



MEMO

To: Jean-Guy Leclair
General Manager

From: Bobby Doroudiani, P.Eng.
Senior Environmental Coordinator

Re: Toxic Reduction Act Public
Report

Date: 9 October, 2019

1. Basic Facility Information (Sections 27.(1)1, Ontario Regulation 455/09 ("O.Reg. 455/09"))

Company Name	Wesdome Gold Mines Ltd. ("Wesdome")
Facility Name	Eagle River Mill
Facility Physical and Mailing Address	93 Mission Rd. PO Box 1520 Wawa, ON P0S 1K0
Spatial Coordinates of Facility	16U 617332 m E, 5329231 m N (NAD83 datum)
NPRI Identification Number	10010
Number of Employees (Full time equivalent)	220
2 Digit NAICS Code	21
4 Digit NAICS Code	2122
6 Digi NAICS Code	212220

2. List of Toxic Substances with Toxic Substance Reduction Plans (Section 27.(1)2, O.Reg.455/09)

The list of all substances for which toxic substance reduction plans ("TSRPs") have been prepared includes:

- Arsenic;
- Cadmium;
- Chromium;
- Lead;
- Manganese;
- Nickel;
- Vanadium;



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- Zinc;
- Cyanides; and
- Particulate matter (PM, PM10 and PM2.5).

3. Material Accounting Summary for 2016 (Section 27.(1)2, O.Reg. 455/09)

Substance Name	CAS No.	Use or Creation	Quantity	Unit
Arsenic (and its compounds)	NA-02	Use	1842	kg
Cadmium (and its compounds)	NA-03	Use	51	kg
Chromium (and its compounds)	NA-04	Use	25	tonnes
Cobalt (and its compounds)	NA-05	Use	4310	kg
Lead (and its compounds)	NA-08	Use	11984	kg
Manganese (and its compounds)	NA-09	Use	142	tonnes
Nickel (and its compounds)	NA-11	Use	15	tonnes
Vanadium (and its compounds)	7440-62-2	Use	23	tonnes
Zinc (and its compounds)	NA-14	Use	39	tonnes
Cyanides (ionic)	NA-07	Use	51	tonnes
Total Particulate Matter	NA-M08	Creation	67	tonnes
PM2.5 Particulate Matter <= 2.5 microns	NA-M10	Creation	23	tonnes
PM10 – Particulate Matter <= 10 microns	NA-M09	Creation	8	tonnes

Note: Contents in the table above are from the 2018 NPRI data submitted to SWIM on 28 May 2019 by Golder on behalf of Wesdome

4. Comparison to Previous Year's Material Accounting (Section 27.(1)3 and 4, O.Reg. 455/09)

Substance Name	Change in Use/Creation from 2017 (%)	Reasons for Change
Arsenic (and its compounds)	-89%	Metals values for TRA "Use" were calculated for 2018 based on concentration in ore and ore usage per typical TRA convention for mining. Golder was not provided with the 2017 calculations and therefore an explanation cannot be provided for differences in calculated "Use" of metals compared to 2017
Cadmium (and its compounds)	-33%	
Chromium (and its compounds)	9%	
Cobalt (and its compounds)	-8%	
Lead (and its compounds)	>100%	
Manganese (and its compounds)	13%	
Nickel (and its compounds)	-1%	
Vanadium (and its compounds)	>100%	
Zinc (and its compounds)	-12%	
Cyanides (ionic)	-24%	
Total Particulate Matter	-12%	Lower estimated release from unpaved roadways
PM2.5 Particulate Matter <= 2.5 microns	12%	Refinement to the diesel calculation used total volume of diesel combusted in stationary equipment in 2018 versus individual equipment power output (HP) and annual operation hours.
PM10 – Particulate Matter <= 10 microns	>100%	

Note: Contents in the table above are from the 2018 NPRI data submitted to SWIM on 28 May 2019 by Golder on behalf of Wesdome

5. Objectives Set Out in Current Version of the TRSP Including any Targets for Reducing the Use and Creation of the Substance at the Facility (Section 27.(1)5, O.Reg. 455/09)

Wesdome does not intend to reduce the use of arsenic, cadmium, chromium, lead, manganese, nickel, vanadium or zinc as the substances are naturally occurring in ore from which gold is extracted. Manganese and zinc are also present in reactants which are required in the gold extraction process. Thus, reduction in use will decrease gold production. Reduction in use is not possible. Wesdome also does not intend to reduce the creation of particulate matter from the production of gold as there are no technically viable options available.

Wesdome is committed to playing a leadership role in protecting the environment. Toxic substance reduction will be an ongoing effort, and Wesdome will continue to monitor technological advancements to ensure that options that are both technologically and financially viable are



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implemented at our facility. It is the goal of Wesdome to minimize its ecological footprint at all operations, while conducting business in a safe, efficient and cost-effective manner.

6. Description of Steps that were Taken in Past Year to Implement Options and Whether Timelines Will Be Met (Section 27.(1)6, O.Reg.455/09)

There are no quantity targets or timelines for the toxic substances mentioned above. Wesdome continues to reduce the use of cyanide through process optimization and ongoing improvements.

7. Summary of Any Amendments Made to the TSRPs (Section 27.(1)7. O.Reg. 455/09)

No amendments have been made to the plans.

8. Certification by Highest Ranking Employee (Section 27.(1)8, O.Reg. 455/09)

As of 9 October 2019, I, Jean-Guy Leclair certify that I have read the reports on the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the information contained in the reports is factually accurate and the reports comply with the Toxic Reductions, 2009 and Ontario Regulation 455/09 (General) made under the Act.

Prepared By: _____

A handwritten signature in black ink, appearing to read "B. Doroudiani", is written over a horizontal line.

Bobby Doroudiani, P.Eng.
Senior Environmental Coordinator

Attachments:

2018 Certification



To: Jean-Guy Leclair, General Manager

Attachments

9 October 2019



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SWIM > 2018 > Wesdome Gold Mines Ltd. > Eagle River Mill > Report Preview

Summary Report

NPRI ID

10010

Company Name

Wesdome Gold Mines Ltd.

Facility Name

Eagle River Mill

Facility Address

93 Mission Road, Wawa (Ontario)

Report Details

Report Status

Submitted (2019-05-28 10:21:31 AM)

Reporting Period

2018

Report Type

Inventory (Programs: NPRI,ON MECP TRA)

Substances

Inventory

CAS RN	Substance Name	Releases	Disposals	Recycling	Unit
NA - M09	PM10 - Particulate Matter <= 10 Microns	23.2201	N/A	N/A	tonnes
NA - M10	PM2.5 - Particulate Matter <= 2.5 Microns	8.4604	N/A	N/A	tonnes
NA - M08	Total Particulate Matter	67.1941	N/A	N/A	tonnes
NA - 07	Cyanides (ionic)	0.1852	N/A	N/A	tonnes
NA - 11	Nickel (and its compounds)	0.0523	14.7840	N/A	tonnes
NA - 06	Copper (and its compounds)	N/A	9.4170	N/A	tonnes
NA - 04	Chromium (and its compounds)	0.0030	25.3220	N/A	tonnes
NA - 22	Phosphorus (total)	N/A	0.0000	N/A	tonnes
NA - 14	Zinc (and its compounds)	0.0295	38.7890	N/A	tonnes
NA - 09	Manganese (and its compounds)	0.0270	141.6880	N/A	tonnes
NA - 02	Arsenic (and its compounds)	6.9043	1834.8850	N/A	kg
NA - 05	Cobalt (and its compounds)	0.0280	4310.2700	N/A	kg
NA - 03	Cadmium (and its compounds)	0.0003	51.1600	N/A	kg
NA - 08	Lead (and its compounds)	1.5000	11982.9200	N/A	kg
NA - 12	Selenium (and its compounds)	N/A	89.5310	N/A	kg
7647-01-0	Hydrochloric acid	N/A	N/A	N/A	tonnes
7440-62-2	Vanadium (and its compounds)	0.0001	23.1500	N/A	tonnes
630-08-0	Carbon monoxide	21.9843	N/A	N/A	tonnes
11104-93-1	Nitrogen oxides (expressed as NO2)	99.6056	N/A	N/A	tonnes

Version: 3.15.0



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