motor and lubricating oil, cleaning compounds, certain building construction and demolition waste and products with an expired shelf life. They will generally exhibit one or more of the following characteristics - ignitable (i.e. flammable), reactive, corrosive or toxic. Hazardous waste often requires that specific management measures be taken to ensure the health and safety of the environment, workers and the general public.

The purpose of the Environmental Guideline for the General Management of Hazardous Waste (the Guideline) is to ensure the safe, effective and efficient management of hazardous waste in Nunavut. It provides information to generators, carriers and receivers of hazardous waste on its hazards, how best to reduce or eliminate the effects it can have on the environment, worker and public safety and guidance on its storage, registration and transportation.

The *Environmental Protection Act* enables the Government of Nunavut to implement measures that preserve, protect and enhance the quality of the environment. Section 2.2 of the *Act* provides the Minister with authority to develop, coordinate, and administer the Guideline.

The Guideline is not an official statement of the law. For further information and guidance, the owner or person in charge, management or control of a hazardous waste is encouraged to review all applicable legislation and consult the Department of Environment, other regulatory agencies or qualified persons with expertise in hazardous waste management.

1.1 Definitions

Carrier	A person who accepts hazardous waste for transportation or transports hazardous waste, whether or not for hire or reward. A carrier is also referred to as a transporter of hazardous waste.
Commercial	Actions undertaken for hire or reward.
Commissioner's Land	Lands that have been transferred by Order-in-Council to the Government of Nunavut. This includes roadways and land subject to block land transfers. Most Commissioner's Land is located within municipalities.
Consignee	A person to whom hazardous waste is being or is intended to be transported. A consignee is also referred to as a receiver of hazardous waste.

Consignor	A person who has possession of hazardous waste immediately before it is transported. A consignor may also be a generator of hazardous waste.
Contaminant	Any noise, heat, vibration or substance and includes such other substance as the Minister may prescribe that, where discharged into the environment, (a) endangers the health, safety or welfare of persons, (b) interferes or is likely to interfere with normal enjoyment of life or property, (c) endangers the health of animal life, or (d) causes or is likely to cause damage to plant life or to property.
Dangerous Good	Any product, substance or organism included by its nature or by the *Transportation of Dangerous Goods Regulations* in any of the classes listed in the Schedule provided in the *Transportation of Dangerous Goods Act* (Canada).
Empty Container	A container that previously held a hazardous waste and has been emptied to the greatest extent practical or triple rinsed with an appropriate cleaning agent. This does not include containers that previously contained mercury or Class 2.3, 5.1 or 6.1 materials.
Environment	Means the components of the Earth and includes (a) air, land and water, (b) all layers of the atmosphere, (c) all organic and inorganic matter and living organisms, and (d) the interacting natural systems that include components referred to in paragraphs (a) to (c) above.
Generator	The owner or person in charge, management or control of a hazardous waste at the time it is generated or a facility that generates a hazardous waste. A generator may also be a consignor of hazardous waste.
Hazardous Waste	A contaminant that is a dangerous good and is no longer wanted or is unusable for its original intended purpose and is intended for storage, recycling, treatment or disposal. A hazardous waste does not include a contaminant that is (a) household in origin; (b) exempted as a small quantity; (c) returned directly to a manufacturer or supplier of the product, substance or organism for reprocessing, repackaging or resale for any reason; (d) an empty container; or (e) intended for disposal in a landfill or a sewage treatment facility and meets the applicable standards set out in the Environmental Guideline for Industrial Waste Discharges.

Hazardous Waste Management Facility	A commercial facility used for the collection, storage, transfer, treatment, recycling or disposal of a hazardous waste. For clarity, a hazardous waste management facility does not include a municipal landfill or sewage lagoon.
Incompatible Hazardous Waste	A hazardous waste that, when in contact with another substance or hazardous waste under normal circumstances, reacts to produce heat, gas, fire, explosion or a corrosive or toxic substance.
Landfilling	The intentional depositing or placement of waste in or on land for the purposes of disposal.
Long-term Storage	The storage of hazardous waste for a period of 180 days or more.
Manifest	The manifest as set out in Schedule IX to the *Export and Import of Hazardous Waste and Hazardous Recyclables Regulations* under the *Canadian Environmental Protection Act* (Canada).
Minister	The Minister of Environment of the Government of Nunavut.
Qualified Person	A person who has an appropriate level of knowledge and experience in all relevant aspects of hazardous waste management.
Receiver	A person to whom hazardous waste is being or is intended to be transported. A receiver is also referred to as a consignee of hazardous waste.
Responsible Party	The owner or person in charge, management or control of the hazardous waste.
Small Quantity	Hazardous waste that is generated in an amount that is less than five kilograms per month if a solid or less than five litres per month if a liquid, and where the total quantity accumulated at any one time does not exceed five kilograms or five litres. This does not include hazardous waste that is mercury or Class 2.3, 5.1 or 6.1 materials. These wastes must be generated in an amount that is less than one kilogram per month if a solid or less than one litre per month if a liquid, and where the total quantity accumulated at any one time does not exceed one kilogram or one litre.
Transport Authority	The statute and regulations controlling the management of hazardous waste under that mode of transport. These include (a) Road and Rail - *Transportation of Dangerous Goods Act* (Canada) and *Regulations; Interprovincial Movement of Hazardous Waste Regulations* (CEPA) and *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (CEPA). (b) Air – *International Air Transport Association (IATA) Dangerous Goods Regulations* and *International Civil Aviation Organization* (ICAO) *Technical Instructions;* and

(c) Marine – *International Maritime Dangerous Goods Code* (IMDG).

Transfer	The temporary storage of hazardous waste for a period of 179 days or less for the purpose of changing from one vehicle or means of transportation to another.
Transporter	A person who accepts hazardous waste for transportation or transports hazardous waste, whether or not for hire or reward. A transporter is also referred to as a carrier of hazardous waste.
Waste Audit	An inventory or study of the amount and type of waste that is produced at a location.

1.2 Roles and Responsibilities

1.2.1 Environmental Protection Division

The Environmental Protection Division of the Department of Environment is the key environmental agency responsible for ensuring the proper management of hazardous waste and other contaminants on Commissioner's Land. Authority is derived from the *Environmental Protection Act*, which prohibits the discharge of contaminants to the environment and enables the Minister to undertake actions to ensure appropriate management measures are in place. Although programs and services are applied primarily to activities taking place on Commissioner's and municipal lands and to Government of Nunavut undertakings, the *Environmental Protection Act* may be applied to the whole of the territory where other controlling legislation, standards and guidelines do not exist. A complete listing of relevant legislation and guidelines can be obtained by contacting the Department of Environment or by visiting the web site at http://env.gov.nu.ca/programareas/environmentprotection.

The Department of Environment will provide advice and guidance on the proper management of hazardous waste. However, it remains the responsibility of the owner or person in charge, management or control of the hazardous waste to ensure compliance with all applicable statutes, regulations, standards, guidelines and local by-laws.

1.2.2 Generators of Hazardous Waste

The generator is the owner or person in charge, management or control of the hazardous waste at the time it is produced or of the facility that produces the hazardous waste. The generator is responsible for any and all hazardous waste produced and must ensure the hazardous waste is properly and safely managed from the time it is generated to its final disposal. This is referred to as managing the waste from cradle-to-grave.

Contractors may manage hazardous waste on behalf of the generator. However, the generator remains responsible for determining whether the waste is hazardous and ensuring the method of management complies with all applicable statutes, regulations, standards, guidelines and local by-laws. If the contractor does not comply with the requirements of the *Environmental Protection Act* and is charged with a violation while managing the waste, the generator may also be held liable.

The basic responsibilities of a hazardous waste generator in Nunavut are:

- Registering with the Department of Environment as a generator of hazardous waste.
- Registering the facility with the Department of Environment as a hazardous waste management facility where the facility is used for commercial purposes and is intended for the storage of hazardous waste for a period of 180 days or more, where stored quantities exceed the criteria set out in Appendix 8 or where hazardous waste is recycled, treated or disposed of in quantities in any single month that exceed a 'small quantity'.
- Classifying and labeling hazardous waste in accordance with the Transport Authority.
- Managing the hazardous waste in accordance with the Guideline, *Environmental Protection Act, Fire Prevention Act*, *Safety Act, Public Health Act* and all other applicable statutes, regulations, standards, guidelines and local by-laws.
- Reusing, recycling, treating or disposing of the hazardous waste in a proper and safe manner.
- Where the hazardous waste is transported off-site, completing Part A of the waste manifest form and retaining a copy for two years, using a registered hazardous waste carrier to transport the waste and sending the waste to a registered receiver or hazardous waste management facility.
- Ensuring staff are trained and qualified to safely handle the hazardous waste.
- Filing a spill contingency plan with the Minister where stored quantities of hazardous waste exceed the criteria set out in Schedule A of the *Spill Contingency Planning and Reporting Regulations*.
- Reporting any spill immediately to the NWT/Nunavut Spill Report Line at (867) 920-8130.

Further information and application forms for registering as a generator or a hazardous waste management facility are available from the Department of Environment. Refer to sections 3.2.1 and 3.2.2 and Appendices 4 and 7 for further information.

1.2.3 Carriers of Hazardous Waste

Hazardous waste must be transported in accordance with the appropriate Transport Authority: Road and Rail - *Transportation of Dangerous Goods Act* (Canada) and *Regulations, Interprovincial Movement of Hazardous Waste Regulations* (CEPA) and *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (CEPA)*;* Air – *International Air Transport Association (IATA) Dangerous Goods Regulations* and *International Civil Aviation Organization* (ICAO) *Technical Instructions;* and Marine – *International Maritime Dangerous Goods Code* (IMDG).

Carriers operating in Nunavut must be registered with the Department of Environment before transporting hazardous waste. Other basic responsibilities of hazardous waste carriers are:

- Placarding and labeling all transport vehicles and containers in accordance with the appropriate Transport Authority.
- Completing Part B of the waste manifest form and retaining a copy for two years.
- Accepting hazardous waste only from registered generators and safely transporting hazardous waste only to a registered receiver or hazardous waste management facility.
- Ensuring staff are trained and qualified to safely transport hazardous waste.
- Reporting any spill immediately to the NWT/Nunavut Spill Report Line at (867) 920-8130.

Further information and application forms for registering as a hazardous waste carrier are available from the Department of Environment. Refer to section 3.2.1 and Appendix 5 for further information.

1.2.4 Receivers of Hazardous Waste

Any person receiving or accepting hazardous waste in Nunavut for the purpose of storage, transfer, reuse, recycling, treatment or disposal must be registered with the Department of Environment as a hazardous waste receiver. The facility must also be registered as a hazardous waste management facility where it is used for commercial purposes and is used to store hazardous waste for a period of 180 days or more, store quantities that exceed the criteria set out in Appendix 8 or hazardous waste is recycled, treated or disposed of in quantities in any single month that exceed a 'small quantity'. Other basic responsibilities of hazardous waste receivers in Nunavut are:

- Handling and storing the hazardous waste in accordance with the Guideline, *Environmental Protection Act, Fire Prevention Act*, *Safety Act, Public Health Act* and all other applicable statutes, regulations, standards, guidelines and local by-laws.
- Reusing, recycling, treating or disposing of the hazardous waste in a proper and safe manner.
- Completing Part C of the waste manifest form and retaining a copy for two years.
- Accepting hazardous waste only from registered generators and carriers.
- Ensuring staff are trained and qualified to safely handle hazardous waste.
- Filing a spill contingency plan with the Minister where stored quantities of hazardous waste exceed the criteria set out in Schedule A of the *Spill Contingency Planning and Reporting Regulations*.
- Reporting any spill immediately to the NWT/Nunavut Spill Report Line at (867) 920-8130.

Further information and application forms for registering as a receiver or hazardous waste management facility are available from the Department of Environment. Refer to sections 3.2.1 and 3.2.2 and Appendices 6 and 7 for further information.

1.2.5 Other Regulatory Agencies

Other regulatory agencies may have to be consulted regarding the management of hazardous waste as there may be other environmental or public and worker health and safety issues to consider. Some of the other agencies include:

Department of Economic Development and Transportation

The Motor Vehicles Division is responsible for ensuring the safe transport of hazardous waste and other dangerous goods by road through administration of the *Transportation of Dangerous Goods Act*. The Department is also responsible under the *Motor Vehicles Act* for driver licensing and various other vehicle and load safety matters.

Workers' Safety and Compensation Commission

The Workers' Safety and Compensation Commission is responsible for promoting and regulating worker and workplace health and safety in Nunavut. The Commission derives its authority from the *Workers' Compensation Act* and *Safety Act* which require an employer to maintain a safe workplace and ensure the safety and well being of workers. The Workplace Hazardous Materials Information System, or WHMIS, requires information be provided to workers on the safe use of any hazardous material used in the workplace. All hazardous waste generators, carriers and receivers should consult the Prevention Services Division for further information and guidance.

Department of Community and Government Services

The Department of Community and Government Services is responsible under the *Commissioners' Lands Act* for the issuance of land leases, reserves, licenses and permits on Commissioner's Lands. The Department, in cooperation with communities, is also responsible for the planning and funding of municipal solid waste and sewage disposal facilities in most Nunavut communities. Emergency planning responsibilities under the *Emergency Measures Act* include developing territorial emergency response plans, coordinating emergency operations at the territorial and regional levels and supporting community emergency response operations.

The Office of the Fire Marshal is responsible for ensuring the safe storage, handling and use of flammable and combustible liquids and materials. The Office of the Fire Marshal derives its authority from the *Fire Prevention Act*, National Fire Code and National Building Code.

Department of Health and Social Services

Activities related to the generation, storage, transportation, treatment and disposal of hazardous waste may have an impact on public health. The Office of the Chief Medical Officer of Health and Regional Environmental Health Officers should be consulted regarding legislated requirements under the *Public Health Act.*

Environment Canada

Environment Canada is responsible under the *Canadian Environmental Protection Act* for ensuring the safe management of designated hazardous waste at federal facilities and on federal lands. The management, disposal and export of polychlorinated biphenyl (PCB) waste is controlled under the *PCB Regulations*, the *Federal Mobile PCB Treatment and Destruction Regulations* and the *PCB Waste Export Regulations*. The interprovincial and international transport of waste is controlled under the *Interprovincial Movement of Hazardous Waste Regulations* and the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*. Environment Canada is also responsible for administering the pollution prevention provisions of the federal *Fisheries Act*.

Indian and Northern Affairs Canada

Indian and Northern Affairs Canada is responsible under the *Territorial Lands Act* and *Nunavut Waters and Nunavut Surface Rights Tribunal Act* for the management of federal lands and waters in Nunavut, including the impact hazardous waste may have on the quality of these lands and waters.

Natural Resources Canada

The *Explosives Act* provides Natural Resources Canada with authority to manage explosives in Canada, including waste explosives. The Canadian Nuclear Safety Commission, which reports to Parliament through the Minister of Natural Resources, administers the safe handling and disposal of radioactive materials and licenses institutions and companies to possess and use radioactive materials under the *Nuclear Safety and Control Act* and *Nuclear Liability Act.*

Local Municipal Governments

The role of municipal governments is important in the proper local management of hazardous waste. Under the Nunavut Land Claim Agreement, municipalities are entitled to control their own municipal disposal sites. Hazardous waste may be deposited into municipal landfill sites and sewage treatment facilities only with the consent of the local government. Local environmental and safety standards are determined, in part, by how the property is designated under municipal government development plans (i.e. land use zoning). The local fire department may also be called upon if a fire or other public safety issue is identified.

Co-management Boards and Agencies

Co-management boards and agencies established under the Nunavut Land Claim Agreement have broad authority for land use planning, impact assessment and the administration of land and water. Activities involving hazardous waste may be controlled through the setting of terms and conditions in plans, licenses and permits issued by the Nunavut Water Board and other co-management boards and agencies.

Appendix 3 provides further assistance in determining the primary regulatory agency contact for managing hazardous waste in Nunavut.

Appendix 11 provides mailing addresses, phone and fax numbers for each of the regulatory agencies.

Management of Hazardous Waste

2.1 What is Hazardous Waste?

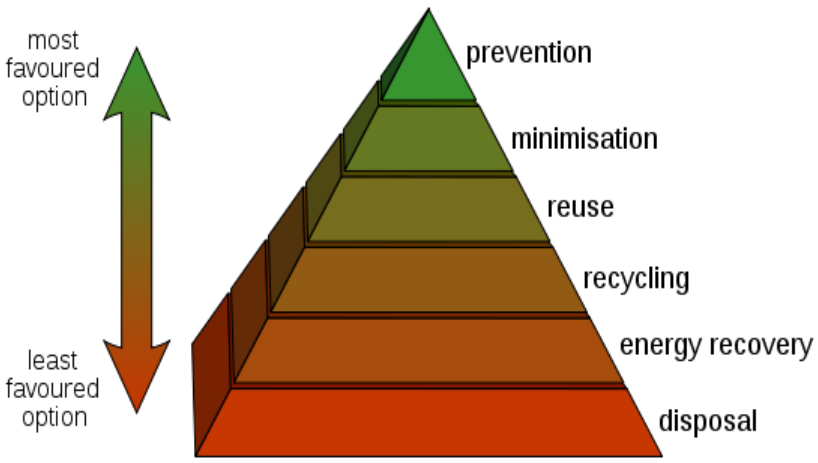
Hazardous waste is unwanted material or products that can cause illness or death to people, plants and animals. It may be a liquid, solid, sludge or gas and contain chemicals, heavy metals, radioactives, infectious organisms or other toxic substances. It may be a single product or a combination of many hazardous and non-hazardous materials (i.e. mixed waste). Its harmful effects may exist for a relatively short period of time (i.e. oil-based paint before hardening) or continue for hundreds of years. It can persist in soil, water and sediment (i.e. radioactive materials) or bioaccumulate in plants and animals (i.e. mercury, PCBs).

Hazardous waste is generated by everybody. Households commonly generate unwanted gasoline, brake and windshield wiper fluid, cleaning supplies, paints and paint thinners, lead acid batteries, used computer equipment and construction materials (i.e. asbestos), pesticides and others. Hospitals and nursing stations generate unwanted needles and waste human tissue, body fluids and biotic cultures. Business and industry generate many different types of hazardous waste including used motor and lubricating oil, cleaning solvent, drilling fluid and cuttings and mine tailings.

2.2 Waste Management

Proper waste management simply makes good sense. Minimizing or eliminating the generation of hazardous and other waste helps to reduce the hazards and costs associated with its handling, storage, transport, recycling, treatment and disposal. It also reduces the impacts waste could have on the environment, human and worker health and safety and reduces the global emission of greenhouse gases by minimizing the use of raw materials. Another term commonly used to describe activities that reduce the amount of material entering a waste stream or being released to the environment is ‘pollution prevention’.

Once a waste is created, the generator is responsible for its safe management from cradle-to-grave. Waste generators can prevent pollution and reduce costs by implementing various waste reduction, reuse and recycling programs through changes to operational procedures, maintenance practices and raw material use. Treating and disposing of waste either locally or outside of Nunavut should be considered only if reuse and recycling options are not available or practical.



2.2.1 Reduce and Minimize – the first option

Using raw materials efficiently and reducing the amount of waste generated is the first and most important step in effective waste management. Both environmentally and economically, consuming less is the most fundamental and effective step to reducing waste.

A waste audit should be undertaken to inventory and study the waste produced at a location or business. The audit should identify the type and amount of waste being generated, the costs of current management methods including handling, storage, treatment, transport and disposal, and examine opportunities and set targets for reducing or reusing waste. These opportunities include awareness and education, the substitution or reduction of purchased raw materials, production redesign, process changes and improved maintenance activities. Other opportunities include purchasing products that are durable or are manufactured from environmentally-friendly materials (i.e. biodegradable or post-consumer materials), avoiding products that are designed for single or short life usage and buying only the quantity that is needed. Effective communications is critical to the success of any waste reduction program.

2.2.2 Reuse and Recycle

Even with effective waste reduction measures in place there will be waste generated. Reusing the waste product for a different but related purpose (reuse) or producing a new product from the original material (recycle) is an effective way to reduce the volume of waste. The waste audit should identify whether opportunities are available for reusing or recycling waste within the generating facility. Alternatively, other local or distant users may be found to reuse or recycle the waste that would otherwise require treatment or disposal.

The Department of Environment encourages the reuse and recycling of hazardous and other waste in the following ways:

- Local reuse and recycle programs are available in various communities for some types of hazardous waste including used oil and waste fuel. Generators should contact the Department of Environment or local municipal government for the names of registered waste receivers or other opportunities to reuse or recycle wastes locally.
- Waste exchanges and associations offer opportunities for waste generators to transfer unwanted, overstocked, obsolete, damaged, contaminated and post-dated material to another person or company that can use it. In some cases, the receiving company will purchase the waste from the generator. Appendix 10 provides a listing of several waste exchanges and associations in Canada.

2.2.3 Treatment and Disposal in Nunavut

Treatment and disposal of a hazardous waste is the last step in effective waste management and should be undertaken only after all other practical reuse and recycle options have been examined.

Treatment covers a broad spectrum of activities. It includes any method, technique or process that will change the physical, chemical or biological character or composition of a hazardous waste so as to reduce its volume, neutralize or make the waste less hazardous and make it safer to transport or store

prior to its disposal. In some cases, more than one process may be required to treat the waste. Facilities in Nunavut at which hazardous waste is stored, treated, recycled or disposed of for commercial purposes must be registered as a hazardous waste management facility. The owner or operator of a facility should refer to section 3.2.2 and Appendix 7 for further information.

It is a contravention of the *Environmental Protection Act* for hazardous waste to be abandoned or disposed of on land or into water in Nunavut. Although a detailed discussion on specific hazardous waste disposal methods is beyond the scope of the Guideline, the following are general points for consideration:

- Hazardous waste must not be mixed or diluted with another substance, or divided into smaller quantities, simply to avoid meeting the definition of a hazardous waste.
- The generator is responsible for determining how hazardous waste can be safely disposed of and to comply with all applicable statutes, regulations, standards, guidelines and local by-laws. The Department of Environment will provide advice and guidance on the management of hazardous waste. Other sources of information and assistance include:
    - Manufacturer or distributor of the new product;
    - Manufacturer's Material Safety Data Sheets (MSDS); and
    - Waste exchanges and associations, other regulatory authorities, waste management consultants and other qualified persons with expertise in the management of hazardous waste.
- Hazardous waste that meets standards set out in the Environmental Guideline for Industrial Waste Discharges may be directed to municipal landfills and sewage treatment systems for disposal. The local municipal government must be consulted and consent to the use of their facility prior to the waste being disposed. Waste that does not meet the standards set out in the Environmental Guideline for Industrial Waste Discharges must be treated prior to disposal or transported to a facility that is registered to accept the waste.
- The open burning of hazardous waste is not an acceptable practice as toxic substances may be released into the atmosphere.
- Incompatible hazardous waste should not be mixed, combined or stored together in the same container as new hazards may be created. Combining or mixing one waste with another waste may also prevent its reuse or recycling and increase disposal costs.
- Containers that previously held a hazardous waste must be emptied to the greatest extent practical or triple rinsed with an appropriate cleaning agent prior to disposal. The rinsings must then also be managed according to their waste characteristics. Cleaned containers should be rendered unusable by puncturing or crushing prior to disposal to prevent their reuse. This is especially important for containers that could be reused for water or food storage.

The Department of Environment will consider alternate hazardous waste management and disposal measures that provide an equivalent level of environmental protection to those identified in this Guideline.

2.2.4 Treatment and Disposal Outside Nunavut

Hazardous waste can be sent to a receiver or hazardous waste management facility located outside of Nunavut only where the receiver or facility has been registered in the receiving province or territory to

accept that waste. The generator must comply with all applicable statutes, regulations, standards, guidelines and local by-laws of the receiving jurisdiction.

Within Canada, Environment Canada monitors and controls the interprovincial movement of hazardous waste under the *Interprovincial Movement of Hazardous Waste Regulations*. Waste manifests must accompany each shipment of waste in accordance with the Transport Authorities' requirements. Generators and carriers should refer to section 3.3 of the Guideline for additional information on transport and waste manifest requirements.

The international movement of hazardous waste is controlled under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Known simply as the Basel Convention, it is an international treaty to control and reduce the transfer of hazardous waste from developed to less developed countries. Environment Canada monitors and controls the international movement of hazardous waste under the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*.

A listing of Canadian waste management facilities may be obtained by contacting the waste exchanges and other organizations listed in Appendix 10.

General Requirements

Hazardous waste is classified using the system developed under the *Transportation of Dangerous Goods Act (Canada)*. Wastes are categorized into one of nine classes according to their chemical, physical or biological properties. Each waste, or group of similar wastes, is then identified using a specific 'UN' number assigned under the *Transportation of Dangerous Goods Regulations*. Refer to Appendix 2 for additional information on dangerous goods classifications.

3.1 Storage

Storage refers to containment of a hazardous waste for transport, or while awaiting treatment and disposal. Except under extraordinary circumstances (i.e. radioactive materials), storage should always be considered as a temporary measure and is not acceptable for the long-term management of hazardous waste.

Recognition of the incompatibility of different wastes during storage is important in order to avoid the possibility of violent, explosive reactions and toxic fumes. Various systems have been developed to ensure compatible storage including the 'Hazardous Waste Compatibility Chart' adopted by the United States' Environmental Protection Agency[1].

3.1.1 Containers

Hazardous waste storage containers are designed to hold, store and transport small quantities of waste. Many different types of containers are available (i.e. barrels, bottles, bags and boxes) and are made from a variety of materials (i.e. aluminum, plastic, steel, and stainless steel). Selecting the proper container requires an understanding of the properties of the waste to be stored. If transport is to be undertaken, the generator should consult the Transport Authority to confirm the container meets all legislated requirements.

The following are additional general points for consideration:

- Hazardous waste should be stored in their original containers where possible or in containers specially manufactured for the purpose of storing hazardous waste. The containers must be sound, sealable and not damaged or leaking.
- Containers should be clearly labeled to identify their contents according to requirements of the Workplace Hazardous Materials Information System (WHMIS) and the relevant Transport Authority, if transport is planned.
- Small quantities of compatible hazardous waste should be bulked into 16 gauge or equivalent metal or plastic 205 litre (45 gallon) drums for the purpose of secondary containment.
- Containers should be closed and sealed at all times, except while waste is being added or removed.

[1] EPA-600/2-80-076 April 1980. A Method for Determining the Compatibility of Chemical Mixtures.

3.1.2 Facilities

A hazardous waste storage facility is a specially designed building or area that helps to ensure the safe and secure storage of hazardous waste. Detailed storage facility building designs are beyond the scope of the Guideline. The Department of Environment or other qualified person should be consulted prior to designing and constructing a storage facility.

The following are general points to consider when establishing a storage facility:

- The facility should meet all local and territorial siting and construction requirements and be readily accessible for fire fighting and other emergency responses. The local Fire Chief should be advised of the storage facility and its contents for emergency planning and response purposes.
- The facility should be secure. Access should be limited where practical to employees who have been trained in safety and emergency procedures. These procedures should be documented and a copy made available to those employees who have access to the facility.
- Inspections of the facility and stored wastes should be performed and recorded at least once every week.
- Containers should be placed so that each can readily and easily be inspected for signs of leakage, corrosion or deterioration. Leaking, corroded or deteriorated containers should immediately be removed and their contents transferred to a sound container.
- Records should be maintained indicating the type and quantity of waste being stored along with the date, type and quantity of hazardous waste brought into or removed from the facility.
- Drainage into and from the storage facility site should be controlled to prevent spills or leaks from leaving the site and to prevent run-off from entering the site.
- All waste should be stored on a firm working surface that is impervious to leaks.
- Incompatible waste must be stored in a manner that contact in the event of a spill or accidental release is not possible.
- Emergency response plans should be developed in cooperation with local emergency response personnel and emergency response equipment should be locally available in the event of a spill, fire or other emergency situation.

Where the facility is used for commercial purposes and is used to store hazardous waste for periods of 180 days or more or the quantity of waste stored on-site exceeds the criteria set out in Appendix 8, the facility must be registered with the Department of Environment as a hazardous waste management facility.

3.2 Registration

3.2.1 Hazardous Waste Generators, Carriers and Receivers

Generators, carriers and receivers of hazardous waste must be registered before undertaking activities involving these wastes. Completion of the approved form and submission of accurate information enables the Department of Environment to quickly complete the registration process. Registration enables the government to track the generation, transport and disposal of hazardous waste in Nunavut. It also provides assurance that the company has the necessary emergency response and spill

contingency plans in place should an accident or other incident occur involving a hazardous waste. Upon registration, the applicant will be assigned a unique identification number. This number is required in order to complete the waste manifest form.

Appendices 4, 5 and 6 provide samples of registration forms required for generators, carriers and receivers to apply for registration in Nunavut. Original forms and users' guides are available from Nunavut's Department of Environment or by downloading through the department's web site. Incomplete applications will result in delays in completing the registration process.

Generators and receivers of hazardous waste located in Nunavut must be registered with the Department of Environment. Carriers may be registered either in Nunavut or in the province or territory in which the company is based.

3.2.2 Hazardous Waste Management Facilities

A hazardous waste management facility is a facility or specially-designated area that is used for the collection, storage, transfer, treatment, recycling or disposal of hazardous waste for commercial purposes. Where the facility is used solely for the collection, storage or transfer of hazardous waste, the facility must be registered where waste is stored for a period of 180 days or more or the quantities exceed those set out in Appendix 8 of the Guideline. Where the facility is to be used for the treatment, recycling or disposal of hazardous waste, the facility must be registered where the quantity treated, recycled or disposed of in any single month exceeds a 'small quantity'.

The collection, storage, transfer, treatment, recycling or disposal of hazardous waste on behalf of a third-party does not remove the obligation of the owner or operator of a hazardous waste management facility to register the facility.

Appendix 7 includes a sample of the registration form required for the owner or operator of a hazardous waste management facility to apply for registration of the facility. The owner or operator may obtain an original form and users' guide by contacting Nunavut's Department of Environment or by downloading through the department's web site. Incomplete applications will result in delays in completing the registration process.

Registration of a hazardous waste management facility does not remove the obligation to comply with all other applicable municipal, territorial and federal statutes, regulations, standards, guidelines and by-laws. Guidance on planning for and achieving territorial environmental requirements for new industrial projects may be found in the *Environmental Guideline for Industrial Projects on Commissioner's Lands.*

3.3 Transportation

Carriers must ensure hazardous waste is packaged, documented, labeled and placarded in compliance with the method of transport used - road, rail, air or marine. A completed waste manifest must accompany each shipment of hazardous waste. Completion of the manifest together with proper marking and placarding of containers and vehicles enables police, ambulance, fire and other first responders to react effectively and safely in the event of a spill or other accident involving hazardous waste while in transit.

The transport of hazardous waste by road in Canada is controlled under the territorial and federal *Transportation of Dangerous Goods Acts* and the federal *Interprovincial Movement of Hazardous Waste Regulations* and *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations.* These Acts and Regulations require that personnel are trained, containers and transport vehicles are labeled and placarded and a completed waste manifest accompanies each shipment. The generator, carrier and receiver must each complete their portion of the manifest form and provide copies to the Department of Environment at various stages in the transport process. Refer to Appendix 9 for a copy of the manifest. Original manifest forms are available from Nunavut's Department of Environment and completion instructions are included on the reverse side of each manifest. Further assistance in completing a waste manifest may be obtained by referring to the *User's Guide for the Hazardous Waste Manifest* produced by Environment Canada or by contacting the Motor Vehicles Division of the Department of Economic Development and Transportation.

The International Air Transport Association (IATA) requires that all shipments of hazardous wastes tendered to air carriers be accompanied by the IATA Shipper's Declaration of Dangerous Goods. The consignor is responsible for completion of the form in accordance with IATA requirements and to ensure all packaging, placarding and labeling is consistent with the product being transported.

The International Marine Dangerous Goods Code requires use of the International Marine Organization's Multimodal Dangerous Goods Form when transporting dangerous goods or hazardous waste by ship or barge.

Further information on transporting hazardous waste by air or marine can be obtained by contacting Transport Canada. Information and instructions on manifesting, placarding and labeling hazardous waste commonly generated in Nunavut can be obtained by referring to waste-specific guidelines produced by the Department of Environment. A complete listing of guidelines is available at http://env.gov.nu.ca/programareas/environmentprotection.

Conclusion

This is a general introduction to the risks associated with hazardous waste and is intended to inform the reader about the proper handling, storage and transportation of hazardous waste in Nunavut. Detailed guidance on the management of specific waste types can be obtained by referring to other guidelines developed by the Department of Environment.

For additional information on the management of hazardous waste, or to obtain a complete listing of available guidelines, contact the Department of Environment at:

Environmental Protection Division
Department of Environment
Government of Nunavut
Inuksugait Plaza, Box 1000, Station 1360
Iqaluit, Nunavut, X0A 0H0

Phone: (867) 975-7729
Fax: (867) 975-7739
Email: EnvironmentalProtection@gov.nu.ca
Website: http://env.gov.nu.ca/programareas/environmentprotection

References

Government of Alberta, Department of Environment. Alberta Users Guide for Waste Managers, (Catalogue # ENV-266-O/P).

Government of Alberta, Department of Environment. Hazardous Waste Storage Guidelines, (1988).

Government of the Northwest Territories, Department of Environment and Natural Resources. User's Guide for Hazardous Waste Movement Documents in the NWT, (2009).

Government of the Northwest Territories, Department of Municipal and Community Affairs. Guidelines for the Planning, Design, Operations and Maintenance of Modified Solid Waste Sites in the Northwest Territories, (2003).

Government of Nunavut, Department of Environment. Environmental Guideline for General Management of Hazardous Waste, (2002).

Government of Nunavut, Department of Environment. Environmental Guideline for Industrial Projects on Commissioner's Lands, (2002).

Government of Nunavut, Department of Environment. Environmental Guideline for Industrial Waste Discharges, (2002).

APPENDICES

APPENDIX 1 - *ENVIRONMENTAL PROTECTION ACT*

The following are excerpts from the *Environmental Protection Act*

1. "Contaminant" means any noise, heat, vibration or substance and includes such other substance as the Minister may prescribe that, where discharged into the environment,
   (a) endangers the health, safety or welfare of persons,
   (b) interferes or is likely to interfere with normal enjoyment of life or property,
   (c) endangers the health of animal life, or
   (d) causes or is likely to cause damage to plant life or to property;

   "Discharge" includes, but not so as to limit the meaning, any pumping, pouring, throwing, dumping, emitting, burning, spraying, spreading, leaking, spilling, or escaping;

   "Environment" means the components of the Earth and includes
   (a) air, land and water,
   (b) all layers of the atmosphere,
   (c) all organic and inorganic matter and living organisms, and
   (d) the interacting natural systems that include components referred to in paragraphs (a) to (c).

   "Inspector" means a person appointed under subsection 3(2) and includes the Chief Environmental Protection Officer.

2.2 The Minister may
   (a) establish, operate and maintain stations to monitor the quality of the environment in the Territories;
   (b) conduct research studies, conferences and training programs relating to contaminants and to the preservation, protection or enhancement of the environment;
   (c) develop, co-ordinate and administer policies, standards, guidelines and codes of practice relating to the preservation, protection or enhancement of the environment;
   (d) collect, publish and distribute information relating to contaminants and to the preservation, protection or enhancement of the environment:

3. (1) The Minister shall appoint a Chief Environmental Protection Officer who shall administer and enforce this Act and the regulations.

   (2) The Chief Environmental Protection Officer may appoint inspectors and shall specify in the appointment the powers that may be exercised and the duties that may be performed by the inspector under this Act and regulations.

5. (1) Subject to subsection (3), no person shall discharge or permit the discharge of a contaminant into the environment.

   (3) Subsection (1) does not apply where the person who discharged the contaminant or permitted the discharge of the contaminant establishes that
   (a) the discharge is authorized by this Act or the regulations or by an order issued under this Act or the regulations;
   (b) the contaminant has been used solely for domestic purposes and was discharged from within a dwelling house;
   (c) the contaminant was discharged from the exhaust system of a vehicle;
   (d) the discharge of the contaminant resulted from the burning of leaves, foliage, wood, crops or stubble for domestic or agricultural purposes;

(e) the discharge of the contaminant resulted from burning for land clearing or land grading;
(f) the discharge of the contaminant resulted from a fire set by a public official for habitat management of silviculture purposes;
(g) the contaminant was discharged for the purposes of combating a forest fire;
(h) the contaminant is a soil particle or grit discharged in the course of agriculture or horticulture; or
(i) the contaminant is a pesticide classified and labelled as "domestic" under the *Pest Control Products Regulations* (Canada).

(4) The exceptions set out in subsection (3) do not apply where a person discharges a contaminant that the inspector has reasonable grounds to believe is not usually associated with a discharge from the excepted activity.

5.1. Where a discharge of a contaminant into the environment in contravention of this Act or the regulations or the provisions of a permit or license issued under this Act or the regulations occurs or a reasonable likelihood of such a discharge exists, every person causing or contributing to the discharge or increasing the likelihood of such a discharge, and the owner or the person in charge, management or control of the contaminant before its discharge or likely discharge, shall immediately:
(a) subject to any regulations, report the discharge or likely discharge to the person or office designated by the regulations;
(b) take all reasonable measures consistent with public safety to stop the discharge, repair any damage caused by the discharge and prevent or eliminate any danger to life, health, property or the environment that results or may be reasonably expected to result from the discharge or likely discharge; and
(c) make a reasonable effort to notify every member of the public who may be adversely affected by the discharge or likely discharge.

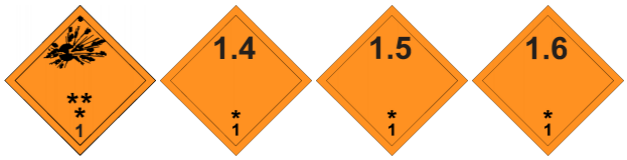
6. **(**1) Where an inspector believes on reasonable grounds that a discharge of a contaminant in contravention of this Act or the regulations or a provision of a permit or license issued under this Act or the regulations has occurred or is occurring, the inspector may issue an order requiring any person causing or contributing to the discharge or the owner or the person in charge, management or control of the contaminant to stop the discharge by the date named in the order.

7. (1) Notwithstanding section 6, where a person discharges or permits the discharge of a contaminant into the environment, an inspector may order that person to repair or remedy any injury or damage to the environment that results from the discharge.

(2) Where a person fails or neglects to repair or remedy any injury or damage to the environment in accordance with an order made under subsection (1) or where immediate remedial measures are required to protect the environment, the Chief Environmental Protection Officer may cause to be carried out the measures that he or she considers necessary to repair or remedy an injury or damage to the environment that results from any discharge.

APPENDIX 2 - DANGEROUS GOODS CLASSIFICATIONS

Class 1 – Explosives[1]



Class 2 – Compressed Gases
Division 2.1 – Flammable Gases
Division 2.2 – Non-flammable and Non-toxic Gases
Division 2.3 – Poison Gases

Class 3 - Flammable Liquids

Class 4 – Flammable Solids
Division 4.1 – Flammable Solids
Division 4.2 – Spontaneously Combustible
Division 4.3 – Water Reactive

Class 5 - Oxidizing Substances and Organic Peroxides
Division 5.1 – Oxidizing Substances
Division 5.2 – Organic Peroxides

Class 6 - Toxic and Infectious Substances
Division 6.1 – Toxic Substances
Division 6.2 – Infectious Substances

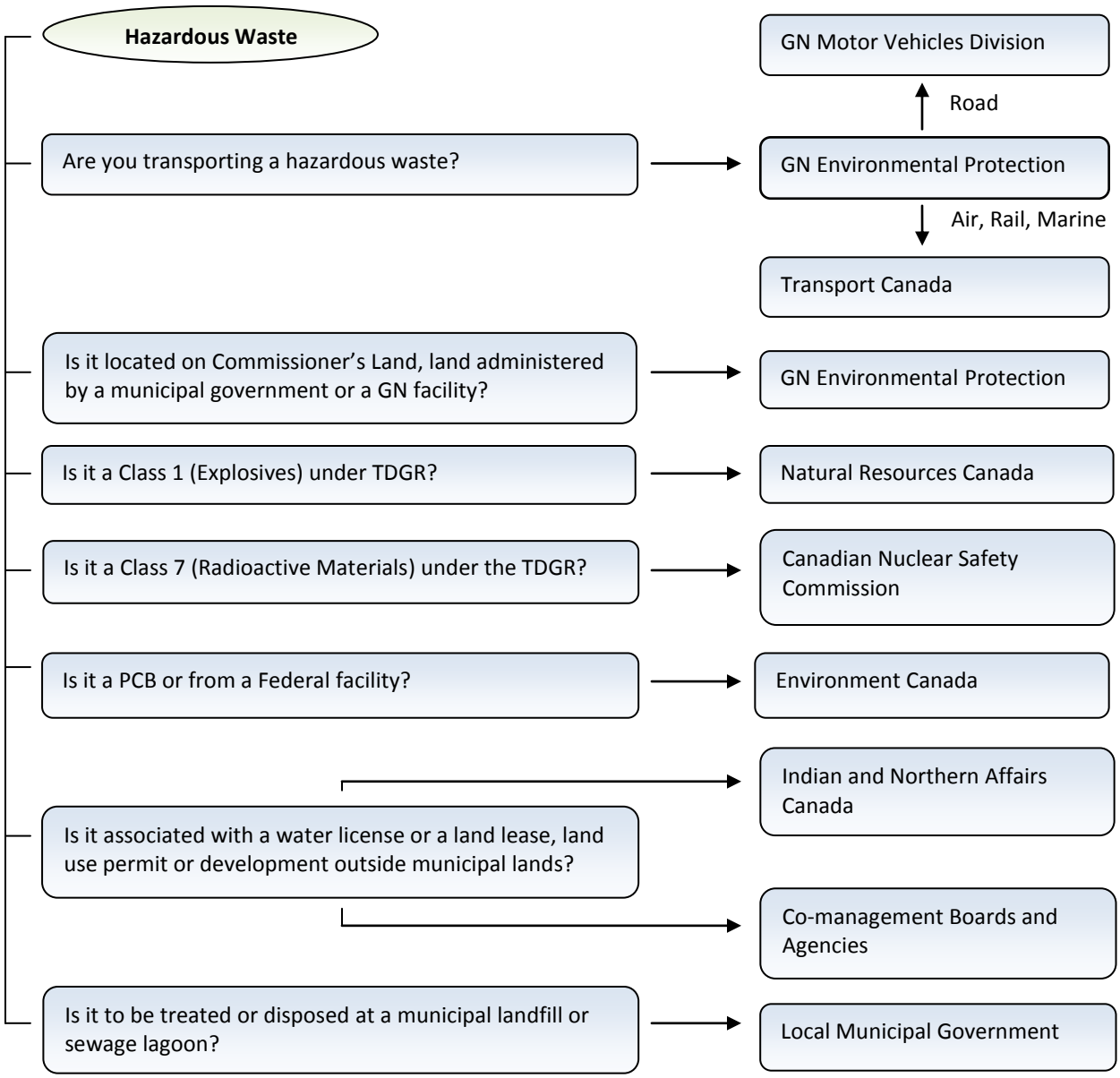
Class 7 - Radioactive Materials[2]

Class 8 - Corrosives

Class 9 - Miscellaneous

1. Class 1 substances (Explosives) are regulated by Natural Resources Canada under the *Explosives Act*.
2. Class 7 substances (Radioactive Materials) are regulated by the Canadian Nuclear Safety Commission under the *Nuclear Safety and Control Act* and *Nuclear Liability Act*.

APPENDIX 3 - DETERMINING REGULATORY AGENCY CONTACTS



APPENDIX 4 – REGISTRATION FORM – HAZARDOUS WASTE GENERATOR

A copy of the generator registration form and users' guide is available by contacting the Department of Environment or by downloading at http://env.gov.nu.ca/programareas/environmentprotection.

Instructions

1. The following information must be provided in order to register as a hazardous waste generator in Nunavut and to obtain a generator number. Incomplete applications will be returned to the applicant.
2. Completed registration forms are to be forwarded to the Manager of Pollution Control, Department of Environment, Government of Nunavut, Box 1000, Station 1360, Iqaluit, Nunavut, X0A 0H0. Electronic registration forms are preferred and may be forwarded to EnvironmentalProtection@gov.nu.ca.
3. Use additional pages to provide information as required.
4. Applicants should refer to the accompanying users' guide for further assistance on completing the generator registration form.

Section 1 - Identification

Generator (Legal Name) _____

Mailing Address _____ Postal Code _____

Principle Contact Person _____ Title _____

Phone _____ Email _____

Alternate Contact Person _____ Title _____

Phone _____ Email _____

Section 2 - Description of Waste Generated (provide a separate table if required)

Site Location(s) where Waste is Generated _____

Shipping Name (Description)	TDG Number	TDG Class	Quantity Generated each Month (L or Kg)	Frequency of Generation

Section 3 - Waste Management Information

General Type of Business _____

Source of Waste _____

Hazardous Waste Carrier(s) Used _____

Hazardous Waste Receiver(s) Used _____

Do you have an approved Emergency Response and Spill Contingency Plan? Yes ____ (attach copy) No _____

Section 4 - Certification

I certify that the information provided on this form is correct, accurate and complete.

Signature of Contact Person _____ Date (dd/mm/yy) _____

Print Name of Contact Person _____ Title _____

Phone _____ Email _____

For Department Use Only
Generator Number NUG# _____ Approved by _____ Date _____

APPENDIX 5 – REGISTRATION FORM – HAZARDOUS WASTE CARRIER

A copy of the carrier registration form and users' guide is available by contacting the Department of Environment or by downloading at http://env.gov.nu.ca/programareas/environmentprotection.

Instructions

1. The following information must be provided in order to register as a hazardous waste carrier in Nunavut and to obtain a carrier number. Incomplete applications will be returned to the applicant.
2. Completed registration forms are to be forwarded to the Manager of Pollution Control, Department of Environment, Government of Nunavut, Box 1000, Station 1360, Iqaluit, Nunavut, X0A 0H0. Electronic registration forms are preferred and may be forwarded to EnvironmentalProtection@gov.nu.ca.
3. Use additional pages to provide information as required.
4. Applicants should refer to the accompanying users' guide for further assistance on completing the carrier registration form.

Section 1 - Identification

Carrier (Legal Name) _____

Corporate Address _____

Site (Dispatch) Address _____

Principle Contact Person _____ Title _____

Phone _____ Email _____

Alternate Contact Person _____ Title _____

Phone _____ Email _____

Section 2 - Description of Waste Transported (provide a separate table if required)

Shipping Name (Description)	TDG Number	TDG Class	Quantity Transported each Month (L or Kg)	Frequency of Transport

Section 3 - Waste Management Information

Mode of Transport (check all that apply) Road _____ Rail _____ Marine _____ Air _____

Hazardous Waste Generator(s) Used _____

Hazardous Waste Receiver(s) Used _____

Do you have an approved Emergency Response and Spill Contingency Plan? Yes _____ (attach copy) No _____

Section 4 - Certification

I certify that the information provided on this form is correct, accurate and complete.

Signature of Contact Person _____ Date (dd/mm/yy) _____

Print Name of Contact Person _____ Title _____

Phone _____ Email _____

For Department Use Only
Carrier Number NUC# _____ Approved by _____ Date _____

APPENDIX 6 – REGISTRATION FORM – HAZARDOUS WASTE RECEIVER

A copy of the receiver registration form and users' guide is available by contacting the Department of Environment or by downloading at http://env.gov.nu.ca/programareas/environmentprotection.

Instructions

1. The following information must be provided in order to register as a hazardous waste receiver in Nunavut and to obtain a receiver number. Incomplete applications will be returned to the applicant.
2. A receiver who operates a commercial business for the purpose of collecting, storing, transferring, treating, recycling or disposing of hazardous waste may be required to register the facility as a hazardous waste management facility. Refer to section 3.2.2 of the *Environmental Guideline for the General Management of Hazardous Waste* for further information.
3. Completed registration forms are to be forwarded to the Manager of Pollution Control, Department of Environment, Government of Nunavut, Box 1000, Station 1360, Iqaluit, Nunavut, X0A 0H0. Electronic registration forms are preferred and may be forwarded to EnvironmentalProtection@gov.nu.ca.
4. Use additional pages to provide information as required.
5. Applicants should refer to the accompanying users' guide for further assistance on completing the receiver registration form.

Section 1 - Identification

Receiver (Legal Name) _____

Mailing Address _____ Postal Code _____

Principle Contact Person _____ Title _____

Phone _____ Email _____

Alternate Contact Person _____ Title _____

Phone _____ Email _____

Section 2 - Description of Waste Received (provide a separate table if required)

Site Location(s) where Waste is Received _____

Shipping Name (Description)	TDG Number	TDG Class	Quantity Received each Month (L or Kg)	Frequency of Acceptance

Attach a brief description of the proposed facility.

Section 3 - Waste Management Information

General Type of Business _____

General Type of Activity _____

Hazardous Waste Generator(s) Used _____

Hazardous Waste Carriers(s) Used _____

Hazardous Waste Management Facilities Used _____

Do you have an approved Emergency Response and Spill Contingency Plan? Yes _____ (attach copy) No _____

Section 4 - Certification

I certify that the information provided on this form is correct, accurate and complete.

Signature of Contact Person _____ Date (dd/mm/yy) _____

Print Name of Contact Person _____ Title _____

Phone _____ Email _____

For Department Use Only
Receiver Number NUR# _____ Approved by _____ Date _____

APPENDIX 7
REGISTRATION FORM – HAZARDOUS WASTE MANAGEMENT FACILITY

A copy of the management facility registration form and users' guide is available by contacting the Department of Environment or by downloading at http://env.gov.nu.ca/programareas/environmentprotection.

Instructions

1. The following information must be provided in order to register as a hazardous waste management facility in Nunavut and obtain a management facility number. Incomplete applications will be returned to the applicant.
2. Completed registration forms are to be forwarded to the Manager of Pollution Control, Department of Environment, Government of Nunavut, Box 1000, Station 1360, Iqaluit, Nunavut, X0A 0H0. Electronic registration forms are preferred and may be forwarded to EnvironmentalProtection@gov.nu.ca.
3. Use additional pages to provide information as required.
4. Applicants should refer to the accompanying users' guide for further assistance on completing the management facility registration form.

Section 1 - Identification

Applicant (Legal Name) _____

Corporate Address _____

Facility Address _____

Principle Contact Person _____ Title _____

Phone _____ Email _____

Alternate Contact Person _____ Title _____

Phone _____ Email _____

Section 2 - Description of Waste to be Managed (provide a separate table if required)

Site Location(s) where Waste is Managed _____

Shipping Name (Description)	TDG Number	TDG Class	Quantity Managed each Month (L or Kg)	Frequency of Acceptance

Attach a complete description of the proposed facility, safety measures, equipment and management processes to be used. Include engineered drawing where applicable.

Section 3 - Waste Management Information

General Type of Business (check all that apply) Receiver of Waste _____ Manage Self-generated Waste _____

Type of Activity (check all that apply) Collect and Store _____ Transfer _____

Treat _____ Recycle _____ Dispose _____

Hazardous Waste Generator(s) Used _____

Hazardous Waste Carriers(s) Used _____

Do you have an approved Emergency Response and Spill Contingency Plan? Yes _____ (attach copy) No _____

Section 4 - Certification

I certify that the information provided on this form is correct, accurate and complete.

Signature of Contact Person _____ Date (dd/mm/yy) _____

Print Name of Contact Person _____ Title _____

Phone _____ Email _____

For Department Use Only
Management Facility Number NUF# _____ Approved by _____ Date _____

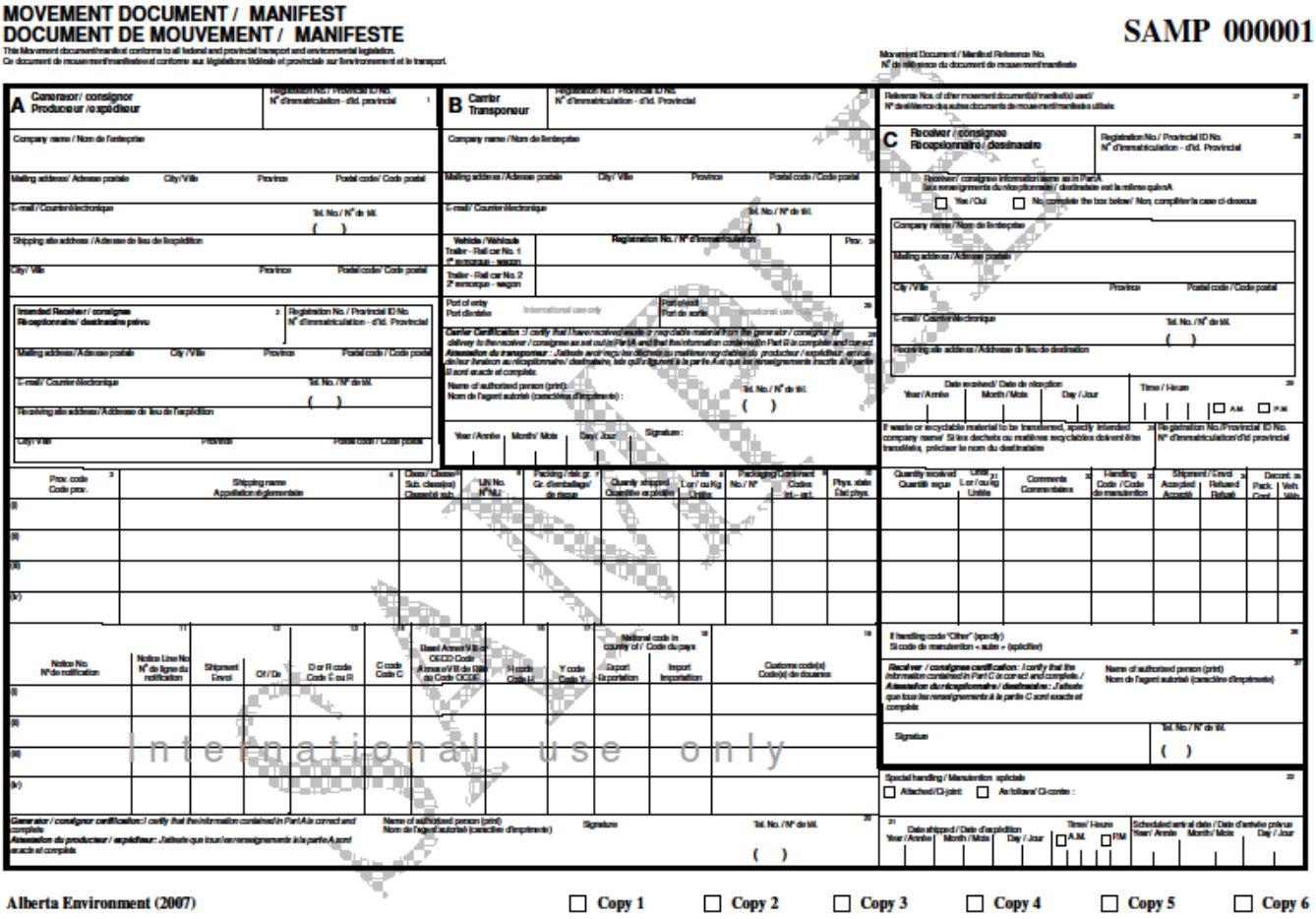
APPENDIX 8 - CRITERIA FOR REGISTERING A HAZARDOUS WASTE MANAGEMENT FACILITY

A facility must be registered with the Department of Environment as a hazardous waste management facility where it is used for commercial purposes to store hazardous waste for a period of 180 days or more or the quantity of hazardous waste[1] stored on-site at any one time exceeds the criteria established in the following table. Where the facility is to be used for the treatment, recycling or disposal of hazardous waste, the facility must be registered as a hazardous waste management facility where the quantity treated, recycled or disposed of each month exceeds a 'small quantity'[2].

	Description	**Quantity[3] (Kg or L)**
Class 1	Explosives	50
Class 2	Division 2.1 – Flammable Gases	500[4]
	Division 2.2 – Non-flammable and Non-toxic Gases	5000[4]
	Division 2.3 – Poison Gases	200[4]
Class 3	Flammable Liquids	4000
Class 4	Division 4.1 – Flammable Solids	5000
	Division 4.2 – Spontaneously Combustible	1000
	Division 4.3 – Water Reactive	500
Class 5	Division 5.1 – Oxidizing Substances	1000
	Division 5.2 – Organic Peroxides	50
Class 6	Division 6.1 – Toxic Substances	1000
	Division 6.2 – Infectious Substances	500[4]
Class 7	Radioactive Materials	Any amount
Class 8	Corrosives	1000
Class 9	Miscellaneous	1000
	PCB Materials	50
	Environmentally Hazardous Substance Solid – UN3077	5000
All Classes	Total Aggregate Quantity	5000

1. Applies to hazardous waste only and not to dangerous goods.
2. Small quantity means hazardous waste that is generated in an amount that is less than five kilograms per month if a solid or less than five litres per month if a liquid, and where the total quantity accumulated at any one time does not exceed five kilograms or five litres. This does not include hazardous waste that is mercury or Class 2.3, 5.1 or 6.1 materials. These wastes must be generated in an amount that is less than one kilogram per month if a solid or less than one litre per month if a liquid, and where the total quantity accumulated at any one time does not exceed one kilogram or one litre.
3. Quantity applies to solids when expressed in kilograms (kg) and liquids when expressed in litres (L).
4. Total liquid capacity of the container.

APPENDIX 9 – HAZARDOUS WASTE MANIFEST



MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

SAMP 000001

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

A Generator / consignor
Producteur / expéditeur

Registration No./ Provincial ID No.
N° d'immatriculation - d'id. provincial

Company name / Nom de l'entreprise

Mailing address/ Adresse postale | City/ Ville | Province | Postal code/ Code postal

E-mail / Courriel électronique | Tel. No. / N° de tél.

Shipping site address / Adresse de lieu de l'expédition

City/ Ville | Province | Postal code/ Code postal

Intended Receiver / consignee
Récipiendaire/ destinataire prévu

Registration No. / Provincial ID No.
N° d'immatriculation - d'id. Provincial

Mailing address/ Adresse postale | City/ Ville | Province | Postal code / Code postal

E-mail/ Courriel électronique | Tel. No. / N° de tél.

Receiving site address / Address de lieu de l'expédition

City/ Ville | Province | Postal code / Code postal

B Carrier
Transporteur

Registration No./ Provincial ID No.
N° d'immatriculation - d'id. Provincial

Company name / Nom de l'entreprise

Mailing address / Adresse postale | City/ Ville | Province | Postal code / Code postal

E-mail/ Courriel électronique | Tel. No. / N° de tél.

Vehicle / Véhicule
Trailer - Rail car No. 1
1er remorque - wagon
Trailer - Rail car No. 2
2e remorque - wagon

Registration No. / N° d'immatriculation | Prov.

Port of entry
Port d'entrée
International use only
Port of exit
Port de sortie
International use only

Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au récipiendaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print)
Nom de l'agent autorisé (caractères d'imprimerie) :

Tel. No. / N° de tél.

Year / Année | Month / Mois | Day / Jour | Signature :

C Receiver / consignee
Récipiendaire / destinataire

Reference Nos. of other movement document(s)/ manifest(s) used/
N° de référence des autres documents de mouvement/ manifestes utilisés

Registration No./ Provincial ID No.
N° d'immatriculation - d'id. Provincial

Receiver/ consignee information same as in Part A.
Les renseignements du récipiendaire / destinataire sont la même que ceux de la partie A.

Yes / Oui | No, complete the box below / Non, compléter la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville | Province | Postal code / Code postal

E-mail/ Courriel électronique | Tel. No. / N° de tél.

Receiving site address / Address de lieu de destination

Date received/ Date de réception
Year / Année | Month / Mois | Day / Jour

Time / Heure
A.M. | P.M.

If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire

Registration No./Provincial ID No.
N° d'immatriculation/d'id provincial

Prov. code Code prov.	Shipping name Appellation réglementaire	Class/ Classe Sub. class(es) Classe(s) sub.	UN No. N° NU	Packing / Risk gr. Gr. d'emballage/ de risque	Quantity shipped Quantité expédiée	Units L or / ou Kg Unités	Packaging/ Contained No. / N°	Packaging/ Contained Codes Int. – ext.	Phys. state Etat phys.
(i)									
(ii)									
(iii)									
(iv)									

Quantity received Quantité reçue	Units L or / ou Kg Unités	Comments Commentaires	Handling Code / Code de manutention	Shipment / Load Accepted Accepté	Shipment / Load Refused Refusé	Decont. as Pack. Cont.	Decont. as Veh. Véh.

Notice No. N° de notification	Notice Line No. N° de ligne de notification	Shipment Load	Of / De	D or R code Code D ou R	C code Code C	Basel Annex VIII or OECD Code Annexe VIII de Bâle ou Code OCDE	H code Code H	Y code Code Y	National code in country of / Code du pays Export Exportation	National code in country of / Code du pays Import Importation	Customs code(s) Code(s) de douane
(i)											
(ii)											
(iii)											
(iv)											

If handling code "Other" (specify)
Si code de manutention « autre » (spécifier)

Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du récipiendaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets

Name of authorized person (print)
Nom de l'agent autorisé (caractères d'imprimerie)

Signature | Tel. No. / N° de tél.

Special handling / Manutention spéciale
Attached / Ci-joint | As follows / Ci-contre :

Generator / consignor certification: I certify that the information contained in Part A is correct and complete.
Attestation du producteur / expéditeur : J'atteste que tous les renseignements à la partie A sont exacts et complets

Name of authorized person (print)
Nom de l'agent autorisé (caractères d'imprimerie)

Signature | Tel. No. / N° de tél.

Date shipped / Date d'expédition
Year / Année | Month / Mois | Day / Jour

Time / Heure
A.M. | P.M.

Scheduled arrival date / Date d'arrivée prévue
Year/ Année | Month / Mois | Day / Jour

International use only

Alberta Environment (2007)

Copy 1 | Copy 2 | Copy 3 | Copy 4 | Copy 5 | Copy 6

APPENDIX 10 - WASTE EXCHANGES AND ASSOCIATIONS

The concept of exchanging waste began in Canada in the 1980s. It involves the transfer of unwanted, overstocked, obsolete, damaged, contaminated or post-dated material and waste to another company or person who would reuse it. Various waste exchanges and associations have been established in Canada to facilitate these transfers. Several, but not all, waste exchanges and associations are listed below.

Northern Territories Water and Waste Association
201, 4817- 49 Street
Yellowknife, Northwest Territories X1A 3S7
(867) 873-4325
http://www.ntwwa.com

Recycling Council of British Columbia
Unit #10, 119 West Pender Street
Vancouver, British Columbia V6B 1S5
(604) 683-6009
http://www.rcbc.bc.ca

Alberta Waste Materials Exchange
Building #350, 6815 Eighth Street NE
Calgary, Alberta T2E 7H7
(403) 297-7505

Calgary Materials Exchange
809 Fourth Avenue NE
Calgary, Alberta T2P 0K5
(403) 230-1443
http://www.cmex.ca

Saskatchewan Waste Materials Exchange
515 Henderson Drive.
Regina, Saskatchewan S4N 5X1
(306) 787-9800

Manitoba Waste Exchange
1329 Niakwa Road
Winnipeg, Manitoba R2J 3T4
(204) 257-3891

Ontario Waste Exchange
OCETA 63 Polson Street, 2nd floor
Toronto, Ontario M5A 1A4
(416) 778-4199
http://www.owe.org

Canadian Waste Materials Exchange
2395 Spearman Drive
Mississauga, Ontario L5K 1B3
(416) 822-4111

Canadian Chemical Exchange
900 Blondin
Ste-Adele, Quebec J0R 1L0
(450) 229-6511
http://www.stobec.com

Quebec Waste Materials Exchange
14 Place du Commerce, Bureau 350
Le-des-Squeurs, Quebec H3E 1T5
(514) 762-9012

APPENDIX 11 – GOVERNMENT CONTACTS

Government of Nunavut

Environmental Protection Division
Department of Environment
Inuksugait Plaza
P.O. Box 1000, Station 1360
Iqaluit, Nunavut X0A 0H0
Telephone: (867) 975-7729 Fax: (867) 975-7739

Workers' Safety and Compensation Commission
P.O. Box 669
Baron Building/1091
Iqaluit, Nunavut X0A 0H0
Telephone: 1-877-404-4407 (toll free) Fax: 1-866-979-8501

Office of Chief Medical Health Officer of Health
Department of Health and Social Services
P.O. Box 1000, Station 1000
Iqaluit, Nunavut X0A 0H0
Telephone: (867) 975-5774 Fax: (867) 975-5755

Motor Vehicles Division
Department of Economic Development and Transportation
P.O. Box 10
Gjoa Haven, Nunavut X0B 1J0
Telephone: (867) 360-4615 Fax: (867) 360-4619

Department of Community and Government Services (all Divisions)
P.O. Box 1000, Station 700
4th Floor, W.G. Brown Building
Iqaluit, Nunavut X0A 0H0
Telephone: (867) 975-5400 Fax: (867) 975-5305

Government of Canada

Indian and Northern Affairs – Nunavut Region
P.O. Box 2200
Iqaluit, Nunavut X0A 0H0
Telephone: (867) 975-4500 Fax: (867) 975-4560

Department of Transport – Road, Rail, Marine, Air
P.O. Box 8550
344 Edmonton Street
Winnipeg, Manitoba R3C 1P6
Telephone: 1-888-463-0521 (toll free)
Fax: (204) 983-8992 Road, Rail and Marine only
Fax: (204) 983-1734 Air only

Environment Canada (NWT and Nunavut)
5019 52nd Street
Yellowknife, Northwest Territories X1A 1T5
Telephone: (867) 669-4730 Fax: (867) 873-8185