



Musselwhite Mine

TOXIC SUBSTANCE REDUCTION PLAN SUMMARY

This Toxic Substance Reduction Plan Summary has been prepared in accordance with Section 8(2) of the Toxics Reduction Act and satisfies the minimum Plan Summary content requirements stipulated in Section 24 of Ontario Regulation (O.Reg.) 455/09.

Basic Facility Information

Mandatory Basic Facility Information Item	Details
Substance Name and Chemical Abstracts Service (CAS) Registry Number for the Substance(s) whose Toxic Substance Reduction Plans are summarized by this this Plan Summary	Lead (Per O.Reg. 455/09; "no single CAS number applies to these substances")
National Pollutant Release Inventory (NPRI) and O.Reg.127/01 Identification Numbers	NPRI ID: 5656 O.Reg.127/01 ID: N/A
The legal and trade names of the owner and the operator of the facility, the street address of the facility and the mailing address of the facility, if different	Musselwhite Mine Goldcorp Canada Ltd. Kenora District, Ontario, Canada P7B 6S8
The number of full time employee equivalents at the facility	484
The two- and four-digit North American Industry Classification System (NAICS) codes and the six-digit NAICS Canada code	21 – Mining & Oil & Gas Extraction 2122 – Metal Ore Mining 212220 – Gold & Silver Ore Mining
Public contact	Shane Matson Sr. Environmental Coordinator Goldcorp Canada Ltd. Musselwhite Mine P.O. Box 7500 Thunder Bay Ontario P7B 6S8 (807) 928-2200 Extension 6243
The spatial coordinates of the facility expressed in Universal Transverse Mercator (UTM) within a North American Datum 83 (NAD83) datum	UTM Zone 15 678336 E, 5831032 N
Parent Company Information	Goldcorp Inc. Suite 3400-666 Burrard Street, Park Place Vancouver, BC V6C 2X8 (604) 696-3000

List of All Substances for which Toxic Substance Reduction Plans Have Been Prepared at the Facility

The Facility has prepared Toxic Substance Reduction Plans for the following prescribed Toxic Substances:

Arsenic*



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Cadmium*

Chromium*

Cobalt*

Copper*

Lead*

Manganese*

Nickel*

Phosphorus*

Zinc*

Vanadium [CAS number 7440-62-2]

Cyanides (Ionic)*

Hydrochloric Acid [CAS number 7647-01-0]

*Per O.Reg. 455/09, "no single CAS numbers apply to these substances"

Statement of Intent

As required by s.4(1) of the TRA, a Plan must include either a statement of the Facility's intent to reduce the use and/or creation of the Toxic Substance at the Facility, or the reasons for not including this statement, as well as objectives of the Plan.

A statement of the Facility's intent to reduce use of the Toxic Substance has not been included as a part of this Plan. The Toxic Substance is never created within the Facility's process and therefore no statement with respect to intent to reduce creation of the Toxic Substance is required.

The Toxic Substance has triggered reporting under the TRA and O.Reg.455/09 due to two activities at the Facility which are defined as "uses" of the Toxic Substance under the TRA framework.

The first Facility activity defined as a "use" is the processing of mined ore in which the Toxic Substance occurs naturally. In this case, the Toxic Substance flows through the Facility process without undergoing any chemical change and, due to its natural occurrence in feedstock, this Facility activity which the TRA has defined as a "use" of the Toxic Substance can only be reduced by reducing the Facility's production.

The second activity which is defined as a use under the TRA framework is the use of the Toxic Substance as a component of lead nitrate which is a reagent that is commonly added to gold extraction processes at facilities which process sulphide gold ore. This reagent is known to increase gold recovery within the process and therefore the Facility feels the use of this reagent which contains the Toxic Substance is essential to the business.



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After completing the TRA exercise for the above noted use of the Toxic Substance, the Facility is of the opinion that it has previously optimized this use of the Toxic Substance using the best available technology and practices that are economically achievable at this time. No obvious toxic substance reduction options were revealed by undertaking the TRA exercise with respect to the Toxic Substance.

It should also be noted that the Facility currently complies with all environmental regulations that control the release and disposal of the Toxic Substances; meeting or exceeding the strict release limits imposed by these regulations for the Toxic Substance.

Objectives of the Toxic Substance Reduction Plan

The Objectives of the Plan are as follows:

- provide support for the Facility's position with respect to the Statement of Intent of this Plan; and
- document how the Facility has fulfilled the applicable requirements under the TRA and O. Reg. 455/09 with respect to the Toxic Substance.

Description of Why the Toxic Substance Is Used or Created

As stated elsewhere in this Plan, the Toxic Substance has triggered reporting under the TRA and O.Reg.455/09 due to two activities at the Facility which are defined as "uses" of the Toxic Substance under the TRA framework.

The first Facility activity defined as a "use" is the processing of mined ore in which the Toxic Substance occurs naturally. In this case, the Toxic Substance flows through the Facility process without undergoing any chemical change and, due to its natural occurrence in feedstock, this Facility activity which the TRA has defined as a "use" of the Toxic Substance can only be reduced by reducing the Facility's production.

The second activity which is defined as a use under the TRA framework is the use of the Toxic Substance as a component of lead nitrate which is a reagent that is commonly added to gold extraction processes at facilities which process sulphide gold ore. This reagent is known to increase gold recovery within the process.

Rationale for Not Implementing Toxic Substance Reduction Options

As required by s.18(4) of O.Reg.455/09 (as amended by s.9(3) of O.Reg.214/11), a Plan must contain an explanation of why no toxic substance reduction options will be implemented.

Facility personnel have considered each of the seven categories for toxic substance reduction options, and, in light of the information provided in the Statement of Intent section of this Plan, the Facility feels that no toxic substance reduction options can be identified in any of the seven toxic substance reduction categories.

Therefore the rationale for not implementing toxic substance reduction options is that no toxic substance reduction options could be identified.



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Planner License Number

As required by s.18(2) of O.Reg.455/09 (as amended by s. 9(2) of O.Reg.214/11), the Licensed Toxic Substance Reduction Planner responsible for providing Planner Recommendations on and certification of this Plan is as follows:

Russell Polack
Air Quality Specialist
Golder Associates Ltd.
Toxic Substance Reduction Planner License Number TSRP0002

Copies of the Certification

Certification statements are provided in the following page.



December 18, 2012

Project No. 12-1192-0094

Shane Matson
Musselwhite Mine

**LICENSED TOXIC SUBSTANCE REDUCTION PLANNER CERTIFICATION STATEMENT FOR PHASE I
TOXIC SUBSTANCE REDUCTION PLANS FOR GOLDCORP CANADA LTD. MUSSELWHITE MINE**

Dear Mr. Matson:

Golder Associates Ltd. (Golder) was retained by Goldcorp Canada Ltd. Musselwhite Mine (the Facility) to provide various services pertaining to Phase I Toxic Substance Reduction Plan preparation under the *Toxics Reduction Act* (TRA), including Toxic Substance Reduction Planner (Planner) certification of Phase I Toxic Substance Reduction Plans (the Plans).

The following Planner Certification Statement which is made under s.19.1(4) of Ontario Regulation (O.Reg.) 455/09 (as amended by s.11 of O.Reg.214/11) satisfies the Planner Certification requirements for the Plans that are assembled as a single document as of the date of this Certification Statement. Furthermore, the following Certification Statement is limited to the respective versions of the Plans which are dated as indicated in the Certification Statement:

As of (December 18, 2012), I, Russell Polack certify that I am familiar with the processes at the Goldcorp Canada Ltd. Musselwhite Mine facility that use or create the toxic substances referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the Toxics Reduction Act, 2009 that are set out in the toxic substance reduction plans referred to below for the toxic substances and that the plans comply with that Act and Ontario Regulation 455/09 (General) made under that Act.

- Cyanides(Ionic) (December 18, 2012)
- Hydrochloric Acid (December 18, 2012)
- Copper (December 18, 2012)
- Lead (December 18, 2012)
- Arsenic (December 18, 2012)
- Cadmium (December 18, 2012)
- Chromium (December 18, 2012)
- Cobalt (December 18, 2012)
- Manganese (December 18, 2012)
- Nickel (December 18, 2012)
- Phosphorus (December 18, 2012)
- Vanadium (December 18, 2012)
- Zinc (December 18, 2012)

Russell Polack

Russell Polack
Toxic Substance Reduction Planner
License No. TSRP0002

SAG/RLP/ms

December 18, 2012

Date

Golder Associates Ltd.

1010 Lorne Street, Sudbury, Ontario, Canada P3C 4R9

Tel: +1 (705) 524 6861 Fax: +1 (705) 524 1984 www.golder.com

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Toxic Substance Reduction Plans Certification by Highest Ranking Employee

As required by s.4(2) of the *Toxics Reduction Act* (TRA), Toxic Substance Reduction Plans must contain a certification, signed by the highest ranking employee at the Facility who has management responsibilities relating to the Facility.

The following Certification Statement is being made under s.19(2) of Ontario Regulation (O.Reg.) 455/09 (as amended by s.11 of O.Reg.214/11) and satisfies the requirements of s.4(2) of the TRA for the Toxic Substance Plans that are assembled within this single document as of the date of this Certification Statement. Furthermore, the following Certification Statement is limited to the respective versions of the Plans which are dated as indicated in the Certification Statement:

As of (insert date) December 18, 2012, I, (insert name) G. LAWSON, certify that I have read the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the plans are factually accurate and comply with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

- Cyanides (December 18, 2012)
- Hydrochloric Acid (December 18, 2012)
- Copper (December 18, 2012)
- Lead (December 18, 2012)
- Arsenic (December 18, 2012)
- Cadmium (December 18, 2012)
- Chromium (December 18, 2012)
- Cobalt (December 18, 2012)
- Manganese (December 18, 2012)
- Nickel (December 18, 2012)
- Phosphorus (December 18, 2012)
- Vanadium (December 18, 2012)
- Zinc (December 18, 2012)



Gil Lawson

December 18, 2012

(December 18, 2012)