



ALAMOS GOLD INC.
YOUNG-DAVIDSON

TOXICS REDUCTION ACT
PUBLIC ANNUAL SUMMARY REPORT
REPORTING YEAR 2017

Basic Facility Information	
Company Name	Alamos Gold Inc.
Facility Name	Young-Davidson Mine
Facility physical and mailing address	Mine Site, Highway 566 PO Box 187 Matachewan, ON P0K 1M0
Spatial Coordinates of Facility	UTM Zone 17 524250 E, 5310450 N
NPRI and O. Reg 127/01 Identification numbers	NPRI ID 26132
Number of Employees (end of 2017 - full time equivalent)	762
2 digit NAICS code	21 - Mining & Oil and Gas Extraction
4 Digit NAICS code	2122 - Metal Ore Mining
6 Digit NAICS code	212220 - Gold & Silver Ore Mining
Facility public contact	Leah Zapotochny Environmental Superintendent Alamos Gold Young-Davidson Mine Address as per above 705.565.9800 ext 2223
Parent Company Information	Alamos Gold Inc. Suite 3910, 181 Bay Street Toronto, ON M5J 2T3 416.368.9932

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
- Cadmium
- Chromium
- Cobalt
- Copper
- Lead
- Manganese
- Mercury
- Nickel
- Phosphorus
- Selenium
- Silver
- Zinc
- Thallium
- Antimony
- Vanadium
- Cyanides (Ionic)
- Hydrochloric Acid

- Carbon Disulphide
- Total Reduced Sulphur
- Nitrate ion
- Ammonia (total)
- Carbon Monoxide
- Nitrogen Oxides
- PM – Particulate Matter
- PM10 – Particulate Matter <= 10 micrometers
- PM2.5 – Particulate Matter <= 2.5 micrometers

Material Accounting Summary for Report Year 2017

Toxic Substance	CAS No.	Unit	Use	Creation	Contained in Product
Arsenic	N/A-2	kg	>10,000 to 100,000	0 to 1	>10,000 to 100,000
Cadmium	N/A-3	kg	>1,000 to 10,000	0 to 1	>100 to 1,000
Chromium	N/A-4	tonnes	>100 to 1,000	0 to 1	>100 to 1,000
Cobalt	N/A-5	kg	>10,000 to 100,000	0 to 1	>10,000 to 100,000
Copper	N/A-6	tonnes	>100 to 1,000	0 to 1	>100 to 1,000
Lead	N/A-8	kg	>100,000 to 1,000,000	0 to 1	>10,000 to 100,000
Manganese	N/A-9	tonnes	>1,000 to 10,000	0 to 1	>1,000 to 10,000
Mercury	N/A-15	kg	>10 to 100	0 to 1	0 to 1
Nickel	N/A-10	tonnes	>100 to 1,000	0 to 1	>10 to 100
Phosphorus (Total)	N/A-17	tonnes	>1,000 to 10,000	0 to 1	>1,000 to 10,000
Selenium	N/A-12	kg	>1,000 to 10,000	0 to 1	>1,000 to 10,000
Vanadium	7440-62-2	tonnes	>100 to 1,000	0 to 1	>100 to 1,000
Zinc	N/A-14	tonnes	>100 to 1,000	0 to 1	>10 to 100
Antimony	N/A-1	tonnes	>1 to 10	0 to 1	>1 to 10
Silver	N/A-13	tonnes	>1 to 10	0 to 1	>1 to 10
Thallium	N/A-16	kg	>1,000 to 10,000	0 to 1	>1,000 to 10,000
Cyanides	N/A-7	tonnes	>1,000 to 10,000	0 to 1	0 to 1
Hydrochloric Acid	7647-01-0	tonnes	>10 to 100	0 to 1	0 to 1
Carbon Disulphide	75-15-0	tonnes	0 to 1	>10 to 100	0 to 1
Total Reduced Sulphur	N/A-TRS	tonnes	0 to 1	>10 to 100	0 to 1
Nitrate Ion	N/A-11	tonnes	0 to 1	>10 to 100	0 to 1
Ammonia (Total)	N/A	tonnes	0 to 1	0 to 1	0 to 1
Carbon Monoxide	630-08-0	tonnes	0 to 1	>100 to 1,000	0
Nitrogen Oxides	11104-93-1	tonnes	0 to 1	>10 to 100	0
PM - Particulate Matter	N/A-M08	tonnes	0 to 1	>10 to 100	0
PM10 - Particulate Matter <=10 Micrometers	N/A-M09	tonnes	0 to 1	>10 to 100	0
PM2.5 - Particulate Matter <=2.5 Micrometers	N/A-M10	tonnes	0 to 1	>1 to 10	0

Comparison to Previous Year's Material Accounting

Change in USE

Toxic Substance	Change in Use	Comment if Change +/- 10%
Arsenic	36%	increase in effluent discharge volume
Cadmium	29%	increase in effluent discharge volume
Chromium	25%	increase in effluent discharge volume
Cobalt	25%	increase in effluent discharge volume
Copper	20%	increase in effluent discharge volume
Lead	29%	increase in effluent discharge volume
Manganese	25%	increase in effluent discharge volume
Mercury	42%	increase in effluent discharge volume
Nickel	25%	increase in effluent discharge volume
Phosphorus (Total)	25%	increase in effluent discharge volume
Selenium	30%	increase in effluent discharge volume
Vanadium	25%	increase in effluent discharge volume
Zinc	—	
Antimony	25%	Increased effluent discharge volume
Silver	25%	Increased effluent discharge volume
Thallium	—	
Cyanides (Ionic)	-3%	
Hydrochloric Acid	-37%	Reduced usage in process plant
Carbon Disulphide	—	
Total Reduced Sulphur	—	
Nitrate Ion	—	
Ammonia (Total)	—	
Carbon Monoxide	—	
Nitrogen Oxides	—	
PM - Particulate Matter	—	
PM10 - Particulate Matter <=10 Micrometers	—	
PM2.5 - Particulate Matter <=2.5 Micrometers	—	

Change in CREATION

Toxic Substance	Change in Creation	Comment if Change +/- 10%
Arsenic	—	
Cadmium	—	
Chromium	—	
Cobalt	—	
Copper	—	
Lead	—	
Manganese	—	
Mercury	—	
Nickel	—	
Phosphorus (Total)	—	
Selenium	—	
Vanadium	—	
Zinc	—	
Antimony	—	
Silver	—	
Thallium	—	
Cyanides (Ionic)	—	
Hydrochloric Acid	—	
Carbon Disulphide	12%	Increased release due to increase in xanthate usage in the process
Total Reduced Sulphur	12%	Increased release due to increase in xanthate usage in the process
Nitrate Ion	>100%	Increased release due to increase effluent discharge volume (WTP ntrification)
Ammonia (Total)	74%	Increased release due to increase effluent discharge volume (WTP ntrification)
Carbon Monoxide	0%	
Nitrogen Oxides	-8%	
PM - Particulate Matter	-8%	
PM10 - Particulate Matter <=10 Micrometers	-9%	
PM2.5 - Particulate Matter <=2.5 Micrometers	-7%	

Contained in PRODUCT

Toxic Substance	Change in Contained in Product	Comment if Change +/- 10%
Arsenic	-2%	
Cadmium	10%	Increase in waste rock utilized as product for site construction and increased pastebackfill production
Chromium	19%	Increase in pastebackfill production
Cobalt	19%	Increase in pastebackfill production
Copper	19%	Increase in pastebackfill production
Lead	11%	Increase in waste rock utilized as product for site construction and increased pastebackfill production
Manganese	19%	Increase in pastebackfill production
Mercury	-8%	
Nickel	19%	Increase in pastebackfill production
Phosphorus (Total)	19%	Increase in pastebackfill production
Selenium	8%	
Vanadium	19%	Increase in pastebackfill production
Zinc	—	
Antimony	19%	Increase in pastebackfill production
Silver	19%	Increase in pastebackfill production
Thallium	13%	Increase in waste rock utilized as product for site construction and increased pastebackfill production
Cyanides (Ionic)	—	
Hydrochloric Acid	—	
Carbon Disulphide	—	
Total Reduced Sulphur	—	
Nitrate Ion	—	
Ammonia (Total)	—	
Carbon Monoxide	—	
Nitrogen Oxides	—	
PM - Particulate Matter	—	
PM10 - Particulate Matter <=10 Micrometers	—	
PM2.5 - Particulate Matter <=2.5 Micrometers	—	

Comparison to Objectives Set Out in Current Version of the Toxic Substance Reduction Plan

Objectives are set out in the current version of the Toxic Substance Reduction Plan for two substances, Cyanides (ionic) and Hydrochloric Acid. The target was to reduce the cyanide use by 5% by the end of 2014 and the Hydrochloric use by 50% by the end of 2014. Although the steps were completed in 2014 for the Hydrochloric Acid plan, another attempt to reduce the concentration of Hydrochloric Acid during the acid washing was successfully completed. A 19% intensity based reduction was achieved compared to 2015. Another 37% reduction in the use of Hydrochloric Acid was achieved in 2017. Steps were completed in 2015 for the Cyanide plan and no additional measures were implemented.

Summary of Any Amendment Made to the Toxic Substance Reduction Plans

No amendments have been made to the plans.

Certifications

List of Toxic Substances Included in This Summary:

- Arsenic
- Cadmium
- Chromium
- Cobalt
- Copper
- Lead
- Manganese
- Mercury
- Nickel
- Phosphorus
- Selenium
- Silver

- Zinc
- Thallium
- Antimony
- Vanadium
- Cyanides (Ionic)
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Highest Ranking Employee

As of 17/04/2018, I, Luc Guimond, 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 Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

Original on file

Luc Guimond, General Manager