

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, if any | Propane (CAS No. 74-98-6) |
| NPRI and O.Reg.127/01 Identification Numbers | NPRI ID: 1233 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 | Sudbury INO Onaping Mines/Mill Operations Strathcona Services Building, 85 Regional Road, Onaping, ON P0M 2R0 |
| The number of full time employee equivalents at the facility | 454 |
| NAICS codes and the six-digit NAICS Canada code | 21 - Mining & Oil & Gas Extraction 2122 - Metal Ore Mining 212232 – Nickel-Copper Ore Mining |
| Public contact | Joe Fyfe Superintendent – Environment and SD Management Systems Onaping Mines/Mill Operations Strathcona Services Building, 85 Regional Road, Onaping, ON P0M 2R0 |
| Technical contact and person who is responsible for coordinating plan preparation | John Petherick Occupational Hygiene & Environment Specialist Onaping Mines/Mill Operations Strathcona Services Building, 85 Regional Road, Onaping, ON P0M 2R0 |
| The person who prepared the plan | Russell Polack Toxic Substance Reduction Planner Golder Associates Ltd. – 1010 Lorne Street, Sudbury, ON P3C 4R9 (705) 524-6861 |
| Highest Ranking employee at the facility who has management responsibilities relating to the facility and who is responsible for making certification | Rob Roeterink Strathcona Mill Manager Onaping Mines/Mill Operations Strathcona Services Building, 85 Regional Road, Onaping, ON P0M 2R0 |
| The spatial coordinates of the facility expressed in Universal Transverse Mercator (UTM) within a North American Datum 83 (NAD83) datum | UTM Zone 17 473367 E 5168770 N |
| Parent Company Information | Glencore Canada Corporation 100 King Street West, 1 First Canadian Place, Suite 6900 Toronto, Ontario M5X 1E3 |

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:

Propane [CAS number 74-98-6]

Solvent Naphtha Medium Aliphatic [CAS number 64742-88-7]

Arsenic*

Cadmium*

Chromium*

Cobalt*

Copper*

Lead*

Manganese*

Nickel*

Selenium*

Zinc*

Vanadium [CAS number 7440-62-2]

Sulphuric Acid [CAS number 7664-93-9]

Particulate Matter*

PM10*

PM2.5*

Nitrogen Oxides [CAS number 11104-93-1]

Carbon Monoxide [CAS number 630-08-0]

Ammonia (Total)*

Nitrate Ion*

Total Reduced Sulphur*

I-Butyl Alcohol [CAS number 78-83-1]

Carbon Disulphide [CAS number 75-15-10]

*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.

A statement of the Facility's intent to reduce its "creation" or "use" of the Toxic Substance has not been included as a part of this Plan.

The Toxic Substance has triggered reporting under the TRA and O.Reg.455/09 due to two activities at the Facility, one of which is defined as a "use" under the TRA Framework and another which is interpreted as a "creation" of the Toxic Substance under the TRA framework.

The activity that has been classified as a "use" of the Toxic Substance for the purpose of the required TRA Quantification, Accounting and Reporting exercise for the Toxic Substance is the use of spray paint cans which contain the Toxic Substance. The Facility is of the opinion that it has previously optimized its use of products containing the Toxic Substance to greatest extent that can reasonably be expected and therefore 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 activity that has been classified as a "creation" of the Toxic Substance for the purpose of the required TRA Quantification, Accounting and Reporting exercise for the Toxic Substances is the generation and subsequent release of the Toxic Substance as a by-product of natural gas combustion. It should be noted that the quantity "created" by this means contributed less than 10% of the total TRA-reportable use/creation quantity for the 2013 baseline reporting year.

The Facility is of the opinion that it has previously optimized its control of the "creation" and subsequent release of the Toxic Substance to the greatest extent that can reasonably be expected, and therefore a statement of the Facility's intent to reduce "creation" of the Toxic Substances has not been included as a part of this Plan. As a result of satisfying various regulatory requirements in addition to voluntary actions with respect to combustion product releases, Sudbury INO actively implements a variety of controls to minimize combustion product releases from different parts of its process components. Relevant measures in place which minimize natural gas combustion which can lead to the "creation" and subsequent release of the Toxic Substance include, but are not limited to, the following:

- Natural gas burning heating equipment is inspected and serviced at the frequencies described in the Operations and Maintenance Manuals. Efficient operation of this equipment minimizes natural gas consumption and generation of the Toxic Substance.

The mine air heaters at the Fraser Mine complex at the Facility were replaced in 2013 and the replacements meet, or exceed, the requirements of ANSI Z83.4/CAN-CSA 3.7 "Non-recirculating direct gas-fired industrial air heaters" in terms of fuel efficiency and emissions.

Finally, it is Sudbury INOs feeling that the exceedance of the NPRI and TRA reporting threshold that was observed for the Toxic Substance in the 2013 reporting year (which resulted in the requirement to prepare this Toxic Substance Reduction Plan) is likely a one-time occurrence, and that the Facility is not likely to trigger reporting for this substance in subsequent reporting years.

Objectives of the Toxic Substance Reduction Plan

The objectives of this Plan are as follows:

- provide the reader with information on measures currently in place at the Facility which influence the way in which the Toxic Substance is used or created at the Facility;
- provide support for the Facility's position with respect to the Statement of Intent of this Plan; and
- document how, by preparing this Plan, 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

The activity that has been classified as a "use" of the Toxic Substance for the purpose of the required TRA Quantification, Accounting and Reporting exercise for the Toxic Substance is the use of spray paint cans which contain the Toxic Substance. The activity that has been classified as a "creation" of the Toxic Substance for the purpose of the required TRA Quantification, Accounting and Reporting exercise for the Toxic Substances is the generation and subsequent release of the Toxic Substance as a by-product of natural gas combustion.

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.

Statement that the Plan Summary Accurately Reflects the Current Version of the Plan

As required by s.24(1)8 of O.Reg.455/09 this Plan Summary accurately reflects the current version of the Plan.

Planner License Number

As required by s.18(2) of O.Reg.455/09, 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 pages.

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.

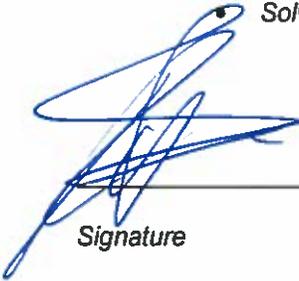
As of (insert date) Dec 19, 2014, I, ROB ROETERINK, certify that I have read the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the plans are factually accurate and comply with the *Toxics Reduction Act, 2009* and *Ontario Regulation 455/09 (General)* made under that Act.

- Propane

(dated December 17, 2014)

- Solvent Naphtha Medium Aliphatic

(dated December 17, 2014)



Signature

19 Dec 2014
Date

ROB ROETERINK
Print Name

December 17, 2014

Project No. 14-1192-0007

John Petherick
Sudbury Integrated Nickel Operations

**LICENSED TOXIC SUBSTANCE REDUCTION PLANNER CERTIFICATION STATEMENT FOR TOXIC
SUBSTANCE REDUCTION PLANS FOR VARIOUS TRA SUBSTANCES FOR SUDBURY INTEGRATED
NICKEL OPERATIONS ONAPING MINES MILL**

Dear Mr. Petherick:

Golder Associates Ltd. (Golder) was retained by Sudbury Integrated Nickel Operations (Sudbury INO) Onaping Mines Mill (the Facility) to provide various services pertaining to Toxic Substance Reduction Plan preparation for Various TRA Substances under the *Toxics Reduction Act* (TRA), including Toxic Substance Reduction Planner (Planner) certification of Substance Reduction Plans for Various TRA Substances (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 under this cover 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 17, 2014, I, Russell Polack certify that I am familiar with the processes at the Sudbury Integrated Nickel Operations Onaping Mines Mill 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.

- *Propane* (December 17, 2014)
- *Solvent Naphtha Medium Aliphatic* (December 17, 2014)



Russell Polack
Toxic Substance Reduction Planner
License No. TSRP0002
DCC/RLP/FSC/ms

December 17, 2014

Date

