

# Facility Report

## Information for Syncrude Canada Ltd

<b>Reporting year</b>	2022
<b>Company</b>	Syncrude Canada Ltd.
<b>Company Mailing Address</b>	PoBox 4009 Post Office Box Mildred Lake Plant Site Highway, Fort McMurray, Alberta, T9H 3L1, Canada
<b>Portable Facility?</b>	No
<b>NPRI ID</b>	2274
<b>Facility Physical Address</b>	Highway 63 Highway North, Fort McMurray, Alberta, T9H 3L1, Canada

## Facility details

<b>Business number</b>	105112023					
<b>DUNS</b>	200846335					
<b>Number of full-time employee equivalents</b>	3802					
<b>Contact information</b>	Brooke Bennett Environmental Advisor 780-881-3304 brobennett@suncor.com English					
<b>Parent company</b>	Parent company	Percentage ownership	Address	Business number	DUNS Number	
<b>Typical days of operation</b>	mon /tue /wed /thu /fri /sat /sun					
<b>Operating hours</b>	24.00					
<b>Start time</b>	07:30					
<b>Shutdown periods</b>	Period	Start	End	Duration (day)	Same Time Next Year	Partial Shutdown
	1	2022-07-15	2022-09-12	59	No	Yes
	Comments	Maintenance shutdown. This time frame was for the largest pieces of equipment. Other maintenance work was also accomplished in 2022 on a smaller scale.				
<b>Activities</b>	<b>Activities with no employee threshold</b>					
	None of the above					
	<b>Activities that require Part 3 reporting</b>					
	None of the above					

## Report details

<b>Type</b>	NPRI Inventory
<b>Last Updated</b>	2025-06-03 12:53:40 PM
<b>Other years' reports</b>	1996, 1995, 1994, 1993, 2015, 2014, 2013, 2012, 2011, 2017, 2016, 2010, 2008, 2007, 2009, 2006, 2005, 2004, 2003, 2002, 2001, 2000, 1999, 1998, 1997, 2019, 2020, 2018, 2021, 2023, 2024
<b>Report comments</b>	Calculation errors were found in the reporting of some of the Metals from point sources and for Naphthenic Acid.
<b>Facility is case 3</b>	No
<b>Facility is case 4</b>	No

## Geographical details

<b>Latitude</b>	57.0405
<b>Longitude</b>	-111.6192
<b>Datum</b>	1983
<b>Census sub-division</b>	Wood Buffalo

<b>Census division</b>	Division No. 16
<b>Economic area</b>	Wood Buffalo--Cold Lake
<b>Census metropolitan and agglomeration area</b>	Wood Buffalo
<b>Ecozone</b>	Boreal PLain
<b>Major drainage area</b>	Great Slave Lake Drainage Area
<b>Land survey description</b>	09-01-093-11-W4
<b>National Topograph Description</b>	C-050-A/074-E-4
<b>Additional information</b>	

## Industry details

<b>Key industrial sector</b>	Non-Conventional Oil Extraction (including Oilsands and Heavy Oil)
<b>NAICS2</b>	Mining, quarrying, and oil and gas extraction
<b>NAICS4</b>	Oil and gas extraction
<b>NAICS6 Primary</b>	Mined oil sands extraction
<b>NAICS6 Secondary</b>	
<b>NAICS6 Tertiary</b>	

## Pollution prevention

### Plan details

### Pollution prevention

<b>Does the facility have a P2 plan?</b>	The facility does not have a P2 plan
<b>Reason for plan preparation</b>	
<b>Recent update</b>	The report was not updated during the reporting year
<b>Target of plan</b>	

### Activities

Primary activity	Secondary activity	Comment
No data available		

## Other environmental programs

### Other facility identifiers

ID number	Program
G10187	GHGRP Identification Number
26	Alberta EPEA Approval number or Code of Practice Registration number

### Permits

Permit number	Issuing Agency
8573	Alberta Energy and Utility Board, UE-1 Approval
18942-00-00	AENV, Aurora Oil Sands Plant/Mine Approval
26-02-00	AENV, AEPEA Amendment Approval, June 24, 2007
7550	Approval under AEUB Oil Sands Conservation Act

## Summary

Substance	CAS number	Units	Releases				Disposals and Transfers				Voluntary Report
			Air	Water	Land	Total	On-site disposals	Off-site disposals	Off-site treatment	Off-site recycling	
1,2,4-Trimethylbenzene	95-63-6	tonnes	12.507	-	-	12.507	48.620	-	-	-	
Acenaphthene	83-32-9	kg	0.694	-	-	0.694	2459.966	-	-	-	

Acenaphthylen e	208-96-8	kg	0.903	-	-	0.903	-	-	-	1.603
Ammonia (total)	NA - 16	tonnes	1220.001	0.109	-	1220.110	1498.280	-	-	-
Arsenic (and its compounds)	NA - 02	kg	9.487	2.691	-	12.178	55575.650	1.070	-	413.117
Benz[a]anthrac ene	56-55-3	kg	-	-	-	0.000	806.474	-	-	2.632
Benzene	71-43-2	tonnes	14.330	-	-	14.330	27.240	-	-	-
Benzo[a]pyren e	50-32-8	kg	0.483	-	-	0.483	1563.979	-	-	40.442
Benzo[b]fluora nthere	205-99-2	kg	0.178	-	-	0.178	-	-	-	2.632
Benzo[e]pyren e	192-97-2	kg	0.440	-	-	0.440	3744.043	-	-	2.393
Benzo[ghi]per ylene	191-24-2	kg	2.835	-	-	2.835	1534.093	-	-	3.829
Benzo[j]fluora nthere	205-82-3	kg	0.036	-	-	0.036	-	-	-	-
Benzo[k]fluora nthere	207-08-9	kg	0.145	-	-	0.145	-	-	-	1.197
Cadmium (and its compounds)	NA - 03	kg	3.953	0.022	-	3.975	1642.960	-	-	-
Carbon disulphide	75-15-0	tonnes	33.905	-	-	33.905	0.350	-	-	-
Carbon monoxide	630-08-0	tonnes	5561.638	-	-	5561.638	-	-	-	-
Carbonyl sulphide	463-58-1	tonnes	26.572	-	-	26.572	2.140	-	-	-
Chromium (and its compounds)	NA - 04	tonnes	0.141	0.005	-	0.146	298.200	0.830	-	-
Chrysene	218-01-9	kg	0.117	-	-	0.117	-	-	-	-
Cobalt (and its compounds)	NA - 05	kg	31.228	1.901	-	33.129	212262.670	0.205	-	413.117
Copper (and its compounds)	NA - 06	tonnes	0.118	0.007	-	0.125	134.040	0.570	-	0.425
Cumene	98-82-8	tonnes	5.593	-	-	5.593	-	-	-	-
Cyclohexane	110-82-7	tonnes	47.103	-	-	47.103	-	48.566	-	-
Dibenz[a,h]ant hracene	53-70-3	kg	0.059	-	-	0.059	575.822	-	-	1.197
Dibenz[a,j]acri dine	224-42-0	kg	0.006	-	-	0.006	-	-	-	-
Ethylbenzene	100-41-4	tonnes	21.882	-	-	21.882	186.470	-	-	-
Ethylene	74-85-1	tonnes	47.889	-	-	47.889	-	-	-	-
Ethylene glycol	107-21-1	tonnes	-	-	-	0.000	-	-	-	188.850
Fluoranthene	206-44-0	kg	0.971	-	-	0.971	1997.811	-	-	2.632
Fluorene	86-73-7	kg	0.267	-	-	0.267	885.058	-	-	1.914
Hydrogen sulphide	7783-06-4	tonnes	14.868	-	-	14.868	-	-	-	-
Indeno[1,2,3-c d]pyrene	193-39-5	kg	0.913	-	-	0.913	731.346	-	-	1.197
Isoprene	78-79-5	kg	419.919	-	-	419.919	-	-	-	-
Lead (and its compounds)	NA - 08	kg	60.902	2.405	-	63.307	192874.690	-	-	-
Manganese (and its compounds)	NA - 09	tonnes	0.603	0.278	-	0.881	9684.870	-	-	-
Mercury (and its compounds)	NA - 10	kg	5.534	0.006	-	5.540	473.080	179.579	-	362.110
Methyl ethyl ketone	78-93-3	tonnes	7.903	-	-	7.903	-	-	-	-
Molybdenum trioxide	1313-27-5	tonnes	-	-	-	0.000	-	52.844	-	89.589
Naphthenic acid fraction compounds (and their salts)	NA - 47	tonnes	-	-	-	0.000	12627.255	-	-	-
n-Hexane	110-54-3	tonnes	32.652	-	-	32.652	-	77.705	-	-
Nickel (and its compounds)	NA - 11	tonnes	1.160	0.009	-	1.169	326.770	56.332	-	109.159
Nitrogen oxides (expressed as nitrogen dioxide)	11104-93-1	tonnes	14460.795	-	-	14460.795	-	-	-	-

Perylene	198-55-0	kg	0.014	-	-	0.014	2983.695	-	-	1.197
Phenanthrene	85-01-8	kg	4.832	-	-	4.832	13099.944	-	-	5.983
Phosphorus (total)	NA - 22	tonnes	4.125	0.325	-	4.450	4553.060	78.919	-	-
PM10 - Particulate Matter <= 10 Micrometers	NA - M09	tonnes	4701.384	-	-	4701.384	-	-	-	-
PM2.5 - Particulate Matter <= 2.5 Micrometers	NA - M10	tonnes	1100.854	-	-	1100.854	-	-	-	-
Propylene	115-07-1	tonnes	53.843	-	-	53.843	-	-	-	-
Pyrene	129-00-0	kg	1.592	-	-	1.592	6422.290	-	-	8.376
Quinoline	91-22-5	kg	0.449	-	-	0.449	-	-	-	-
Selenium (and its compounds)	NA - 12	kg	23.718	0.573	-	24.291	0.000	-	-	-
Sulphur dioxide	7446-09-5	tonnes	29501.226	-	-	29501.226	-	-	-	-
Sulphuric acid	7664-93-9	tonnes	110.261	-	-	110.261	-	-	-	-
Toluene	108-88-3	tonnes	58.803	-	-	58.803	415.070	1.125	-	4.736
Total particulate matter	NA - M08	tonnes	12747.188	-	-	12747.188	-	-	-	-
Total reduced sulphur (expressed as hydrogen sulphide)	NA - M14	tonnes	70.160	-	-	70.160	-	-	-	-
Vanadium (and its compounds)	NA - 40	tonnes	2.701	0.009	-	2.710	410.400	122.234	-	244.235
Volatile Organic Compounds (Total)	NA - M16	tonnes	6811.133	-	-	6811.133	-	-	-	-
Xylene (all isomers)	1330-20-7	tonnes	113.487	-	-	113.487	572.011	1.125	-	5.593
Zinc (and its compounds)	NA - 14	tonnes	1.506	0.118	-	1.624	387.200	0.126	-	0.255

## Comments

Substance	CAS number	Comment Type	Comment
1,2,4-Trimethylbenzene	95-63-6	On-site releases comment	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.
1,2,4-Trimethylbenzene	95-63-6	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Ammonia (total)	NA - 16	On-site releases comment	Discharge volume decreased -0.6 Mm3 and average concentration decreased.
Arsenic (and its compounds)	NA - 02	On-site releases comment	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.
Arsenic (and its compounds)	NA - 02	Recycling comment	Discharge volume decreased -0.6 Mm3 and average concentration decreased. Reduction in the amount of Plant 22 catalyst available for recycling
Benzene	71-43-2	On-site releases comment	Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound off the ponds.
Benzene	71-43-2	Nature of other non-point releases	LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3. Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Cadmium (and its compounds)	NA - 03	On-site releases comment	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.

Cadmium (and its compounds)	NA - 03	On-site releases comment	Discharge volume decreased -0.6 Mm3 and average concentration increased.
Cadmium (and its compounds)	NA - 03	Disposal comment	Net amount of substance increased to Tailings due to decreased concentration in the recycle water.
Carbon disulphide	75-15-0	On-site releases comment	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Carbon disulphide	75-15-0	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Carbon monoxide	630-08-0	On-site releases comment	CO laser installed in Main Stack for year round values, no longer based on survey results. Survey results were also available for some of the stack >25m due to MSAPR testing which is more accurate than using USEPA factors.
Carbon monoxide	630-08-0	Nature of other non-point releases	Estimated emissions from propane heating.
Carbonyl sulphide	463-58-1	On-site releases comment	Diverter stack use in 2022 increased the emissions of this substance.
Carbonyl sulphide	463-58-1	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Chromium (and its compounds)	NA - 04	On-site releases comment	Diverter stack use in 2022 increased the emissions of this substance.  Discharge volume decreased -0.6 Mm3 and average concentration increased. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.
Chromium (and its compounds)	NA - 04	Nature of other non-point releases	Estimated emissions from onsite Welding activities.
Cobalt (and its compounds)	NA - 05	On-site releases comment	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.
Cobalt (and its compounds)	NA - 05	Disposal comment	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
Cobalt (and its compounds)	NA - 05	Recycling comment	Reduction in the amount of Plant 22 catalyst available for recycling
Copper (and its compounds)	NA - 06	On-site releases comment	Diverter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
Copper (and its compounds)	NA - 06	Recycling comment	Reduction in the amount of Plant 22 catalyst available for recycling
Cumene	98-82-8	On-site releases comment	Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound off the ponds and mine face.
Cumene	98-82-8	Substance criteria comment	Emissions for 2021 were within the reporting threshold. 2022 emissions have reduced to below reporting threshold.
Cumene	98-82-8	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Cyclohexane	110-82-7	On-site releases comment	Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound off the ponds and mine face.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
Cyclohexane	110-82-7	Nature of other non-point releases	Venting from non-tank sources, emissions from the fine fluid tails cake deposits.
Cyclohexane	110-82-7	Disposal comment	Waste Grease
Ethylbenzene	100-41-4	On-site releases comment	Fugitive emissions study performed in 2022 measured a decrease in emissions of

Ethylbenzene	100-41-4	On-site releases comment	this compound off the ponds and mine face.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
Ethylbenzene	100-41-4	Nature of other non-point releases	Venting from non-tank sources, releases from the Fine Tails cake deposit
Ethylene	74-85-1	On-site releases comment	Increase was due to increased speciation data availability with stack height changing from >50 M to >25M for the 2022 reporting cycle.
Ethylene	74-85-1	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Hydrogen sulphide	7783-06-4	On-site releases comment	Reduction in amount of sour gas going to flare in 2022.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
Hydrogen sulphide	7783-06-4	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Isoprene	78-79-5	On-site releases comment	Fugitive emissions study performed in 2022 measured an increase in emissions of this compound at the mine face and off the surface impoundments(ponds).
Isoprene	78-79-5	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Lead (and its compounds)	NA - 08	On-site releases comment	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
Lead (and its compounds)	NA - 08	Disposal comment	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
Manganese (and its compounds)	NA - 09	On-site releases comment	Diverter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.  Discharge volume decreased -0.6 Mm3 and average concentration decreased.
Mercury (and its compounds)	NA - 10	On-site releases comment	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.  Discharge volume decreased -0.6 Mm3 and average concentration decreased.
Methyl ethyl ketone	78-93-3	Substance criteria comment	Emissions for 2021 were within the reporting threshold. 2022 emissions have reduced to below reporting threshold.
Methyl ethyl ketone	78-93-3	On-site releases comment	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.
Methyl ethyl ketone	78-93-3	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Molybdenum trioxide	1313-27-5	Disposal comment	Increased amount of Plant 22 catalyst disposed of in 2022
Molybdenum trioxide	1313-27-5	Recycling comment	Reduction in the amount of Plant 22 catalyst available for recycling
n-Hexane	110-54-3	On-site releases comment	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.

n-Hexane	110-54-3	On-site releases comment	LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
n-Hexane	110-54-3	Nature of other non-point releases	Venting from non-tank sources, emissions from the fine fluid tails cake deposits.
n-Hexane	110-54-3	Disposal comment	Waste Grease and Oil
Nickel (and its compounds)	NA - 11	On-site releases comment	Diverter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
Nickel (and its compounds)	NA - 11	Nature of other non-point releases	Emissions estimate for onsite welding emissions.
Nickel (and its compounds)	NA - 11	Disposal comment	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
Nickel (and its compounds)	NA - 11	Recycling comment	Reduction in the amount of Plant 22 catalyst available for recycling
Nitrogen oxides (expressed as nitrogen dioxide)	11104-93-1	On-site releases comment	The increase is attributed to the CO Boilers running with higher excess oxygen as a prevention strategy against premature tube failures, resulting in an increase in NOx from the Main Stack.
Nitrogen oxides (expressed as nitrogen dioxide)	11104-93-1	Nature of other non-point releases	Estimated emissions from propane heating.
Phosphorus (total)	NA - 22	On-site releases comment	Diverter stack use in 2022 increased the emissions of this substance.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
Phosphorus (total)	NA - 22	Disposal comment	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
PM10 - Particulate Matter <= 10 Micrometers	NA - M09	On-site releases comment	Fugitive dust values were calculated using the aggregate and wind erosion method supplied by ECCC which is a more accurate representation. This was a change for the Syncrude facilities in 2022. Previously they were calculated using a different stockpile calculation method provided by ECCC.  Diverters were utilized in 2022.
PM10 - Particulate Matter <= 10 Micrometers	NA - M09	Nature of other non-point releases	Welding emissions estimates.
PM2.5 - Particulate Matter <= 2.5 Micrometers	NA - M10	On-site releases comment	Fugitive dust values were calculated using the aggregate and wind erosion method supplied by ECCC which is a more accurate representation. This was a change for the Syncrude facilities in 2022. Previously they were calculated using a different stockpile calculation method provided by ECCC.  Diverting utilized in 2022.
Propylene	115-07-1	On-site releases comment	Increase was due to change in calculations for stacks >25M, speciated VOCs now included for more stacks at the Mildred Lake facility.
Propylene	115-07-1	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Selenium (and its compounds)	NA - 12	On-site releases comment	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.
Selenium (and its compounds)	NA - 12	Disposal comment	Net amount of substance decreased to Tailings due to increase concentration in recycle water.
Sulphur dioxide	7446-09-5	On-site releases comment	The increase in the All Sources SO2 emission value is attributed to a full

Sulphur dioxide	7446-09-5	On-site releases comment	operating year from Plant 52-1, usage of the diverter stacks in 2022, and Plant 12-0 being off line for an extended period in 2022 for maintenance and upgrades. Plant 12-0 outage resulted in HV 225 being opened, which is the alternative routing for tail gas, sending Plant 12-1/2/3/4 tail gas to Plant 29-1 during 2022, which is done to manage SO2 loading to Plant 26-1. In addition, HV 225 was opened in Q4 to maintain a continuous flow to minimize corrosion in the tail gas line/header to Plant 29-1. As sulphur recovery is lower in Plant 29-1 (approximately 65%) than it is in Plant 26-1 (typical route where recovery is approx. 90%) overall SO2 emission was higher.
Sulphuric acid	7664-93-9	On-site releases comment	Reduced emissions from the Main Stack in 2022 due to one of the cokers feeding to the Main Stack being offline for turnaround maintenance in 2022.
Toluene	108-88-3	On-site releases comment	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
Toluene	108-88-3	Nature of other non-point releases	releases from the Fine Tails cake deposit
Total particulate matter	NA - M08	On-site releases comment	Fugitive dust values were calculated using the aggregate and wind erosion method supplied by ECCC which is a more accurate representation. This was a change for the Syncrude facilities in 2022. Previously they were calculated using a different stockpile calculation method provided by ECCC.
Total particulate matter	NA - M08	Nature of other non-point releases	Diverting was utilized in 2022. Other non point sources includes estimates of welding activities.
Total reduced sulphur (expressed as hydrogen sulphide)	NA - M14	On-site releases comment	Fugitive emissions study performed in 2022 measured an increase in emissions of this compound off the ponds and mine face. Diverter stack use in 2022 increased the emission of this substance at point sources.
Total reduced sulphur (expressed as hydrogen sulphide)	NA - M14	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Vanadium (and its compounds)	NA - 40	On-site releases comment	Diverter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.
Vanadium (and its compounds)	NA - 40	Disposal comment	Discharge volume decreased -0.6 Mm3 and average concentration increased. Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
Vanadium (and its compounds)	NA - 40	Recycling comment	Reduction in the amount of Plant 22 catalyst available for recycling
Volatile Organic Compounds (Total)	NA - M16	On-site releases comment	Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound at the mine face, and off the tanks. LDAR program increased inventory for 2021 increasing the amount of this compound estimated to be released from the components.
Volatile Organic Compounds (Total)	NA - M16	Nature of other non-point releases	Emissions from NRU and extraction venting, fugitive emissions from the

Volatile Organic Compounds (Total)	NA - M16	Nature of other non-point releases	MFT/FFT area.
Xylene (all isomers)	1330-20-7	On-site releases comment	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.
Xylene (all isomers)	1330-20-7	Nature of other non-point releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Zinc (and its compounds)	NA - 14	On-site releases comment	Diverted stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
Zinc (and its compounds)	NA - 14	Recycling comment	Reduction in the amount of Plant 22 catalyst available for recycling

## Release to air

Substance	CAS number	Units	Stack/Point	Storage/Han dling	Fugitive	Spills	Road Dust	Other	Total
1,2,4-Trimethylbenzene	95-63-6	tonnes	0.009	0.435	11.990	-	-	0.073	12.507
Acenaphthene	83-32-9	kg	0.694	-	-	-	-	-	0.694
Acenaphthylene	208-96-8	kg	0.903	-	-	-	-	-	0.903
Ammonia (total)	NA - 16	tonnes	1220.001	-	-	-	-	-	1220.001
Arsenic (and its compounds)	NA - 02	kg	9.487	-	-	-	-	-	9.487
Benzene	71-43-2	tonnes	2.070	0.578	11.392	-	-	0.290	14.330
Benzo[a]pyrene	50-32-8	kg	0.483	-	-	-	-	-	0.483
Benzo[b]fluoranthene	205-99-2	kg	0.178	-	-	-	-	-	0.178
Benzo[e]pyrene	192-97-2	kg	0.440	-	-	-	-	-	0.440
Benzo[ghi]perylene	191-24-2	kg	2.835	-	-	-	-	-	2.835
Benzo[j]fluoranthene	205-82-3	kg	0.036	-	-	-	-	-	0.036
Benzo[k]fluoranthene	207-08-9	kg	0.145	-	-	-	-	-	0.145
Cadmium (and its compounds)	NA - 03	kg	3.953	-	-	-	-	-	3.953
Carbon disulphide	75-15-0	tonnes	11.772	-	22.132	-	-	0.001	33.905
Carbon monoxide	630-08-0	tonnes	5561.138	-	-	-	-	0.500	5561.638
Carbonyl sulphide	463-58-1	tonnes	17.994	0.002	8.566	-	-	0.010	26.572
Chromium (and its compounds)	NA - 04	tonnes	0.130	-	-	-	-	0.011	0.141
Chrysene	218-01-9	kg	0.117	-	-	-	-	-	0.117
Cobalt (and its compounds)	NA - 05	kg	31.228	-	-	-	-	-	31.228
Copper (and its compounds)	NA - 06	tonnes	0.118	-	-	-	-	-	0.118
Cumene	98-82-8	tonnes	0.002	0.131	5.384	-	-	0.076	5.593
Cyclohexane	110-82-7	tonnes	0.450	1.026	44.770	-	-	0.857	47.103
Dibenz[a,h]anthracene	53-70-3	kg	0.059	-	-	-	-	-	0.059
Dibenz[a,j]acridene	224-42-0	kg	0.006	-	-	-	-	-	0.006
Ethylbenzene	100-41-4	tonnes	0.067	1.046	20.638	-	-	0.131	21.882
Ethylene	74-85-1	tonnes	46.558	0.018	1.272	-	-	0.041	47.889
Fluoranthene	206-44-0	kg	0.971	-	-	-	-	-	0.971
Fluorene	86-73-7	kg	0.267	-	-	-	-	-	0.267
Hydrogen sulphide	7783-06-4	tonnes	11.423	0.110	3.188	-	-	0.147	14.868
Indeno[1,2,3-cd]pyrene	193-39-5	kg	0.913	-	-	-	-	-	0.913
Isoprene	78-79-5	kg	-	56.443	362.871	-	-	0.605	419.919
Lead (and its compounds)	NA - 08	kg	60.902	-	-	-	-	-	60.902
Manganese (and its compounds)	NA - 09	tonnes	0.603	-	-	-	-	-	0.603

its compounds)	NA - 09	tonnes	0.603	-	-	-	-	-	0.603
Mercury (and its compounds)	NA - 10	kg	5.534	-	-	-	-	-	5.534
Methyl ethyl ketone	78-93-3	tonnes	0.228	0.004	7.670	-	-	0.001	7.903
n-Hexane	110-54-3	tonnes	0.180	2.596	29.602	-	-	0.274	32.652
Nickel (and its compounds)	NA - 11	tonnes	1.130	-	-	-	-	0.030	1.160
Nitrogen oxides (expressed as nitrogen dioxide)	11104-93-1	tonnes	14456.817	-	-	-	-	3.978	14460.795
Perylene	198-55-0	kg	0.014	-	-	-	-	-	0.014
Phenanthrene	85-01-8	kg	3.832	1.000	-	-	-	-	4.832
Phosphorus (total)	NA - 22	tonnes	4.125	-	-	-	-	-	4.125
PM10 - Particulate Matter <= 10 Micrometers	NA - M09	tonnes	1638.384	-	302.030	-	2755.181	5.789	4701.384
PM2.5 - Particulate Matter <= 2.5 Micrometers	NA - M10	tonnes	781.791	-	45.403	-	273.661	-	1100.854
Propylene	115-07-1	tonnes	51.877	0.098	1.822	-	-	0.046	53.843
Pyrene	129-00-0	kg	1.592	-	-	-	-	-	1.592
Quinoline	91-22-5	kg	0.449	-	-	-	-	-	0.449
Selenium (and its compounds)	NA - 12	kg	23.718	-	-	-	-	-	23.718
Sulphur dioxide	7446-09-5	tonnes	29501.226	-	-	-	-	-	29501.226
Sulphuric acid	7664-93-9	tonnes	110.261	-	-	-	-	-	110.261
Toluene	108-88-3	tonnes	0.947	3.112	54.616	-	-	0.128	58.803
Total particulate matter	NA - M08	tonnes	2516.393	-	611.942	-	9600.586	18.267	12747.188
Total reduced sulphur (expressed as hydrogen sulphide)	NA - M14	tonnes	32.330	0.125	37.551	-	-	0.154	70.160
Vanadium (and its compounds)	NA - 40	tonnes	2.701	-	-	-	-	-	2.701
Volatile Organic Compounds (Total)	NA - M16	tonnes	511.993	77.130	6196.649	-	-	25.360	6811.133
Xylene (all isomers)	1330-20-7	tonnes	0.274	3.692	108.923	-	-	0.598	113.487
Zinc (and its compounds)	NA - 14	tonnes	1.506	-	-	-	-	-	1.506

## Releases to water

Substance	CAS number	Units	Direct Discharges	Leaks	Spills	Total
Ammonia (total)	NA - 16	tonnes	0.109	-	-	0.109
Arsenic (and its compounds)	NA - 02	kg	2.691	-	-	2.691
Cadmium (and its compounds)	NA - 03	kg	0.022	-	-	0.022
Chromium (and its compounds)	NA - 04	tonnes	0.005	-	-	0.005
Cobalt (and its compounds)	NA - 05	kg	1.901	-	-	1.901
Copper (and its compounds)	NA - 06	tonnes	0.007	-	-	0.007
Lead (and its compounds)	NA - 08	kg	2.405	-	-	2.405
Manganese (and its compounds)	NA - 09	tonnes	0.278	-	-	0.278
Mercury (and its compounds)	NA - 10	kg	0.006	-	-	0.006
Nickel (and its compounds)	NA - 11	tonnes	0.009	-	-	0.009
Phosphorus (total)	NA - 22	tonnes	0.325	-	-	0.325
Selenium (and its compounds)	NA - 12	kg	0.573	-	-	0.573
Vanadium (and its compounds)	NA - 40	tonnes	0.009	-	-	0.009

compounds)	NA - 40	tonnes	0.009	-	-	0.009
Zinc (and its compounds)	NA - 14	tonnes	0.118	-	-	0.118

## On-site disposals

Substance	CAS number	Units	Landfill	Land Treatment	Underground Injection	Tailings	Waste Rock	Total
1,2,4-Trimethylbenzene	95-63-6	tonnes	-	-	-	48.6200	-	48.620
Acenaphthene	83-32-9	kg	-	-	-	2459.9660	-	2459.966
Ammonia (total)	NA - 16	tonnes	-	-	-	1498.2800	-	1498.280
Arsenic (and its compounds)	NA - 02	kg	-	-	-	55575.6500	-	55575.650
Benz[a]anthracene	56-55-3	kg	-	-	-	806.4740	-	806.474
Benzene	71-43-2	tonnes	-	-	-	27.2400	-	27.240
Benzo[a]pyrene	50-32-8	kg	-	-	-	1563.9790	-	1563.979
Benzo[e]pyrene	192-97-2	kg	-	-	-	3744.0430	-	3744.043
Benzo[ghi]perylene	191-24-2	kg	-	-	-	1534.0930	-	1534.093
Cadmium (and its compounds)	NA - 03	kg	-	-	-	1642.9600	-	1642.960
Carbon disulphide	75-15-0	tonnes	-	-	-	0.3500	-	0.350
Carbonyl sulphide	463-58-1	tonnes	-	-	-	2.1400	-	2.140
Chromium (and its compounds)	NA - 04	tonnes	-	-	-	298.2000	-	298.200
Cobalt (and its compounds)	NA - 05	kg	-	-	-	212262.6700	-	212262.670
Copper (and its compounds)	NA - 06	tonnes	-	-	-	134.0400	-	134.040
Dibenz[a,h]anthracene	53-70-3	kg	-	-	-	575.8220	-	575.822
Ethylbenzene	100-41-4	tonnes	-	-	-	186.4700	-	186.470
Fluoranthene	206-44-0	kg	-	-	-	1997.8110	-	1997.811
Fluorene	86-73-7	kg	-	-	-	885.0580	-	885.058
Indeno[1,2,3-cd]pyrene	193-39-5	kg	-	-	-	731.3460	-	731.346
Lead (and its compounds)	NA - 08	kg	-	-	-	192874.6900	-	192874.690
Manganese (and its compounds)	NA - 09	tonnes	-	-	-	9684.8700	-	9684.870
Mercury (and its compounds)	NA - 10	kg	-	-	-	473.0800	-	473.080
Naphthenic acid fraction compounds (and their salts)	NA - 47	tonnes	-	-	-	12627.2548	-	12627.255
Nickel (and its compounds)	NA - 11	tonnes	-	-	-	326.7700	-	326.770
Perylene	198-55-0	kg	-	-	-	2983.6950	-	2983.695
Phenanthrene	85-01-8	kg	-	-	-	13099.9440	-	13099.944
Phosphorus (total)	NA - 22	tonnes	-	-	-	4553.0600	-	4553.060
Pyrene	129-00-0	kg	-	-	-	6422.2900	-	6422.290
Toluene	108-88-3	tonnes	0.0004	-	-	415.0700	-	415.070
Vanadium (and its compounds)	NA - 40	tonnes	-	-	-	410.4000	-	410.400
Xylene (all isomers)	1330-20-7	tonnes	0.0006	-	-	572.0100	-	572.011
Zinc (and its compounds)	NA - 14	tonnes	-	-	-	387.2000	-	387.200

## Off-site disposals

Substance	CAS number	Units	Landfill	Land Treatment	Underground Storage and Injection	Tailings	Waste Rock	Total
1,2,4-Trimethylbenzene	95-63-6	tonnes	-	-	-	48.6200	-	48.620
Acenaphthene	83-32-9	kg	-	-	-	2459.9660	-	2459.966
Ammonia (total)	NA - 16	tonnes	-	-	-	1498.2800	-	1498.280
Arsenic (and its compounds)	NA - 02	kg	1.0700	-	-	55575.6500	-	55576.720
Benz[a]anthracene	56-55-3	kg	-	-	-	806.4740	-	806.474

ne	56-55-3	kg	-	-	-	-	806.4740	-	806.474
Benzene	71-43-2	tonnes	-	-	-	-	27.2400	-	27.240
Benzo[a]pyrene	50-32-8	kg	-	-	-	-	1563.9790	-	1563.979
Benzo[e]pyrene	192-97-2	kg	-	-	-	-	3744.0430	-	3744.043
Benzo[ghi]perylene	191-24-2	kg	-	-	-	-	1534.0930	-	1534.093
ne									
Cadmium (and its compounds)	NA - 03	kg	-	-	-	-	1642.9600	-	1642.960
Carbon disulphide	75-15-0	tonnes	-	-	-	-	0.3500	-	0.350
Carbonyl sulphide	463-58-1	tonnes	-	-	-	-	2.1400	-	2.140
Chromium (and its compounds)	NA - 04	tonnes	0.8300	-	-	-	298.2000	-	299.030
Cobalt (and its compounds)	NA - 05	kg	0.2050	-	-	-	212262.6700	-	212262.875
Copper (and its compounds)	NA - 06	tonnes	0.5700	-	-	-	134.0400	-	134.610
Cyclohexane	110-82-7	tonnes	48.5656	-	-	-	-	-	48.566
Dibenz[a,h]anthracene	53-70-3	kg	-	-	-	-	575.8220	-	575.822
Ethylbenzene	100-41-4	tonnes	-	-	-	-	186.4700	-	186.470
Fluoranthene	206-44-0	kg	-	-	-	-	1997.8110	-	1997.811
Fluorene	86-73-7	kg	-	-	-	-	885.0580	-	885.058
Indeno[1,2,3-cd]pyrene	193-39-5	kg	-	-	-	-	731.3460	-	731.346
Lead (and its compounds)	NA - 08	kg	-	-	-	-	192874.6900	-	192874.690
Manganese (and its compounds)	NA - 09	tonnes	-	-	-	-	9684.8700	-	9684.870
Mercury (and its compounds)	NA - 10	kg	179.5790	-	-	-	473.0800	-	652.659
Molybdenum trioxide	1313-27-5	tonnes	52.8440	-	-	-	-	-	52.844
Naphthenic acid fraction compounds (and their salts)	NA - 47	tonnes	-	-	-	-	12627.2548	-	12627.255
n-Hexane	110-54-3	tonnes	77.7050	-	-	-	-	-	77.705
Nickel (and its compounds)	NA - 11	tonnes	56.3320	-	-	-	326.7700	-	383.102
Perylene	198-55-0	kg	-	-	-	-	2983.6950	-	2983.695
Phenanthrene	85-01-8	kg	-	-	-	-	13099.9440	-	13099.944
Phosphorus (total)	NA - 22	tonnes	78.9191	-	-	-	4553.0600	-	4631.979
Pyrene	129-00-0	kg	-	-	-	-	6422.2900	-	6422.290
Toluene	108-88-3	tonnes	1.1246	-	-	-	415.0700	-	416.195
Vanadium (and its compounds)	NA - 40	tonnes	122.2340	-	-	-	410.4000	-	532.634
Xylene (all isomers)	1330-20-7	tonnes	1.1252	-	-	-	572.0100	-	573.135
Zinc (and its compounds)	NA - 14	tonnes	0.1260	-	-	-	387.2000	-	387.326

## Other years data

Year	CAS number	Substance Units	Releases				Disposals and Transfers			
			Air	Water	Land	Total	On-site disposals	Off-site disposals	Off-site treatment	Off-site recycling
2024	95-63-6	1,2,4-Trimethylbenzene tonnes	9.862	-	-	9.862	-	-	-	0.010
2023	95-63-6	1,2,4-Trimethylbenzene tonnes	22.545	-	-	22.545	48.620	-	-	-
2021	95-63-6	1,2,4-Trimethylbenzene tonnes	27.216	-	-	27.216	48.620	-	-	-
2020	95-63-6	1,2,4-Trimethylbenzene tonnes	30.803	-	-	30.803	48.620	-	-	-
2019	95-63-6	1,2,4-Trimethylbenzene tonnes	38.785	-	-	38.785	48.620	-	-	-
2018	95-63-6	1,2,4-Trimethylbenzene tonnes	22.836	-	-	22.836	48.620	-	-	-
2017	95-63-6	1,2,4-Trimethylbenzene tonnes	45.024	-	-	45.024	48.620	-	-	-
2016	95-63-6	1,2,4-Trimethylbenzene tonnes	133.471	-	-	133.471	48.620	-	-	-

2015	95-63-6	1,2,4-Trimethy lbenzene	tonnes	46.222	-	-	46.222	52.700	-	-	-
2014	95-63-6	1,2,4-Trimethy lbenzene	tonnes	55.941	-	-	55.941	52.180	-	-	-
2013	95-63-6	1,2,4-Trimethy lbenzene	tonnes	28.574	-	-	28.574	36.550	-	-	-
2012	95-63-6	1,2,4-Trimethy lbenzene	tonnes	21.292	-	-	21.292	61.000	-	-	-
2011	95-63-6	1,2,4-Trimethy lbenzene	tonnes	21.299	-	-	21.299	58.000	-	-	-
2010	95-63-6	1,2,4-Trimethy lbenzene	tonnes	13.509	-	-	13.509	-	-	-	-
2009	95-63-6	1,2,4-Trimethy lbenzene	tonnes	13.656	-	-	13.656	-	-	-	-
2008	95-63-6	1,2,4-Trimethy lbenzene	tonnes	53.440	-	-	53.440	-	-	-	-
2007	95-63-6	1,2,4-Trimethy lbenzene	tonnes	54.011	-	-	54.011	-	-	-	-
2006	95-63-6	1,2,4-Trimethy lbenzene	tonnes	53.813	-	-	53.813	-	-	-	-
2005	95-63-6	1,2,4-Trimethy lbenzene	tonnes	55.914	-	-	55.914	-	-	-	-
2004	95-63-6	1,2,4-Trimethy lbenzene	tonnes	62.676	-	-	62.676	-	-	-	-
2003	95-63-6	1,2,4-Trimethy lbenzene	tonnes	53.025	-	-	53.025	-	-	-	-
2002	95-63-6	1,2,4-Trimethy lbenzene	tonnes	53.052	-	-	53.052	0.000	-	-	-
2001	95-63-6	1,2,4-Trimethy lbenzene	tonnes	53.291	-	-	53.291	0.000	-	-	-
2000	95-63-6	1,2,4-Trimethy lbenzene	tonnes	53.152	-	-	53.152	0.000	-	-	-
1999	95-63-6	1,2,4-Trimethy lbenzene	tonnes	59.135	-	-	59.135	0.000	-	-	-
1998	95-63-6	1,2,4-Trimethy lbenzene	tonnes	59.306	-	-	59.306	0.000	-	-	-
1997	95-63-6	1,2,4-Trimethy lbenzene	tonnes	58.948	-	-	58.948	0.000	-	-	-
1996	95-63-6	1,2,4-Trimethy lbenzene	tonnes	8.260	-	-	8.260	0.000	-	-	-
1995	95-63-6	1,2,4-Trimethy lbenzene	tonnes	8.250	-	-	8.250	0.108	-	-	-
1994	95-63-6	1,2,4-Trimethy lbenzene	tonnes	8.380	-	-	8.380	0.103	-	-	-
1993	95-63-6	1,2,4-Trimethy lbenzene	tonnes	15.120	-	0.022	15.142	0.004	-	-	-
2020	106-99-0	1,3-Butadiene	tonnes	0.989	-	-	0.989	-	-	-	-
2019	106-99-0	1,3-Butadiene	tonnes	1.074	-	-	1.074	-	-	-	-
2018	106-99-0	1,3-Butadiene	tonnes	1.321	-	-	1.321	-	-	-	-
2017	106-99-0	1,3-Butadiene	tonnes	2.255	-	-	2.255	-	-	-	-
2016	106-99-0	1,3-Butadiene	tonnes	1.090	-	-	1.090	-	-	-	-
2015	106-99-0	1,3-Butadiene	tonnes	1.620	-	-	1.620	-	-	-	-
2014	106-99-0	1,3-Butadiene	tonnes	1.244	-	-	1.244	-	-	-	-
2013	106-99-0	1,3-Butadiene	tonnes	1.334	-	-	1.334	-	-	-	-
2012	106-99-0	1,3-Butadiene	tonnes	1.484	-	-	1.484	-	-	-	-
2011	106-99-0	1,3-Butadiene	tonnes	2.208	-	-	2.208	-	-	-	-
2010	106-99-0	1,3-Butadiene	tonnes	-	-	-	0.000	-	-	-	-
2009	106-99-0	1,3-Butadiene	tonnes	2.143	-	-	2.143	-	-	-	-
2008	106-99-0	1,3-Butadiene	tonnes	3.028	-	-	3.028	-	-	-	-
2007	106-99-0	1,3-Butadiene	tonnes	6.896	-	-	6.896	-	-	-	-
2006	106-99-0	1,3-Butadiene	tonnes	6.983	-	-	6.983	-	-	-	-
2005	106-99-0	1,3-Butadiene	tonnes	5.336	-	-	5.336	-	-	-	-
2004	106-99-0	1,3-Butadiene	tonnes	5.412	-	-	5.412	-	-	-	-
2003	106-99-0	1,3-Butadiene	tonnes	6.415	-	-	6.415	-	-	-	-
2002	106-99-0	1,3-Butadiene	tonnes	6.242	-	-	6.242	-	-	-	-
2001	106-99-0	1,3-Butadiene	tonnes	10.598	-	-	10.598	-	-	-	-
2000	106-99-0	1,3-Butadiene	tonnes	7.396	-	-	7.396	-	-	-	-
1999	106-99-0	1,3-Butadiene	tonnes	5.172	-	-	5.172	-	-	-	-
1998	106-99-0	1,3-Butadiene	tonnes	4.034	-	-	4.034	-	-	-	-
1997	106-99-0	1,3-Butadiene	tonnes	5.886	-	-	5.886	-	-	-	-
1996	106-99-0	1,3-Butadiene	tonnes	3.883	-	-	3.883	-	-	-	-
1995	106-99-0	1,3-Butadiene	tonnes	2.853	-	-	2.853	-	-	-	-
2018	5522-43-0	1-Nitropyrene	kg	0.002	-	-	0.002	-	-	-	-
2017	5522-43-0	1-Nitropyrene	kg	-	-	-	0.000	-	-	-	-
2016	5522-43-0	1-Nitropyrene	kg	0.022	-	-	0.022	-	-	-	-
2015	5522-43-0	1-Nitropyrene	kg	0.001	-	-	0.001	-	-	-	-
2014	5522-43-0	1-Nitropyrene	kg	0.024	-	-	0.024	-	-	-	-

2013	5522-43-0	1-Nitropyrene	kg	0.006	-	-	0.006	-	-	-	-
2012	5522-43-0	1-Nitropyrene	kg	0.008	-	-	0.008	-	-	-	-
2011	5522-43-0	1-Nitropyrene	kg	0.008	-	-	0.008	-	-	-	-
2010	5522-43-0	1-Nitropyrene	kg	-	-	-	0.000	-	-	-	-
2009	5522-43-0	1-Nitropyrene	kg	0.020	-	-	0.020	-	-	-	-
2008	5522-43-0	1-Nitropyrene	kg	-	-	-	0.000	-	-	-	-
2007	5522-43-0	1-Nitropyrene	kg	-	-	-	0.000	-	-	-	-
2010	56-49-5	3-Methylchola nthrene	kg	-	-	-	0.000	-	-	-	-
2009	56-49-5	3-Methylchola nthrene	kg	-	-	-	0.000	-	-	-	-
2008	56-49-5	3-Methylchola nthrene	kg	-	-	-	0.000	-	-	-	-
2007	56-49-5	3-Methylchola nthrene	kg	-	-	-	0.000	-	-	-	-
2010	3697-24-3	5-Methylchrys ene	kg	-	-	-	0.000	-	-	-	-
2009	3697-24-3	5-Methylchrys ene	kg	-	-	-	0.000	-	-	-	-
2008	3697-24-3	5-Methylchrys ene	kg	-	-	-	0.000	-	-	-	-
2007	3697-24-3	5-Methylchrys ene	kg	-	-	-	0.000	-	-	-	-
2018	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	0.003	-	-	0.003	-	-	-	-
2017	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	-	-	-	0.000	-	-	-	-
2016	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	0.034	-	-	0.034	-	-	-	-
2015	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	0.002	-	-	0.002	-	-	-	-
2014	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	0.036	-	-	0.036	-	-	-	-
2013	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	0.009	-	-	0.009	-	-	-	-
2012	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	0.013	-	-	0.013	-	-	-	-
2011	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	0.011	-	-	0.011	-	-	-	-
2010	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	-	-	-	0.000	-	-	-	-
2009	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	0.030	-	-	0.030	-	-	-	-
2008	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	-	-	-	0.000	-	-	-	-
2007	57-97-6	7,12-Dimethyl benz[a]anthrac ene	kg	-	-	-	0.000	-	-	-	-
2001	194-59-2	7H-Dibenzo[c, g]carbazole	kg	0.000	-	-	0.000	-	-	-	-
2000	194-59-2	7H-Dibenzo[c, g]carbazole	kg	0.000	-	-	0.000	-	-	-	-
2024	83-32-9	Acenaphthene	kg	23.501	-	-	23.501	28502.859	-	-	0.000
2023	83-32-9	Acenaphthene	kg	40.914	-	-	40.914	2402.001	-	-	0.000
2021	83-32-9	Acenaphthene	kg	0.432	-	-	0.432	2269.210	-	-	-
2020	83-32-9	Acenaphthene	kg	0.522	-	-	0.522	2229.964	-	-	-
2019	83-32-9	Acenaphthene	kg	0.524	-	-	0.524	2441.070	-	-	-
2018	83-32-9	Acenaphthene	kg	0.384	-	-	0.384	2002.560	-	-	-
2017	83-32-9	Acenaphthene	kg	0.304	-	-	0.304	1679.860	-	-	-
2016	83-32-9	Acenaphthene	kg	1.246	-	-	1.246	2198.720	-	-	-
2015	83-32-9	Acenaphthene	kg	0.350	-	-	0.350	2183.060	-	-	-
2014	83-32-9	Acenaphthene	kg	1.396	-	-	1.396	2129.680	-	-	-
2013	83-32-9	Acenaphthene	kg	0.585	-	-	0.585	2194.330	-	-	-
2012	83-32-9	Acenaphthene	kg	0.659	-	-	0.659	2145.710	-	-	-
2011	83-32-9	Acenaphthene	kg	0.629	-	-	0.629	2156.000	-	-	-
2010	83-32-9	Acenaphthene	kg	0.526	-	-	0.526	2287.980	-	-	-

2009	83-32-9	Acenaphthene	kg	1.151	-	-	1.151	1810.000	-	-	-
2008	83-32-9	Acenaphthene	kg	0.763	-	-	0.763	1736.000	-	-	-
2007	83-32-9	Acenaphthene	kg	1.477	-	-	1.477	1660.000	-	-	-
2006	83-32-9	Acenaphthene	kg	1.691	-	-	1.691	1212.000	-	-	-
2024	208-96-8	Acenaphthylen	kg	14.398	-	-	14.398	753.470	-	-	0.002
2023	208-96-8	Acenaphthylen	kg	286.662	-	-	286.662	-	-	-	0.002
2021	208-96-8	Acenaphthylen	kg	0.728	-	-	0.728	-	-	-	-
2020	208-96-8	Acenaphthylen	kg	0.783	-	-	0.783	-	-	-	-
2019	208-96-8	Acenaphthylen	kg	0.780	-	-	0.780	-	-	-	-
2018	208-96-8	Acenaphthylen	kg	46.503	-	-	46.503	-	-	-	-
2017	208-96-8	Acenaphthylen	kg	46.975	-	-	46.975	-	-	-	-
2016	208-96-8	Acenaphthylen	kg	41.100	-	-	41.100	-	-	-	-
2015	208-96-8	Acenaphthylen	kg	44.534	-	-	44.534	-	-	-	-
2014	208-96-8	Acenaphthylen	kg	51.227	-	-	51.227	-	-	-	-
2013	208-96-8	Acenaphthylen	kg	48.055	-	-	48.055	-	-	-	-
2012	208-96-8	Acenaphthylen	kg	44.956	-	-	44.956	-	-	-	-
2011	208-96-8	Acenaphthylen	kg	45.852	-	-	45.852	-	-	-	-
2010	208-96-8	Acenaphthylen	kg	49.553	-	-	49.553	0.000	-	-	-
2009	208-96-8	Acenaphthylen	kg	42.916	-	-	42.916	0.000	-	-	-
2008	208-96-8	Acenaphthylen	kg	46.460	-	-	46.460	0.000	-	-	-
2007	208-96-8	Acenaphthylen	kg	50.845	-	-	50.845	0.000	-	-	-
2006	208-96-8	Acenaphthylen	kg	40.321	-	-	40.321	0.000	-	-	-
2016	75-07-0	Acetaldehyde	tonnes	-	-	-	0.000	-	-	-	-
2015	75-07-0	Acetaldehyde	tonnes	1.088	-	-	1.088	-	-	-	-
2014	75-07-0	Acetaldehyde	tonnes	5.581	-	-	5.581	-	-	-	-
2013	75-07-0	Acetaldehyde	tonnes	-	-	-	0.000	-	-	-	-
2012	75-07-0	Acetaldehyde	tonnes	-	-	-	0.000	-	-	-	-
2011	75-07-0	Acetaldehyde	tonnes	-	-	-	0.000	-	-	-	-
2012	79-06-1	Acrylamide	tonnes	-	-	-	0.000	-	-	-	-
2011	79-06-1	Acrylamide	tonnes	-	-	-	0.000	-	-	-	-
2024	1344-28-1	Aluminum oxide (fibrous forms only)	tonnes	-	-	-	0.000	-	739.344	-	-
2024	NA - 16	Ammonia (total)	tonnes	1040.747	0.015	-	1040.762	125.820	-	-	-
2023	NA - 16	Ammonia (total)	tonnes	1224.957	0.024	-	1224.981	2114.610	0.000	-	-
2021	NA - 16	Ammonia (total)	tonnes	1210.763	0.140	-	1210.903	1486.460	-	-	-
2020	NA - 16	Ammonia (total)	tonnes	1225.888	0.177	-	1226.065	836.110	-	-	-
2019	NA - 16	Ammonia (total)	tonnes	1617.199	0.129	-	1617.328	712.920	-	-	-
2018	NA - 16	Ammonia (total)	tonnes	1300.284	0.075	-	1300.359	0.000	-	-	-
2017	NA - 16	Ammonia (total)	tonnes	1359.569	0.082	-	1359.651	59.420	-	-	-
2016	NA - 16	Ammonia (total)	tonnes	1204.806	-	-	1204.806	1150.530	-	-	-
2015	NA - 16	Ammonia (total)	tonnes	1015.943	-	-	1015.943	1246.890	-	-	-
2014	NA - 16	Ammonia (total)	tonnes	1552.968	-	-	1552.968	1234.550	-	-	-
2013	NA - 16	Ammonia (total)	tonnes	1436.270	-	-	1436.270	864.790	-	-	-
2012	NA - 16	Ammonia (total)	tonnes	1195.333	-	-	1195.333	2148.620	-	-	-
2011	NA - 16	Ammonia (total)	tonnes	1021.350	-	-	1021.350	2148.920	-	-	-

2010	NA - 16	Ammonia (total)	tonnes	1066.615	-	-	1066.615	1388.080	-	-	-
2009	NA - 16	Ammonia (total)	tonnes	596.890	-	-	596.890	2220.090	-	-	-
2008	NA - 16	Ammonia (total)	tonnes	996.878	-	-	996.878	3884.830	-	-	-
2007	NA - 16	Ammonia (total)	tonnes	1021.542	-	-	1021.542	2677.960	-	-	-
2006	NA - 16	Ammonia (total)	tonnes	2116.488	-	-	2116.488	2619.350	-	-	-
2005	NA - 16	Ammonia (total)	tonnes	1831.623	-	-	1831.623	-	-	-	-
2004	NA - 16	Ammonia (total)	tonnes	1403.791	-	-	1403.791	-	-	-	-
2003	NA - 16	Ammonia (total)	tonnes	1057.828	-	-	1057.828	-	-	-	-
2002	NA - 16	Ammonia (total)	tonnes	1242.625	-	-	1242.625	-	-	-	-
2001	NA - 16	Ammonia (total)	tonnes	1121.550	-	-	1121.550	-	-	-	-
2000	NA - 16	Ammonia (total)	tonnes	1097.398	-	-	1097.398	-	-	-	-
1999	NA - 16	Ammonia (total)	tonnes	1061.690	-	-	1061.690	-	-	-	-
1998	NA - 16	Ammonia (total)	tonnes	1619.026	-	-	1619.026	-	-	-	-
1997	NA - 16	Ammonia (total)	tonnes	1430.600	-	-	1430.600	-	-	-	-
1996	NA - 16	Ammonia (total)	tonnes	453.657	-	-	453.657	-	-	-	-
1995	NA - 16	Ammonia (total)	tonnes	765.852	-	-	765.852	-	-	-	-
2013	120-12-7	Anthracene	tonnes	-	-	-	0.000	-	-	-	-
2012	120-12-7	Anthracene	tonnes	-	-	-	0.000	-	-	-	-
2011	120-12-7	Anthracene	tonnes	-	-	-	0.000	-	-	-	-
2013	NA - 01	Antimony (and its compounds)	tonnes	0.030	-	-	0.030	0.230	-	-	-
2012	NA - 01	Antimony (and its compounds)	tonnes	-	-	-	0.000	0.220	-	-	-
2011	NA - 01	Antimony (and its compounds)	tonnes	-	-	-	0.000	0.200	-	-	-
2010	NA - 01	Antimony (and its compounds)	tonnes	-	-	-	0.000	-	-	-	-
2009	NA - 01	Antimony (and its compounds)	tonnes	-	-	-	0.000	0.000	-	-	-
2008	NA - 01	Antimony (and its compounds)	tonnes	-	-	-	0.000	0.000	-	-	-
2007	NA - 01	Antimony (and its compounds)	tonnes	-	-	-	0.000	0.000	-	-	-
2006	NA - 01	Antimony (and its compounds)	tonnes	-	-	-	0.000	0.000	-	-	-
2024	NA - 02	Arsenic (and its compounds)	kg	20.080	0.404	0.017	20.502	221364.600	751.265	-	-
2023	NA - 02	Arsenic (and its compounds)	kg	19.878	0.821	-	20.699	55565.970	3524.634	-	1999.490
2021	NA - 02	Arsenic (and its compounds)	kg	8.805	3.032	-	11.837	53652.230	993.075	-	1695.495
2020	NA - 02	Arsenic (and its compounds)	kg	16.842	2.652	-	19.494	51835.430	2941.120	-	5865.581
2019	NA - 02	Arsenic (and its compounds)	kg	12.614	2.455	-	15.069	58132.008	5286.432	-	5865.581
2018	NA - 02	Arsenic (and its compounds)	kg	12.284	2.523	-	14.807	48401.316	1150.406	-	903.330
2017	NA - 02	Arsenic (and its compounds)	kg	10.820	2.150	-	12.970	38727.910	1521.140	-	6002.000
2016	NA - 02	Arsenic (and its compounds)	kg	14.984	-	-	14.984	51130.870	515.000	-	15691.000
2015	NA - 02	Arsenic (and its compounds)	kg	16.448	-	-	16.448	55442.222	58.000	-	2154.000
2014	NA - 02	Arsenic (and its compounds)	kg	44.571	-	-	44.571	54557.022	592.733	-	26536.227
2013	NA - 02	Arsenic (and its compounds)	kg	36.833	-	-	36.833	51040.450	790.000	-	1619.000
2012	NA - 02	Arsenic (and its compounds)	kg	26.943	-	-	26.943	49380.290	1030.000	-	1761.000
2011	NA - 02	Arsenic (and its compounds)	kg	23.177	-	-	23.177	52744.350	6557.000	-	2100.000

2010	NA - 02	Arsenic (and its compounds)	kg	39.127	-	-	39.127	58405.270	-	7858.000	720.000
2009	NA - 02	Arsenic (and its compounds)	kg	33.251	-	-	33.251	42297.000	-	3536.000	774.000
2008	NA - 02	Arsenic (and its compounds)	kg	42.222	-	-	42.222	38922.000	-	5030.000	-
2007	NA - 02	Arsenic (and its compounds)	kg	45.865	-	-	45.865	36926.000	-	3096.000	-
2006	NA - 02	Arsenic (and its compounds)	kg	53.698	-	-	53.698	25703.000	-	6412.000	-
2005	NA - 02	Arsenic (and its compounds)	kg	35.753	-	-	35.753	-	-	10540.000	1310.000
2004	NA - 02	Arsenic (and its compounds)	kg	27.514	-	-	27.514	-	-	5717.000	-
2003	NA - 02	Arsenic (and its compounds)	kg	30.513	-	-	30.513	-	-	12911.000	-
2002	NA - 02	Arsenic (and its compounds)	kg	35.108	-	-	35.108	-	5987.000	-	-
1994	1332-21-4	Asbestos	tonnes	-	-	-	0.000	4.400	-	-	-
2010	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	-	-	-	-
2009	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	4.340	-	-	-
2008	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	2.585	-	-	-
2007	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	0.410	-	-	-
2006	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	0.410	-	-	-
2005	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	7.485	-	-	-
2004	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	26.375	-	-	-
2003	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	-	-	-	-
2002	1332-21-4	Asbestos (friable form only)	tonnes	-	-	0.000	0.000	3.630	-	-	-
2001	1332-21-4	Asbestos (friable form only)	tonnes	-	-	0.000	0.000	3.325	-	-	-
2000	1332-21-4	Asbestos (friable form only)	tonnes	-	-	0.000	0.000	26.441	-	-	-
1999	1332-21-4	Asbestos (friable form only)	tonnes	-	-	0.000	0.000	1.380	-	-	-
1998	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	4.430	-	-	-
1997	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	3.020	-	-	-
1996	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	3.580	-	-	-
1995	1332-21-4	Asbestos (friable form only)	tonnes	-	-	-	0.000	0.440	-	-	-
2024	56-55-3	Benz[a]anthracene	kg	-	-	-	0.000	21057.648	-	-	0.004
2023	56-55-3	Benz[a]anthracene	kg	-	-	-	0.000	792.953	-	-	0.004
2021	56-55-3	Benz[a]anthracene	kg	-	-	-	0.000	749.700	-	-	-
2020	56-55-3	Benz[a]anthracene	kg	-	-	-	0.000	714.472	-	-	-
2019	56-55-3	Benz[a]anthracene	kg	-	-	-	0.000	820.220	-	-	-



2015	50-32-8	Benzo[a]pyren kg e	0.523	-	-	0.523	1430.400	-	-	-
2014	50-32-8	Benzo[a]pyren kg e	1.273	-	-	1.273	1386.530	-	-	-
2013	50-32-8	Benzo[a]pyren kg e	0.706	-	-	0.706	1414.600	-	-	-
2012	50-32-8	Benzo[a]pyren kg e	0.735	-	-	0.735	1384.960	-	-	-
2011	50-32-8	Benzo[a]pyren kg e	0.720	-	-	0.720	1399.780	-	-	-
2010	50-32-8	Benzo[a]pyren kg e	0.675	-	-	0.675	1500.850	-	-	-
2009	50-32-8	Benzo[a]pyren kg e	1.054	-	-	1.054	1156.000	-	-	-
2008	50-32-8	Benzo[a]pyren kg e	0.751	-	-	0.751	1083.000	-	-	-
2007	50-32-8	Benzo[a]pyren kg e	1.261	-	-	1.261	1036.000	-	-	-
2006	50-32-8	Benzo[a]pyren kg e	0.831	-	-	0.831	749.000	-	-	-
2005	50-32-8	Benzo[a]pyren kg e	0.383	-	-	0.383	-	-	-	-
2004	50-32-8	Benzo[a]pyren kg e	0.995	-	-	0.995	-	-	-	-
2003	50-32-8	Benzo[a]pyren kg e	0.385	-	-	0.385	-	-	-	-
2002	50-32-8	Benzo[a]pyren kg e	0.394	-	-	0.394	-	-	-	-
2001	50-32-8	Benzo[a]pyren kg e	0.903	-	-	0.903	-	-	-	-
2000	50-32-8	Benzo[a]pyren kg e	0.786	-	-	0.786	-	-	-	-
2024	205-99-2	Benzo[b]fluora kgnthene	0.296	-	-	0.296	20112.904	-	-	0.004
2023	205-99-2	Benzo[b]fluora kgnthene	0.208	-	-	0.208	-	-	-	0.004
2021	205-99-2	Benzo[b]fluora kgnthene	0.132	-	-	0.132	-	-	-	-
2020	205-99-2	Benzo[b]fluora kgnthene	0.130	-	-	0.130	-	-	-	-
2019	205-99-2	Benzo[b]fluora kgnthene	0.129	-	-	0.129	-	-	-	-
2018	205-99-2	Benzo[b]fluora kgnthene	0.916	-	-	0.916	-	-	-	-
2017	205-99-2	Benzo[b]fluora kgnthene	0.882	-	-	0.882	-	-	-	-
2016	205-99-2	Benzo[b]fluora kgnthene	1.277	-	-	1.277	0.990	-	-	-
2015	205-99-2	Benzo[b]fluora kgnthene	0.868	-	-	0.868	1.050	-	-	-
2014	205-99-2	Benzo[b]fluora kgnthene	1.510	-	-	1.510	1.030	-	-	-
2013	205-99-2	Benzo[b]fluora kgnthene	1.049	-	-	1.049	1.080	-	-	-
2012	205-99-2	Benzo[b]fluora kgnthene	0.988	-	-	0.988	1.010	-	-	-
2011	205-99-2	Benzo[b]fluora kgnthene	1.033	-	-	1.033	0.950	-	-	-
2010	205-99-2	Benzo[b]fluora kgnthene	0.931	-	-	0.931	0.490	-	-	-
2009	205-99-2	Benzo[b]fluora kgnthene	0.931	-	-	0.931	0.490	-	-	-
2008	205-99-2	Benzo[b]fluora kgnthene	0.938	-	-	0.938	0.550	-	-	-
2007	205-99-2	Benzo[b]fluora kgnthene	1.119	-	-	1.119	0.500	-	-	-
2006	205-99-2	Benzo[b]fluora kgnthene	0.860	-	-	0.860	0.370	-	-	-
2005	205-99-2	Benzo[b]fluora kgnthene	0.635	-	-	0.635	-	-	-	-
2004	205-99-2	Benzo[b]fluora kgnthene	0.808	-	-	0.808	-	-	-	-
2003	205-99-2	Benzo[b]fluora kgnthene	0.624	-	-	0.624	-	-	-	-
2002	205-99-2	Benzo[b]fluora kgnthene	0.643	-	-	0.643	-	-	-	-
2001	205-99-2	Benzo[b]fluora kgnthene	0.820	-	-	0.820	-	-	-	-

2001	205-99-2	nthene	kg	0.820	-	-	0.820	-	-	-	-
2000	205-99-2	Benzo[b]fluoranthene	kg	0.856	-	-	0.856	-	-	-	-
2024	192-97-2	Benzo[e]pyrene	kg	0.667	-	-	0.667	23266.042	-	-	0.003
2023	192-97-2	Benzo[e]pyrene	kg	0.502	-	-	0.502	3814.305	-	-	0.004
2021	192-97-2	Benzo[e]pyrene	kg	0.308	-	-	0.308	3402.400	-	-	-
2020	192-97-2	Benzo[e]pyrene	kg	0.340	-	-	0.340	3353.066	-	-	-
2019	192-97-2	Benzo[e]pyrene	kg	0.339	-	-	0.339	3568.200	-	-	-
2018	192-97-2	Benzo[e]pyrene	kg	0.402	-	-	0.402	3030.350	-	-	-
2017	192-97-2	Benzo[e]pyrene	kg	0.304	-	-	0.304	2753.380	-	-	-
2016	192-97-2	Benzo[e]pyrene	kg	1.447	-	-	1.447	3346.030	-	-	-
2015	192-97-2	Benzo[e]pyrene	kg	0.363	-	-	0.363	3181.530	-	-	-
2014	192-97-2	Benzo[e]pyrene	kg	1.615	-	-	1.615	3074.010	-	-	-
2013	192-97-2	Benzo[e]pyrene	kg	0.641	-	-	0.641	3334.670	-	-	-
2012	192-97-2	Benzo[e]pyrene	kg	0.735	-	-	0.735	3271.330	-	-	-
2011	192-97-2	Benzo[e]pyrene	kg	0.697	-	-	0.697	3188.890	-	-	-
2010	192-97-2	Benzo[e]pyrene	kg	0.569	-	-	0.569	3249.510	-	-	-
2009	192-97-2	Benzo[e]pyrene	kg	1.330	-	-	1.330	2807.000	-	-	-
2008	192-97-2	Benzo[e]pyrene	kg	0.858	-	-	0.858	2782.000	-	-	-
2007	192-97-2	Benzo[e]pyrene	kg	1.712	-	-	1.712	2670.000	-	-	-
2006	192-97-2	Benzo[e]pyrene	kg	1.009	-	-	1.009	1973.000	-	-	-
2005	192-97-2	Benzo[e]pyrene	kg	0.255	-	-	0.255	-	-	-	-
2004	192-97-2	Benzo[e]pyrene	kg	1.330	-	-	1.330	-	-	-	-
2003	192-97-2	Benzo[e]pyrene	kg	0.265	-	-	0.265	-	-	-	-
2001	192-97-2	Benzo[e]pyrene	kg	1.122	-	-	1.122	-	-	-	-
2000	192-97-2	Benzo[e]pyrene	kg	0.869	-	-	0.869	-	-	-	-
2024	191-24-2	Benzo[ghi]perylene	kg	2.943	-	-	2.943	17229.432	-	-	0.005
2023	191-24-2	Benzo[ghi]perylene	kg	2.858	-	-	2.858	1552.304	-	-	0.006
2021	191-24-2	Benzo[ghi]perylene	kg	2.465	-	-	2.465	1430.610	-	-	-
2020	191-24-2	Benzo[ghi]perylene	kg	2.612	-	-	2.612	1402.823	-	-	-
2019	191-24-2	Benzo[ghi]perylene	kg	2.600	-	-	2.600	1534.760	-	-	-
2018	191-24-2	Benzo[ghi]perylene	kg	0.934	-	-	0.934	1289.240	-	-	-
2017	191-24-2	Benzo[ghi]perylene	kg	0.902	-	-	0.902	1106.250	-	-	-
2016	191-24-2	Benzo[ghi]perylene	kg	1.259	-	-	1.259	1409.370	-	-	-
2015	191-24-2	Benzo[ghi]perylene	kg	0.886	-	-	0.886	1372.970	-	-	-
2014	191-24-2	Benzo[ghi]perylene	kg	1.495	-	-	1.495	1328.830	-	-	-
2013	191-24-2	Benzo[ghi]perylene	kg	1.060	-	-	1.060	1395.240	-	-	-
2012	191-24-2	Benzo[ghi]perylene	kg	1.041	-	-	1.041	1366.410	-	-	-
2011	191-24-2	Benzo[ghi]perylene	kg	1.041	-	-	1.041	1354.610	-	-	-
2010	191-24-2	Benzo[ghi]perylene	kg	1.037	-	-	1.037	1437.310	-	-	-

2009	191-24-2	Benzo[ghi]perylene	kg	1.243	-	-	1.243	1142.000	-	-	-
2008	191-24-2	Benzo[ghi]perylene	kg	1.114	-	-	1.114	1096.000	-	-	-
2007	191-24-2	Benzo[ghi]perylene	kg	1.527	-	-	1.527	1051.000	-	-	-
2006	191-24-2	Benzo[ghi]perylene	kg	1.086	-	-	1.086	767.000	-	-	-
2005	191-24-2	Benzo[ghi]perylene	kg	0.660	-	-	0.660	-	-	-	-
2004	191-24-2	Benzo[ghi]perylene	kg	1.124	-	-	1.124	-	-	-	-
2003	191-24-2	Benzo[ghi]perylene	kg	0.653	-	-	0.653	-	-	-	-
2002	191-24-2	Benzo[ghi]perylene	kg	0.671	-	-	0.671	-	-	-	-
2001	191-24-2	Benzo[ghi]perylene	kg	1.082	-	-	1.082	-	-	-	-
2000	191-24-2	Benzo[ghi]perylene	kg	1.042	-	-	1.042	-	-	-	-
2024	205-82-3	Benzo[j]fluoranthene	kg	0.145	-	-	0.145	20112.904	-	-	-
2023	205-82-3	Benzo[j]fluoranthene	kg	0.065	-	-	0.065	-	-	-	-
2018	205-82-3	Benzo[j]fluoranthene	kg	0.916	-	-	0.916	-	-	-	-
2017	205-82-3	Benzo[j]fluoranthene	kg	0.882	-	-	0.882	-	-	-	-
2016	205-82-3	Benzo[j]fluoranthene	kg	1.277	-	-	1.277	0.990	-	-	-
2015	205-82-3	Benzo[j]fluoranthene	kg	0.868	-	-	0.868	1.050	-	-	-
2014	205-82-3	Benzo[j]fluoranthene	kg	1.510	-	-	1.510	1.030	-	-	-
2013	205-82-3	Benzo[j]fluoranthene	kg	1.049	-	-	1.049	1.080	-	-	-
2012	205-82-3	Benzo[j]fluoranthene	kg	1.034	-	-	1.034	1.010	-	-	-
2011	205-82-3	Benzo[j]fluoranthene	kg	1.033	-	-	1.033	0.950	-	-	-
2010	205-82-3	Benzo[j]fluoranthene	kg	-	-	-	0.000	-	-	-	-
2009	205-82-3	Benzo[j]fluoranthene	kg	0.931	-	-	0.931	0.490	-	-	-
2008	205-82-3	Benzo[j]fluoranthene	kg	0.965	-	-	0.965	0.550	-	-	-
2007	205-82-3	Benzo[j]fluoranthene	kg	1.119	-	-	1.119	0.500	-	-	-
2006	205-82-3	Benzo[j]fluoranthene	kg	0.860	-	-	0.860	0.370	-	-	-
2005	205-82-3	Benzo[j]fluoranthene	kg	0.635	-	-	0.635	-	-	-	-
2004	205-82-3	Benzo[j]fluoranthene	kg	0.808	-	-	0.808	-	-	-	-
2003	205-82-3	Benzo[j]fluoranthene	kg	0.624	-	-	0.624	-	-	-	-
2002	205-82-3	Benzo[j]fluoranthene	kg	643.000	-	-	643.000	-	-	-	-
2001	205-82-3	Benzo[j]fluoranthene	kg	0.820	-	-	0.820	-	-	-	-
2000	205-82-3	Benzo[j]fluoranthene	kg	0.856	-	-	0.856	-	-	-	-
2024	207-08-9	Benzo[k]fluoranthene	kg	0.260	-	-	0.260	16507.598	-	-	0.002
2023	207-08-9	Benzo[k]fluoranthene	kg	0.175	-	-	0.175	-	-	-	0.002
2021	207-08-9	Benzo[k]fluoranthene	kg	0.101	-	-	0.101	-	-	-	-
2020	207-08-9	Benzo[k]fluoranthene	kg	0.100	-	-	0.100	-	-	-	-
2019	207-08-9	Benzo[k]fluoranthene	kg	0.099	-	-	0.099	-	-	-	-
2018	207-08-9	Benzo[k]fluoranthene	kg	0.846	-	-	0.846	-	-	-	-
2017	207-08-9	Benzo[k]fluoranthene	kg	0.811	-	-	0.811	-	-	-	-
2016	207-08-9	Benzo[k]fluoranthene	kg	1.218	-	-	1.218	-	-	-	-

2016	207-08-9	nthene kg	1.218	-	-	1.218	-	-	-	-
2015	207-08-9	Benzo[k]fluora nthene kg	0.801	-	-	0.801	-	-	-	-
2014	207-08-9	Benzo[k]fluora nthene kg	1.436	-	-	1.436	-	-	-	-
2013	207-08-9	Benzo[k]fluora nthene kg	0.977	-	-	0.977	-	-	-	-
2012	207-08-9	Benzo[k]fluora nthene kg	0.967	-	-	0.967	-	-	-	-
2011	207-08-9	Benzo[k]fluora nthene kg	0.964	-	-	0.964	-	-	-	-
2010	207-08-9	Benzo[k]fluora nthene kg	-	-	-	0.000	-	-	-	-
2009	207-08-9	Benzo[k]fluora nthene kg	0.868	-	-	0.868	0.000	-	-	-
2008	207-08-9	Benzo[k]fluora nthene kg	0.870	-	-	0.870	0.000	-	-	-
2007	207-08-9	Benzo[k]fluora nthene kg	1.045	-	-	1.045	0.000	-	-	-
2006	207-08-9	Benzo[k]fluora nthene kg	0.800	-	-	0.800	0.000	-	-	-
2005	207-08-9	Benzo[k]fluora nthene kg	0.584	-	-	0.584	-	-	-	-
2004	207-08-9	Benzo[k]fluora nthene kg	0.756	-	-	0.756	-	-	-	-
2003	207-08-9	Benzo[k]fluora nthene kg	0.574	-	-	0.574	-	-	-	-
2002	207-08-9	Benzo[k]fluora nthene kg	0.592	-	-	0.592	-	-	-	-
2001	207-08-9	Benzo[k]fluora nthene kg	0.765	-	-	0.765	-	-	-	-
2000	207-08-9	Benzo[k]fluora nthene kg	0.795	-	-	0.795	-	-	-	-
2024	NA - 03	Cadmium (and its compounds) kg	8.367	0.003	-	8.370	2143.180	-	-	-
2023	NA - 03	Cadmium (and its compounds) kg	8.283	0.006	-	8.289	1680.400	-	-	-
2021	NA - 03	Cadmium (and its compounds) kg	3.669	0.046	-	3.715	1620.880	-	-	-
2020	NA - 03	Cadmium (and its compounds) kg	7.017	0.058	-	7.075	1569.990	-	-	-
2019	NA - 03	Cadmium (and its compounds) kg	5.256	-	-	5.256	1718.247	-	-	-
2018	NA - 03	Cadmium (and its compounds) kg	5.190	-	-	5.190	1473.334	0.079	-	-
2017	NA - 03	Cadmium (and its compounds) kg	4.508	0.016	-	4.524	1229.900	126.997	-	-
2016	NA - 03	Cadmium (and its compounds) kg	6.556	-	-	6.556	1517.500	0.000	-	-
2015	NA - 03	Cadmium (and its compounds) kg	6.874	-	-	6.874	1637.190	0.000	-	-
2014	NA - 03	Cadmium (and its compounds) kg	18.911	-	-	18.911	1621.907	61.449	-	-
2013	NA - 03	Cadmium (and its compounds) kg	15.434	-	-	15.434	1536.300	-	-	-
2012	NA - 03	Cadmium (and its compounds) kg	11.345	-	-	11.345	1481.560	-	-	-
2011	NA - 03	Cadmium (and its compounds) kg	9.763	-	-	9.763	2935.090	-	-	-
2010	NA - 03	Cadmium (and its compounds) kg	17.714	-	-	17.714	3267.320	-	-	-
2009	NA - 03	Cadmium (and its compounds) kg	16.975	-	-	16.975	1287.000	-	-	-
2008	NA - 03	Cadmium (and its compounds) kg	17.718	-	-	17.718	1229.000	-	-	-
2007	NA - 03	Cadmium (and its compounds) kg	19.419	-	-	19.419	1166.000	-	-	-
2006	NA - 03	Cadmium (and its compounds) kg	22.554	-	-	22.554	824.000	-	-	-
2005	NA - 03	Cadmium (and its compounds) kg	14.921	-	-	14.921	-	-	-	-
2004	NA - 03	Cadmium (and its compounds) kg	11.710	-	-	11.710	-	-	-	-
2003	NA - 03	Cadmium (and its compounds) kg	12.733	-	-	12.733	-	-	-	-
2002	NA - 03	Cadmium (and its compounds) kg	14.650	-	-	14.650	-	-	-	-

2024	75-15-0	Carbon disulphide	tonnes	42.961	-	-	42.961	-	-	-	-
2023	75-15-0	Carbon disulphide	tonnes	25.648	-	-	25.648	0.350	-	-	-
2021	75-15-0	Carbon disulphide	tonnes	20.707	-	-	20.707	0.350	-	-	-
2020	75-15-0	Carbon disulphide	tonnes	13.547	-	-	13.547	0.350	-	-	-
2019	75-15-0	Carbon disulphide	tonnes	14.718	-	-	14.718	0.350	-	-	-
2018	75-15-0	Carbon disulphide	tonnes	22.730	-	-	22.730	0.350	-	-	-
2017	75-15-0	Carbon disulphide	tonnes	10.177	-	-	10.177	0.350	-	-	-
2016	75-15-0	Carbon disulphide	tonnes	72.153	-	-	72.153	0.350	-	-	-
2015	75-15-0	Carbon disulphide	tonnes	13.192	-	-	13.192	0.380	-	-	-
2014	75-15-0	Carbon disulphide	tonnes	79.852	-	-	79.852	0.380	-	-	-
2013	75-15-0	Carbon disulphide	tonnes	24.695	-	-	24.695	0.260	-	-	-
2012	75-15-0	Carbon disulphide	tonnes	10.117	-	-	10.117	-	-	-	-
2011	75-15-0	Carbon disulphide	tonnes	37.675	-	-	37.675	-	-	-	-
2010	75-15-0	Carbon disulphide	tonnes	37.688	-	-	37.688	-	-	-	-
2009	75-15-0	Carbon disulphide	tonnes	82.188	-	-	82.188	-	-	-	-
2008	75-15-0	Carbon disulphide	tonnes	50.284	-	-	50.284	-	-	-	-
2007	75-15-0	Carbon disulphide	tonnes	12.425	-	-	12.425	-	-	-	-
2006	75-15-0	Carbon disulphide	tonnes	10.958	-	-	10.958	-	-	-	-
2005	75-15-0	Carbon disulphide	tonnes	9.143	-	-	9.143	-	-	-	-
2004	75-15-0	Carbon disulphide	tonnes	11.444	-	-	11.444	-	-	-	-
2003	75-15-0	Carbon disulphide	tonnes	9.442	-	-	9.442	-	-	-	-
2002	75-15-0	Carbon disulphide	tonnes	8.945	-	-	8.945	-	-	-	-
2001	75-15-0	Carbon disulphide	tonnes	21.019	-	-	21.019	-	-	-	-
2000	75-15-0	Carbon disulphide	tonnes	20.491	-	-	20.491	-	-	-	-
1999	75-15-0	Carbon disulphide	tonnes	27.214	-	-	27.214	-	-	-	-
1998	75-15-0	Carbon disulphide	tonnes	32.456	-	-	32.456	-	-	-	-
1997	75-15-0	Carbon disulphide	tonnes	23.022	-	-	23.022	-	-	-	-
1996	75-15-0	Carbon disulphide	tonnes	0.524	-	-	0.524	-	-	-	-
1995	75-15-0	Carbon disulphide	tonnes	0.886	-	-	0.886	-	-	-	-
1994	75-15-0	Carbon disulphide	tonnes	0.448	-	-	0.448	-	-	-	-
1993	75-15-0	Carbon disulphide	tonnes	15.398	-	-	15.398	-	-	-	-
2024	630-08-0	Carbon monoxide	tonnes	5956.431	-	-	5956.431	-	-	-	-
2023	630-08-0	Carbon monoxide	tonnes	5805.510	-	-	5805.510	-	-	-	-
2021	630-08-0	Carbon monoxide	tonnes	9726.747	-	-	9726.747	-	-	-	-
2020	630-08-0	Carbon monoxide	tonnes	6349.212	-	-	6349.212	-	-	-	-
2019	630-08-0	Carbon monoxide	tonnes	4608.813	-	-	4608.813	-	-	-	-
2018	630-08-0	Carbon monoxide	tonnes	7109.333	-	-	7109.333	-	-	-	-
2017	630-08-0	Carbon monoxide	tonnes	7644.488	-	-	7644.488	-	-	-	-
2016	630-08-0	Carbon monoxide	tonnes	9173.452	-	-	9173.452	-	-	-	-

2016	630-08-0	monoxide	tonnes	9173.452	-	-	9173.452	-	-	-	-
2015	630-08-0	Carbon monoxide	tonnes	8804.382	-	-	8804.382	-	-	-	-
2014	630-08-0	Carbon monoxide	tonnes	8034.911	-	-	8034.911	-	-	-	-
2013	630-08-0	Carbon monoxide	tonnes	5551.320	-	-	5551.320	-	-	-	-
2012	630-08-0	Carbon monoxide	tonnes	5581.121	-	-	5581.121	-	-	-	-
2011	630-08-0	Carbon monoxide	tonnes	5307.458	-	-	5307.458	-	-	-	-
2010	630-08-0	Carbon monoxide	tonnes	5841.215	-	-	5841.215	-	-	-	-
2009	630-08-0	Carbon monoxide	tonnes	7973.224	-	-	7973.224	-	-	-	-
2008	630-08-0	Carbon monoxide	tonnes	5578.810	-	-	5578.810	-	-	-	-
2007	630-08-0	Carbon monoxide	tonnes	9350.403	-	-	9350.403	-	-	-	-
2006	630-08-0	Carbon monoxide	tonnes	7007.473	-	-	7007.473	-	-	-	-
2005	630-08-0	Carbon monoxide	tonnes	25761.391	-	-	25761.391	-	-	-	-
2004	630-08-0	Carbon monoxide	tonnes	27929.000	-	-	27929.000	-	-	-	-
2003	630-08-0	Carbon monoxide	tonnes	24159.712	-	-	24159.712	-	-	-	-
2002	630-08-0	Carbon monoxide	tonnes	36533.163	-	-	36533.163	-	-	-	-
2024	463-58-1	Carbonyl sulphide	tonnes	53.683	-	-	53.683	-	-	-	-
2023	463-58-1	Carbonyl sulphide	tonnes	21.300	-	-	21.300	2.140	-	-	-
2021	463-58-1	Carbonyl sulphide	tonnes	17.830	-	-	17.830	2.140	-	-	-
2020	463-58-1	Carbonyl sulphide	tonnes	13.998	-	-	13.998	2.140	-	-	-
2019	463-58-1	Carbonyl sulphide	tonnes	14.136	-	-	14.136	2.140	-	-	-
2018	463-58-1	Carbonyl sulphide	tonnes	20.011	-	-	20.011	2.140	-	-	-
2017	463-58-1	Carbonyl sulphide	tonnes	22.653	-	-	22.653	2.140	-	-	-
2016	463-58-1	Carbonyl sulphide	tonnes	105.622	-	-	105.622	2.140	-	-	-
2015	463-58-1	Carbonyl sulphide	tonnes	12.634	-	-	12.634	2.320	-	-	-
2014	463-58-1	Carbonyl sulphide	tonnes	307.553	-	-	307.553	2.300	-	-	-
2013	463-58-1	Carbonyl sulphide	tonnes	51.846	-	-	51.846	1.610	-	-	-
2012	463-58-1	Carbonyl sulphide	tonnes	45.078	-	-	45.078	3.000	-	-	-
2011	463-58-1	Carbonyl sulphide	tonnes	48.801	-	-	48.801	3.000	-	-	-
2010	463-58-1	Carbonyl sulphide	tonnes	41.052	-	-	41.052	-	-	-	-
2009	463-58-1	Carbonyl sulphide	tonnes	110.991	-	-	110.991	-	-	-	-
2008	463-58-1	Carbonyl sulphide	tonnes	70.662	-	-	70.662	-	-	-	-
2007	463-58-1	Carbonyl sulphide	tonnes	146.041	-	-	146.041	-	-	-	-
2006	463-58-1	Carbonyl sulphide	tonnes	89.296	-	-	89.296	-	-	-	-
2005	463-58-1	Carbonyl sulphide	tonnes	38.449	-	-	38.449	-	-	-	-
2004	463-58-1	Carbonyl sulphide	tonnes	127.047	-	-	127.047	-	-	-	-
2003	463-58-1	Carbonyl sulphide	tonnes	26.107	-	-	26.107	-	-	-	-
2012	75-69-4	CFC-11	tonnes	-	-	-	0.000	-	-	-	-
2011	75-69-4	CFC-11	tonnes	-	-	-	0.000	-	-	-	-
2010	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2009	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2008	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2007	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-

2006	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2005	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2004	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2003	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2002	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2001	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2000	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
1999	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
1998	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
1997	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
1996	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
1995	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
1994	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
1993	7782-50-5	Chlorine	tonnes	-	-	-	0.000	-	-	-	-
2024	NA - 04	Chromium (and its compounds)	tonnes	0.203	0.001	0.000	0.204	445.552	12.717	-	0.000
2023	NA - 04	Chromium (and its compounds)	tonnes	0.176	0.001	-	0.177	305.066	0.000	-	0.000
2021	NA - 04	Chromium (and its compounds)	tonnes	0.068	0.004	-	0.072	272.040	2.010	-	-
2020	NA - 04	Chromium (and its compounds)	tonnes	0.120	0.004	-	0.124	264.940	3.634	-	-
2019	NA - 04	Chromium (and its compounds)	tonnes	0.092	0.002	-	0.094	276.458	2.663	-	-
2018	NA - 04	Chromium (and its compounds)	tonnes	0.095	0.001	-	0.096	241.587	2.239	-	-
2017	NA - 04	Chromium (and its compounds)	tonnes	0.081	0.002	-	0.083	231.427	7.453	-	-
2016	NA - 04	Chromium (and its compounds)	tonnes	0.153	-	-	0.153	253.126	4.489	-	-
2015	NA - 04	Chromium (and its compounds)	tonnes	0.120	-	-	0.120	253.130	0.000	-	-
2014	NA - 04	Chromium (and its compounds)	tonnes	0.347	-	-	0.347	245.730	1.988	-	-
2013	NA - 04	Chromium (and its compounds)	tonnes	0.262	-	-	0.262	263.950	2.686	-	-
2012	NA - 04	Chromium (and its compounds)	tonnes	0.201	-	-	0.201	256.930	1.583	-	-
2011	NA - 04	Chromium (and its compounds)	tonnes	-	-	-	0.000	250.230	3.764	-	-
2010	NA - 04	Chromium (and its compounds)	tonnes	0.265	-	-	0.265	255.809	-	-	-
2009	NA - 04	Chromium (and its compounds)	tonnes	0.250	-	-	0.250	218.329	0.501	-	-
2008	NA - 04	Chromium (and its compounds)	tonnes	-	-	-	0.000	229.620	-	-	-
2007	NA - 04	Chromium (and its compounds)	tonnes	-	-	-	0.000	220.710	-	-	-
2006	NA - 04	Chromium (and its compounds)	tonnes	-	-	-	0.000	164.020	-	-	-
2024	218-01-9	Chrysene	kg	0.124	-	-	0.124	-	-	-	-
2023	218-01-9	Chrysene	kg	0.118	-	-	0.118	-	-	-	-
2021	218-01-9	Chrysene	kg	0.109	-	-	0.109	-	-	-	-
2020	218-01-9	Chrysene	kg	0.107	-	-	0.107	-	-	-	-
2019	218-01-9	Chrysene	kg	0.106	-	-	0.106	-	-	-	-
2001	218-01-9	Chrysene	kg	0.000	-	-	0.000	-	-	-	-
2000	218-01-9	Chrysene	kg	0.000	-	-	0.000	-	-	-	-
2024	NA - 05	Cobalt (and its compounds)	kg	66.097	0.146	0.069	66.312	383291.220	2226.233	0.001	0.879

2023	NA - 05	Cobalt (and its kg compounds)	65.432	0.379	-	65.811	217224.950	0.339	-	649.205
2021	NA - 05	Cobalt (and its kg compounds)	28.983	1.729	-	30.712	188952.820	164.297	-	550.502
2020	NA - 05	Cobalt (and its kg compounds)	55.437	1.090	-	56.527	186666.070	1040.979	-	-
2019	NA - 05	Cobalt (and its kg compounds)	41.522	0.784	-	42.306	189936.768	868.085	-	-
2018	NA - 05	Cobalt (and its kg compounds)	41.243	0.950	-	42.193	167727.586	139.095	-	-
2017	NA - 05	Cobalt (and its kg compounds)	36.000	0.799	-	36.799	164278.610	523.000	-	-
2016	NA - 05	Cobalt (and its kg compounds)	54.000	-	-	54.000	183522.700	267.000	-	512.000
2015	NA - 05	Cobalt (and its tonnes compounds)	0.054	-	-	0.054	175.980	0.712	-	0.449
2014	NA - 05	Cobalt (and its tonnes compounds)	0.152	-	-	0.152	170.080	0.957	-	0.468
2013	NA - 05	Cobalt (and its tonnes compounds)	0.123	-	-	0.123	185.570	0.009	-	0.344
2012	NA - 05	Cobalt (and its tonnes compounds)	0.091	-	-	0.091	181.127	0.730	-	0.572
2011	NA - 05	Cobalt (and its tonnes compounds)	-	-	-	0.000	175.700	0.701	-	0.440
2010	NA - 05	Cobalt (and its tonnes compounds)	0.129	-	-	0.129	173.667	-	0.104	0.230
2009	NA - 05	Cobalt (and its tonnes compounds)	0.112	-	-	0.112	150.517	-	0.429	-
2008	NA - 05	Cobalt (and its tonnes compounds)	-	-	-	0.000	160.900	-	-	-
2007	NA - 05	Cobalt (and its tonnes compounds)	-	-	-	0.000	156.110	-	-	-
2006	NA - 05	Cobalt (and its tonnes compounds)	-	-	-	0.000	115.910	-	-	-
2024	NA - 06	Copper (and its tonnes compounds)	0.170	0.000	0.000	0.171	455.854	5.501	0.006	0.004
2023	NA - 06	Copper (and its tonnes compounds)	0.150	0.002	-	0.152	134.131	0.000	-	0.667
2021	NA - 06	Copper (and its tonnes compounds)	0.053	0.006	-	0.059	128.920	1.038	-	0.566
2020	NA - 06	Copper (and its tonnes compounds)	0.100	0.004	-	0.104	125.190	2.149	-	-
2019	NA - 06	Copper (and its tonnes compounds)	0.075	0.004	-	0.079	137.647	1.717	-	-
2018	NA - 06	Copper (and its tonnes compounds)	0.075	0.005	-	0.080	115.394	1.111	-	-
2017	NA - 06	Copper (and its tonnes compounds)	0.065	0.003	-	0.068	94.524	73.286	-	-
2016	NA - 06	Copper (and its tonnes compounds)	0.103	-	-	0.103	118.653	1.963	-	127.527
2015	NA - 06	Copper (and its tonnes compounds)	0.099	-	-	0.099	128.490	0.019	-	604.462
2014	NA - 06	Copper (and its tonnes compounds)	0.281	-	-	0.281	126.610	34.650	-	449.481
2013	NA - 06	Copper (and its tonnes compounds)	0.224	-	-	0.224	119.370	1.249	-	0.353
2012	NA - 06	Copper (and its tonnes compounds)	0.167	-	-	0.167	115.134	0.024	-	39.686
2011	NA - 06	Copper (and its tonnes compounds)	-	-	-	0.000	121.730	0.019	-	2.189
2010	NA - 06	Copper (and its tonnes compounds)	0.234	-	-	0.234	135.670	-	0.107	12.890
2009	NA - 06	Copper (and its tonnes compounds)	0.207	-	-	0.207	100.000	0.167	-	39.157
2008	NA - 06	Copper (and its tonnes compounds)	0.257	-	-	0.257	93.980	-	-	40.420
2007	NA - 06	Copper (and its tonnes compounds)	0.458	-	-	0.458	88.670	-	-	86.223
2006	NA - 06	Copper (and its tonnes compounds)	0.329	-	-	0.329	62.720	-	-	1243.750
2005	NA - 06	Copper (and its tonnes compounds)	0.214	-	-	0.214	0.170	-	0.140	147.110
2004	NA - 06	Copper (and its tonnes compounds)	0.175	-	-	0.175	0.170	0.703	-	138.533
2003	NA - 06	Copper (and its tonnes compounds)	0.183	-	-	0.183	0.080	-	-	135.259
2002	NA - 06	Copper (and its tonnes compounds)	0.210	-	-	0.210	-	-	-	124.053

2002	NA - 06	compounds)	tonnes	0.210	-	-	0.210	-	-	-	124.053
2001	NA - 06	Copper (and its tonnes compounds)	tonnes	0.072	-	-	0.072	-	-	-	115.219
2000	NA - 06	Copper (and its tonnes compounds)	tonnes	0.108	-	-	0.108	-	-	-	297.018
1999	NA - 06	Copper (and its tonnes compounds)	tonnes	0.236	-	-	0.236	-	-	-	90.481
1998	NA - 06	Copper (and its tonnes compounds)	tonnes	0.140	-	-	0.140	-	-	-	35.400
1997	NA - 06	Copper (and its tonnes compounds)	tonnes	0.266	-	-	0.266	-	-	-	37.850
2024	98-82-8	Cumene	tonnes	3.165	-	-	3.165	-	-	-	-
2023	98-82-8	Cumene	tonnes	11.728	-	-	11.728	-	-	-	-
2021	98-82-8	Cumene	tonnes	14.870	-	-	14.870	-	-	-	-
2020	98-82-8	Cumene	tonnes	11.454	-	-	11.454	-	-	-	-
2019	98-82-8	Cumene	tonnes	10.675	-	-	10.675	-	-	-	-
2018	98-82-8	Cumene	tonnes	12.233	-	-	12.233	-	-	-	-
2017	98-82-8	Cumene	tonnes	13.733	-	-	13.733	-	-	-	-
2016	98-82-8	Cumene	tonnes	57.357	-	-	57.357	-	-	-	-
2015	98-82-8	Cumene	tonnes	24.473	-	-	24.473	-	-	-	-
2014	98-82-8	Cumene	tonnes	5.629	-	-	5.629	-	-	-	-
2013	98-82-8	Cumene	tonnes	8.754	-	-	8.754	-	-	-	-
2012	98-82-8	Cumene	tonnes	4.820	-	-	4.820	-	-	-	-
2011	98-82-8	Cumene	tonnes	4.821	-	-	4.821	-	-	-	-
2010	98-82-8	Cumene	tonnes	3.547	-	-	3.547	-	-	-	-
2009	98-82-8	Cumene	tonnes	3.547	-	-	3.547	-	-	-	-
2008	98-82-8	Cumene	tonnes	10.723	-	-	10.723	-	-	-	-
2007	98-82-8	Cumene	tonnes	11.021	-	-	11.021	-	-	-	-
2006	98-82-8	Cumene	tonnes	11.001	-	-	11.001	-	-	-	-
2005	98-82-8	Cumene	tonnes	11.516	-	-	11.516	-	-	-	-
2004	98-82-8	Cumene	tonnes	12.842	-	-	12.842	-	-	-	-
2003	98-82-8	Cumene	tonnes	10.893	-	-	10.893	-	-	-	-
2002	98-82-8	Cumene	tonnes	10.918	-	-	10.918	-	-	-	-
2001	98-82-8	Cumene	tonnes	10.932	-	-	10.932	-	-	-	-
2000	98-82-8	Cumene	tonnes	10.899	-	-	10.899	-	-	-	-
1999	98-82-8	Cumene	tonnes	14.793	-	-	14.793	-	-	-	-
1998	98-82-8	Cumene	tonnes	14.841	-	-	14.841	-	-	-	-
1997	98-82-8	Cumene	tonnes	14.888	-	-	14.888	-	-	-	-
1996	98-82-8	Cumene	tonnes	2.320	-	-	2.320	-	-	-	-
1995	98-82-8	Cumene	tonnes	2.360	-	-	2.360	0.042	-	-	-
1994	98-82-8	Cumene	tonnes	2.240	-	-	2.240	0.044	-	-	-
1993	98-82-8	Cumene	tonnes	2.090	-	0.084	2.174	0.002	-	-	-
2013	NA - 07	Cyanides (ionic)	tonnes	-	-	-	0.000	1.600	-	-	-
2012	NA - 07	Cyanides (ionic)	tonnes	-	-	-	0.000	1.520	-	-	-
2011	NA - 07	Cyanides (ionic)	tonnes	-	-	-	0.000	1.480	-	-	-
2010	NA - 07	Cyanides (ionic)	tonnes	-	-	-	0.000	-	-	-	-
2009	NA - 07	Cyanides (ionic)	tonnes	-	-	-	0.000	0.000	-	-	-
2008	NA - 07	Cyanides (ionic)	tonnes	-	-	-	0.000	0.000	-	-	-
2007	NA - 07	Cyanides (ionic)	tonnes	-	-	-	0.000	0.000	-	-	-
2006	NA - 07	Cyanides (ionic)	tonnes	-	-	-	0.000	0.000	-	-	-
2024	110-82-7	Cyclohexane	tonnes	37.935	-	-	37.935	-	0.669	-	-
2023	110-82-7	Cyclohexane	tonnes	70.319	-	-	70.319	-	0.870	-	-
2021	110-82-7	Cyclohexane	tonnes	93.043	-	-	93.043	-	-	-	-
2020	110-82-7	Cyclohexane	tonnes	79.950	-	-	79.950	-	-	-	-
2019	110-82-7	Cyclohexane	tonnes	71.932	-	-	71.932	-	-	-	-
2018	110-82-7	Cyclohexane	tonnes	83.933	-	-	83.933	-	-	-	-
2017	110-82-7	Cyclohexane	tonnes	77.854	-	-	77.854	-	-	-	-
2016	110-82-7	Cyclohexane	tonnes	143.889	-	-	143.889	-	-	-	-
2015	110-82-7	Cyclohexane	tonnes	177.283	-	-	177.283	-	-	-	-
2014	110-82-7	Cyclohexane	tonnes	121.737	-	-	121.737	-	-	-	-
2013	110-82-7	Cyclohexane	tonnes	91.413	-	-	91.413	-	-	-	-
2012	110-82-7	Cyclohexane	tonnes	64.730	-	-	64.730	-	-	-	-
2011	110-82-7	Cyclohexane	tonnes	64.723	-	-	64.723	-	-	-	-
2010	110-82-7	Cyclohexane	tonnes	77.009	-	-	77.009	-	-	-	-
2009	110-82-7	Cyclohexane	tonnes	62.289	-	-	62.289	-	-	-	-
2008	110-82-7	Cyclohexane	tonnes	55.927	-	-	55.927	-	-	-	-
2007	110-82-7	Cyclohexane	tonnes	56.714	-	-	56.714	-	-	-	-
2006	110-82-7	Cyclohexane	tonnes	56.673	-	-	56.673	-	-	-	-
2005	110-82-7	Cyclohexane	tonnes	58.267	-	-	58.267	-	-	-	-

2004	110-82-7	Cyclohexane	tonnes	64.940	-	-	64.940	-	-	-	-
2003	110-82-7	Cyclohexane	tonnes	56.043	-	-	56.043	-	-	-	-
2002	110-82-7	Cyclohexane	tonnes	56.260	-	-	56.260	-	-	-	-
2001	110-82-7	Cyclohexane	tonnes	54.909	-	-	54.909	-	-	-	-
2000	110-82-7	Cyclohexane	tonnes	54.864	-	-	54.864	-	-	-	-
1999	110-82-7	Cyclohexane	tonnes	14.657	-	-	14.657	-	-	-	-
1998	110-82-7	Cyclohexane	tonnes	14.343	-	-	14.343	-	-	-	-
1997	110-82-7	Cyclohexane	tonnes	13.966	-	-	13.966	-	-	-	-
1996	110-82-7	Cyclohexane	tonnes	13.630	-	-	13.630	-	-	-	-
1995	110-82-7	Cyclohexane	tonnes	14.266	-	-	14.266	-	-	-	-
1994	110-82-7	Cyclohexane	tonnes	14.736	-	-	14.736	0.064	-	-	-
1993	110-82-7	Cyclohexane	tonnes	8.970	-	-	8.970	0.006	-	-	-
2018	226-36-8	Dibenz[a,h]acrikg dine		0.004	-	-	0.004	-	-	-	-
2017	226-36-8	Dibenz[a,h]acrikg dine		-	-	-	0.000	-	-	-	-
2016	226-36-8	Dibenz[a,h]acrikg dine		0.045	-	-	0.045	-	-	-	-
2015	226-36-8	Dibenz[a,h]acrikg dine		0.003	-	-	0.003	-	-	-	-
2014	226-36-8	Dibenz[a,h]acrikg dine		0.049	-	-	0.049	-	-	-	-
2013	226-36-8	Dibenz[a,h]acrikg dine		0.012	-	-	0.012	-	-	-	-
2012	226-36-8	Dibenz[a,h]acrikg dine		0.017	-	-	0.017	-	-	-	-
2011	226-36-8	Dibenz[a,h]acrikg dine		0.015	-	-	0.015	-	-	-	-
2010	226-36-8	Dibenz[a,h]acrikg dine		-	-	-	0.000	-	-	-	-
2009	226-36-8	Dibenz[a,h]acrikg dine		0.040	-	-	0.040	-	-	-	-
2008	226-36-8	Dibenz[a,h]acrikg dine		-	-	-	0.000	-	-	-	-
2007	226-36-8	Dibenz[a,h]acrikg dine		-	-	-	0.000	-	-	-	-
2024	53-70-3	Dibenz[a,h]ant kg hracene		0.081	-	-	0.081	15863.100	-	-	0.002
2023	53-70-3	Dibenz[a,h]ant kg hracene		0.064	-	-	0.064	569.938	-	-	0.002
2021	53-70-3	Dibenz[a,h]ant kg hracene		0.049	-	-	0.049	536.790	-	-	-
2020	53-70-3	Dibenz[a,h]ant kg hracene		0.048	-	-	0.048	511.256	-	-	-
2019	53-70-3	Dibenz[a,h]ant kg hracene		0.048	-	-	0.048	586.740	-	-	-
2018	53-70-3	Dibenz[a,h]ant kg hracene		0.418	-	-	0.418	474.020	-	-	-
2017	53-70-3	Dibenz[a,h]ant kg hracene		0.415	-	-	0.415	343.920	-	-	-
2016	53-70-3	Dibenz[a,h]ant kg hracene		0.439	-	-	0.439	500.840	-	-	-
2015	53-70-3	Dibenz[a,h]ant kg hracene		0.398	-	-	0.398	548.660	-	-	-
2014	53-70-3	Dibenz[a,h]ant kg hracene		0.534	-	-	0.534	540.620	-	-	-
2013	53-70-3	Dibenz[a,h]ant kg hracene		0.449	-	-	0.449	489.710	-	-	-
2012	53-70-3	Dibenz[a,h]ant kg hracene		0.427	-	-	0.427	478.300	-	-	-
2011	53-70-3	Dibenz[a,h]ant kg hracene		0.430	-	-	0.430	526.310	-	-	-
2010	53-70-3	Dibenz[a,h]ant kg hracene		0.454	-	-	0.454	580.210	-	-	-
2009	53-70-3	Dibenz[a,h]ant kg hracene		0.447	-	-	0.447	402.000	-	-	-
2008	53-70-3	Dibenz[a,h]ant kg hracene		0.537	-	-	0.537	343.000	-	-	-
2007	53-70-3	Dibenz[a,h]ant kg hracene		0.537	-	-	0.537	325.000	-	-	-
2006	53-70-3	Dibenz[a,h]ant kg hracene		0.411	-	-	0.411	227.000	-	-	-
2005	53-70-3	Dibenz[a,h]ant kg hracene		0.299	-	-	0.299	-	-	-	-
2004	53-70-3	Dibenz[a,h]ant kg hracene		0.389	-	-	0.389	-	-	-	-
2003	53-70-3	Dibenz[a,h]ant kg		0.294	-	-	0.294	-	-	-	-

2003	53-70-3	hracene	kg	0.294	-	-	0.294	-	-	-	-
2002	53-70-3	Dibenz[a,h]ant	kg	0.303	-	-	0.303	-	-	-	-
2001	53-70-3	Dibenz[a,h]ant	kg	0.393	-	-	0.393	-	-	-	-
2000	53-70-3	Dibenz[a,h]ant	kg	0.408	-	-	0.408	-	-	-	-
2024	224-42-0	Dibenz[a,j]acri	kg	0.025	-	-	0.025	-	-	-	-
2023	224-42-0	Dibenz[a,j]acri	kg	0.011	-	-	0.011	-	-	-	-
2018	224-42-0	Dibenz[a,j]acri	kg	0.308	-	-	0.308	-	-	-	-
2017	224-42-0	Dibenz[a,j]acri	kg	0.304	-	-	0.304	-	-	-	-
2016	224-42-0	Dibenz[a,j]acri	kg	0.346	-	-	0.346	-	-	-	-
2015	224-42-0	Dibenz[a,j]acri	kg	0.293	-	-	0.293	-	-	-	-
2014	224-42-0	Dibenz[a,j]acri	kg	0.419	-	-	0.419	-	-	-	-
2013	224-42-0	Dibenz[a,j]acri	kg	0.335	-	-	0.335	-	-	-	-
2012	224-42-0	Dibenz[a,j]acri	kg	0.321	-	-	0.321	-	-	-	-
2011	224-42-0	Dibenz[a,j]acri	kg	0.323	-	-	0.323	-	-	-	-
2010	224-42-0	Dibenz[a,j]acri	kg	-	-	-	0.000	-	-	-	-
2009	224-42-0	Dibenz[a,j]acri	kg	0.350	-	-	0.350	-	-	-	-
2008	224-42-0	Dibenz[a,j]acri	kg	0.338	-	-	0.338	-	-	-	-
2007	224-42-0	Dibenz[a,j]acri	kg	0.423	-	-	0.423	-	-	-	-
2006	224-42-0	Dibenz[a,j]acri	kg	0.317	-	-	0.317	-	-	-	-
2005	224-42-0	Dibenz[a,j]acri	kg	0.220	-	-	0.220	-	-	-	-
2004	224-42-0	Dibenz[a,j]acri	kg	0.308	-	-	0.308	-	-	-	-
2003	224-42-0	Dibenz[a,j]acri	kg	0.216	-	-	0.216	-	-	-	-
2002	224-42-0	Dibenz[a,j]acri	kg	0.223	-	-	0.223	-	-	-	-
2001	224-42-0	Dibenz[a,j]acri	kg	0.306	-	-	0.306	-	-	-	-
2000	224-42-0	Dibenz[a,j]acri	kg	0.312	-	-	0.312	-	-	-	-
2010	5385-75-1	Dibenzo[a,e]fl	kg	-	-	-	0.000	-	-	-	-
2009	5385-75-1	Dibenzo[a,e]fl	kg	-	-	-	0.000	-	-	-	-
2008	5385-75-1	Dibenzo[a,e]fl	kg	-	-	-	0.000	-	-	-	-
2007	5385-75-1	Dibenzo[a,e]fl	kg	-	-	-	0.000	-	-	-	-
2010	192-65-4	Dibenzo[a,e]pykg	rene	-	-	-	0.000	-	-	-	-
2009	192-65-4	Dibenzo[a,e]pykg	rene	-	-	-	0.000	-	-	-	-
2008	192-65-4	Dibenzo[a,e]pykg	rene	-	-	-	0.000	-	-	-	-
2007	192-65-4	Dibenzo[a,e]pykg	rene	-	-	-	0.000	-	-	-	-
2010	189-64-0	Dibenzo[a,h]pykg	rene	-	-	-	0.000	-	-	-	-
2009	189-64-0	Dibenzo[a,h]pykg	rene	-	-	-	0.000	-	-	-	-
2008	189-64-0	Dibenzo[a,h]pykg	rene	-	-	-	0.000	-	-	-	-
2007	189-64-0	Dibenzo[a,h]pykg	rene	-	-	-	0.000	-	-	-	-
2001	189-55-9	Dibenzo[a,i]py	kg	0.000	-	-	0.000	-	-	-	-
2000	189-55-9	Dibenzo[a,i]py	kg	0.000	-	-	0.000	-	-	-	-

2017	191-30-0	Dibenzo[a,l]pyrene	-	-	-	0.000	-	-	-	-	
2016	191-30-0	Dibenzo[a,l]pyrene	0.003	-	-	0.003	-	-	-	-	
2015	191-30-0	Dibenzo[a,l]pyrene	-	-	-	0.000	-	-	-	-	
2014	191-30-0	Dibenzo[a,l]pyrene	0.003	-	-	0.003	-	-	-	-	
2013	191-30-0	Dibenzo[a,l]pyrene	0.001	-	-	0.001	-	-	-	-	
2012	191-30-0	Dibenzo[a,l]pyrene	0.001	-	-	0.001	-	-	-	-	
2011	191-30-0	Dibenzo[a,l]pyrene	0.001	-	-	0.001	-	-	-	-	
2010	191-30-0	Dibenzo[a,l]pyrene	-	-	-	0.000	-	-	-	-	
2009	191-30-0	Dibenzo[a,l]pyrene	0.002	-	-	0.002	-	-	-	-	
2008	191-30-0	Dibenzo[a,l]pyrene	-	-	-	0.000	-	-	-	-	
2007	191-30-0	Dibenzo[a,l]pyrene	-	-	-	0.000	-	-	-	-	
2013	75-09-2	Dichloromethane	-	-	-	0.000	-	-	-	-	
2012	75-09-2	Dichloromethane	1.324	-	-	1.324	-	-	-	-	
2011	75-09-2	Dichloromethane	1.324	-	-	1.324	-	-	-	-	
2010	111-42-2	Diethanolamine (and its salts)	0.000	-	-	0.000	-	-	-	-	
2009	111-42-2	Diethanolamine (and its salts)	0.000	-	-	0.000	-	-	-	-	
2008	111-42-2	Diethanolamine (and its salts)	0.000	-	-	0.000	-	-	-	-	
2007	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
2006	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
2005	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
2004	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
2003	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
2002	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
2001	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
2000	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
1999	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
1998	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
1997	111-42-2	Diethanolamine (and its salts)	0.005	-	-	0.005	-	-	-	-	
1996	111-42-2	Diethanolamine (and its salts)	0.070	-	-	0.070	-	-	-	-	
1995	111-42-2	Diethanolamine (and its salts)	0.070	-	-	0.070	-	-	-	-	
1994	111-42-2	Diethanolamine (and its salts)	0.070	-	0.174	0.244	-	-	-	-	
1993	111-42-2	Diethanolamine (and its salts)	-	-	-	0.000	-	-	-	-	
2024	100-41-4	Ethylbenzene	tonnes	17.323	-	-	17.323	76.160	0.001	0.034	0.165
2023	100-41-4	Ethylbenzene	tonnes	40.728	-	-	40.728	184.480	0.000	-	0.146
2021	100-41-4	Ethylbenzene	tonnes	54.258	-	-	54.258	174.460	-	-	-
2020	100-41-4	Ethylbenzene	tonnes	32.355	-	-	32.355	166.588	-	-	-
2019	100-41-4	Ethylbenzene	tonnes	31.609	-	-	31.609	190.733	-	-	-
2018	100-41-4	Ethylbenzene	tonnes	33.015	-	-	33.015	154.340	-	-	-
2017	100-41-4	Ethylbenzene	tonnes	47.421	-	-	47.421	115.290	-	-	-
2016	100-41-4	Ethylbenzene	tonnes	253.534	-	-	253.534	797.280	-	-	-
2015	100-41-4	Ethylbenzene	tonnes	112.824	-	-	112.824	865.120	-	-	-
2014	100-41-4	Ethylbenzene	tonnes	52.933	-	-	52.933	855.660	-	-	-
2013	100-41-4	Ethylbenzene	tonnes	47.563	-	-	47.563	636.740	-	-	-
2012	100-41-4	Ethylbenzene	tonnes	38.007	-	-	38.007	948.710	-	-	-
2011	100-41-4	Ethylbenzene	tonnes	37.993	-	-	37.993	928.120	-	-	-

2010	100-41-4	Ethylbenzene	tonnes	19.738	-	-	19.738	845.750	-	-	-
2009	100-41-4	Ethylbenzene	tonnes	19.506	-	-	19.506	902.900	-	-	-
2008	100-41-4	Ethylbenzene	tonnes	66.787	-	-	66.787	835.800	-	-	-
2007	100-41-4	Ethylbenzene	tonnes	69.596	-	-	69.596	792.970	-	-	-
2006	100-41-4	Ethylbenzene	tonnes	69.308	-	-	69.308	735.920	-	-	-
2005	100-41-4	Ethylbenzene	tonnes	73.009	-	-	73.009	-	-	-	-
2004	100-41-4	Ethylbenzene	tonnes	81.630	-	-	81.630	-	-	-	-
2003	100-41-4	Ethylbenzene	tonnes	69.206	-	-	69.206	-	-	-	-
2002	100-41-4	Ethylbenzene	tonnes	69.368	-	-	69.368	-	-	-	-
2001	100-41-4	Ethylbenzene	tonnes	70.088	-	-	70.088	-	-	-	-
2000	100-41-4	Ethylbenzene	tonnes	70.665	-	-	70.665	-	-	-	-
1999	100-41-4	Ethylbenzene	tonnes	65.253	-	-	65.253	-	-	-	-
1998	100-41-4	Ethylbenzene	tonnes	67.397	-	-	67.397	-	-	-	-
1997	100-41-4	Ethylbenzene	tonnes	66.483	-	-	66.483	-	-	-	-
1996	100-41-4	Ethylbenzene	tonnes	6.705	-	-	6.705	-	-	-	-
1995	100-41-4	Ethylbenzene	tonnes	6.665	-	-	6.665	0.060	-	-	-
1994	100-41-4	Ethylbenzene	tonnes	7.008	-	-	7.008	0.081	-	-	-
1993	100-41-4	Ethylbenzene	tonnes	8.731	-	0.120	8.851	0.004	-	-	-
2024	74-85-1	Ethylene	tonnes	66.432	-	0.010	66.442	-	-	-	0.168
2023	74-85-1	Ethylene	tonnes	41.037	-	-	41.037	-	-	-	-
2021	74-85-1	Ethylene	tonnes	38.969	-	-	38.969	-	-	-	-
2020	74-85-1	Ethylene	tonnes	32.637	-	-	32.637	-	-	-	-
2019	74-85-1	Ethylene	tonnes	40.354	-	-	40.354	-	-	-	-
2018	74-85-1	Ethylene	tonnes	42.724	-	-	42.724	-	-	-	-
2017	74-85-1	Ethylene	tonnes	52.134	-	-	52.134	-	-	-	-
2016	74-85-1	Ethylene	tonnes	59.251	-	-	59.251	-	-	-	-
2015	74-85-1	Ethylene	tonnes	58.078	-	-	58.078	-	-	-	-
2014	74-85-1	Ethylene	tonnes	69.259	-	-	69.259	-	-	-	-
2013	74-85-1	Ethylene	tonnes	60.941	-	-	60.941	-	-	-	-
2012	74-85-1	Ethylene	tonnes	62.077	-	-	62.077	-	-	-	-
2011	74-85-1	Ethylene	tonnes	74.558	-	-	74.558	-	-	-	-
2010	74-85-1	Ethylene	tonnes	84.906	-	-	84.906	-	-	-	-
2009	74-85-1	Ethylene	tonnes	89.192	-	-	89.192	-	-	-	-
2008	74-85-1	Ethylene	tonnes	70.212	-	-	70.212	-	-	-	-
2007	74-85-1	Ethylene	tonnes	77.256	-	-	77.256	-	-	-	-
2006	74-85-1	Ethylene	tonnes	67.024	-	-	67.024	-	-	-	-
2005	74-85-1	Ethylene	tonnes	62.842	-	-	62.842	-	-	-	-
2004	74-85-1	Ethylene	tonnes	68.919	-	-	68.919	-	-	-	-
2003	74-85-1	Ethylene	tonnes	85.642	-	-	85.642	-	-	-	-
2002	74-85-1	Ethylene	tonnes	59.884	-	-	59.884	-	-	-	-
2001	74-85-1	Ethylene	tonnes	141.962	-	-	141.962	-	-	-	-
2000	74-85-1	Ethylene	tonnes	83.736	-	-	83.736	-	-	-	-
1999	74-85-1	Ethylene	tonnes	112.625	-	-	112.625	-	-	-	-
1998	74-85-1	Ethylene	tonnes	112.065	-	-	112.065	-	-	-	-
1997	74-85-1	Ethylene	tonnes	54.230	-	-	54.230	-	-	-	-
1996	74-85-1	Ethylene	tonnes	47.314	-	-	47.314	-	-	-	-
1995	74-85-1	Ethylene	tonnes	47.007	-	-	47.007	-	-	-	-
1994	74-85-1	Ethylene	tonnes	50.660	-	-	50.660	-	-	-	-
1993	74-85-1	Ethylene	tonnes	64.150	-	-	64.150	-	-	-	-
2024	107-21-1	Ethylene glycol	tonnes	0.000	-	0.006	0.006	-	-	0.005	231.192
2023	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	176.065
2013	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	35.627
2012	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	39.600	-	-	-
2011	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	35.400	-	-	-
2010	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	56.300	-	-	-
2009	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	123.440	-	-	-
2008	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	82.980	-	-	-
2007	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	96.600	-	-	-
2006	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	59.700	-	-	-
2005	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
2004	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
2003	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
2002	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-

2001	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
2000	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
1999	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
1998	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
1997	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
1996	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
1995	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
1994	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
1993	107-21-1	Ethylene glycol	tonnes	-	-	-	0.000	-	-	-	-
2024	206-44-0	Fluoranthene	kg	1.551	-	-	1.551	16577.027	-	-	0.004
2023	206-44-0	Fluoranthene	kg	1.128	-	-	1.128	2018.005	-	-	0.004
2021	206-44-0	Fluoranthene	kg	0.674	-	-	0.674	1853.330	-	-	-
2020	206-44-0	Fluoranthene	kg	0.596	-	-	0.596	1833.411	-	-	-
2019	206-44-0	Fluoranthene	kg	0.724	-	-	0.724	1981.110	-	-	-
2018	206-44-0	Fluoranthene	kg	4.450	-	-	4.450	1660.090	-	-	-
2017	206-44-0	Fluoranthene	kg	4.259	-	-	4.259	1464.380	-	-	-
2016	206-44-0	Fluoranthene	kg	6.486	-	-	6.486	1822.670	-	-	-
2015	206-44-0	Fluoranthene	kg	4.213	-	-	4.213	1742.470	-	-	-
2014	206-44-0	Fluoranthene	kg	7.642	-	-	7.642	1686.340	-	-	-
2013	206-44-0	Fluoranthene	kg	5.156	-	-	5.156	1818.540	-	-	-
2012	206-44-0	Fluoranthene	kg	5.115	-	-	5.115	1780.710	-	-	-
2011	206-44-0	Fluoranthene	kg	5.094	-	-	5.094	1733.840	-	-	-
2010	206-44-0	Fluoranthene	kg	5.072	-	-	5.072	1820.440	-	-	-
2009	206-44-0	Fluoranthene	kg	6.348	-	-	6.348	1495.000	-	-	-
2008	206-44-0	Fluoranthene	kg	5.515	-	-	5.515	1471.000	-	-	-
2007	206-44-0	Fluoranthene	kg	7.842	-	-	7.842	1411.000	-	-	-
2006	206-44-0	Fluoranthene	kg	5.464	-	-	5.464	1040.000	-	-	-
2005	206-44-0	Fluoranthene	kg	3.129	-	-	3.129	-	-	-	-
2004	206-44-0	Fluoranthene	kg	5.801	-	-	5.801	-	-	-	-
2003	206-44-0	Fluoranthene	kg	3.104	-	-	3.104	-	-	-	-
2002	206-44-0	Fluoranthene	kg	3.191	-	-	3.191	-	-	-	-
2001	206-44-0	Fluoranthene	kg	5.509	-	-	5.509	-	-	-	-
2000	206-44-0	Fluoranthene	kg	5.189	-	-	5.189	-	-	-	-
2024	86-73-7	Fluorene	kg	7.064	-	-	7.064	15494.878	-	-	0.003
2023	86-73-7	Fluorene	kg	119.254	-	-	119.254	821.097	-	-	0.003
2021	86-73-7	Fluorene	kg	0.276	-	-	0.276	819.080	-	-	-
2020	86-73-7	Fluorene	kg	0.292	-	-	0.292	768.444	-	-	-
2019	86-73-7	Fluorene	kg	0.291	-	-	0.291	886.050	-	-	-
2018	86-73-7	Fluorene	kg	0.592	-	-	0.592	707.220	-	-	-
2017	86-73-7	Fluorene	kg	0.304	-	-	0.304	487.700	-	-	-
2016	86-73-7	Fluorene	kg	3.687	-	-	3.687	775.620	-	-	-
2015	86-73-7	Fluorene	kg	0.506	-	-	0.506	848.900	-	-	-
2014	86-73-7	Fluorene	kg	4.049	-	-	4.049	836.400	-	-	-
2013	86-73-7	Fluorene	kg	1.264	-	-	1.264	758.870	-	-	-
2012	86-73-7	Fluorene	kg	1.578	-	-	1.578	741.460	-	-	-
2011	86-73-7	Fluorene	kg	1.459	-	-	1.459	815.140	-	-	-
2010	86-73-7	Fluorene	kg	1.040	-	-	1.040	897.890	-	-	-
2009	86-73-7	Fluorene	kg	3.325	-	-	3.325	618.000	-	-	-
2008	86-73-7	Fluorene	kg	1.916	-	-	1.916	529.000	-	-	-
2007	86-73-7	Fluorene	kg	4.336	-	-	4.336	501.000	-	-	-
2006	86-73-7	Fluorene	kg	2.418	-	-	2.418	349.000	-	-	-
2012	75-45-6	HCFC-22	tonnes	1.332	-	-	1.332	-	-	-	-
2011	75-45-6	HCFC-22	tonnes	1.653	-	-	1.653	-	-	-	-
2010	75-45-6	HCFC-22	tonnes	1.066	-	-	1.066	-	-	-	-
2009	75-45-6	HCFC-22	tonnes	1.066	-	-	1.066	-	-	-	-
2008	75-45-6	HCFC-22	tonnes	1.692	-	-	1.692	-	-	-	-
2007	75-45-6	HCFC-22	tonnes	1.366	-	-	1.366	-	-	-	-
2006	75-45-6	HCFC-22	tonnes	0.800	-	-	0.800	-	-	-	-
2005	75-45-6	HCFC-22	tonnes	1.115	-	-	1.115	-	-	-	-
2004	75-45-6	HCFC-22	tonnes	-	-	-	0.000	-	-	-	-
2024	7783-06-4	Hydrogen sulphide	tonnes	31.725	-	-	31.725	-	-	-	-
2023	7783-06-4	Hydrogen sulphide	tonnes	19.950	-	-	19.950	-	-	-	-
2021	7783-06-4	Hydrogen sulphide	tonnes	22.436	-	-	22.436	-	-	-	-
2020	7783-06-4	Hydrogen sulphide	tonnes	28.065	-	-	28.065	-	-	-	-

2019	7783-06-4	Hydrogen sulphide	tonnes	20.428	-	-	20.428	-	-	-	-
2018	7783-06-4	Hydrogen sulphide	tonnes	21.035	-	-	21.035	-	-	-	-
2017	7783-06-4	Hydrogen sulphide	tonnes	56.471	-	-	56.471	-	-	-	-
2016	7783-06-4	Hydrogen sulphide	tonnes	51.979	-	-	51.979	-	-	-	-
2015	7783-06-4	Hydrogen sulphide	tonnes	70.231	-	-	70.231	-	-	-	-
2014	7783-06-4	Hydrogen sulphide	tonnes	123.034	-	-	123.034	-	-	-	-
2013	7783-06-4	Hydrogen sulphide	tonnes	44.788	-	-	44.788	-	-	-	-
2012	7783-06-4	Hydrogen sulphide	tonnes	50.962	-	-	50.962	-	-	-	-
2011	7783-06-4	Hydrogen sulphide	tonnes	53.312	-	-	53.312	-	-	-	-
2010	7783-06-4	Hydrogen sulphide	tonnes	42.013	-	-	42.013	-	-	-	-
2009	7783-06-4	Hydrogen sulphide	tonnes	96.308	-	-	96.308	-	-	-	-
2008	7783-06-4	Hydrogen sulphide	tonnes	61.677	-	-	61.677	-	-	-	-
2007	7783-06-4	Hydrogen sulphide	tonnes	129.487	-	-	129.487	-	-	-	-
2006	7783-06-4	Hydrogen sulphide	tonnes	82.507	-	-	82.507	-	-	-	-
2005	7783-06-4	Hydrogen sulphide	tonnes	31.447	-	-	31.447	-	-	-	-
2004	7783-06-4	Hydrogen sulphide	tonnes	102.496	-	-	102.496	-	-	-	-
2003	7783-06-4	Hydrogen sulphide	tonnes	47.351	-	-	47.351	-	-	-	-
2002	7783-06-4	Hydrogen sulphide	tonnes	32.246	-	-	32.246	-	-	-	-
2001	7783-06-4	Hydrogen sulphide	tonnes	103.212	-	-	103.212	-	-	-	-
2000	7783-06-4	Hydrogen sulphide	tonnes	82.842	-	-	82.842	-	-	-	-
1999	7783-06-4	Hydrogen sulphide	tonnes	148.555	-	-	148.555	-	-	-	-
2024	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.962	-	-	0.962	19696.615	-	-	0.002
2023	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.917	-	-	0.917	727.157	-	-	0.002
2021	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.841	-	-	0.841	686.170	-	-	-
2020	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.839	-	-	0.839	652.138	-	-	-
2019	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.832	-	-	0.832	751.160	-	-	-
2018	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.967	-	-	0.967	630.730	-	-	-
2017	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.980	-	-	0.980	467.210	-	-	-
2016	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.821	-	-	0.821	686.300	-	-	-
2015	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.927	-	-	0.927	724.100	-	-	-
2014	193-39-5	Indeno[1,2,3-c d]pyrene	kg	1.029	-	-	1.029	702.340	-	-	-
2013	193-39-5	Indeno[1,2,3-c d]pyrene	kg	1.000	-	-	1.000	659.870	-	-	-
2012	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.924	-	-	0.924	646.050	-	-	-
2011	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.944	-	-	0.944	690.940	-	-	-
2010	193-39-5	Indeno[1,2,3-c d]pyrene	kg	1.026	-	-	1.026	764.340	-	-	-
2009	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.863	-	-	0.863	533.000	-	-	-
2008	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.951	-	-	0.951	457.000	-	-	-
2007	193-39-5	Indeno[1,2,3-c d]pyrene	kg	1.018	-	-	1.018	435.000	-	-	-
2006	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.835	-	-	0.835	303.000	-	-	-

2006	193-39-5	d]pyrene	kg	0.835	-	-	0.835	303.000	-	-	-
2005	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.698	-	-	0.698	-	-	-	-
2004	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.722	-	-	0.722	-	-	-	-
2003	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.684	-	-	0.684	-	-	-	-
2002	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.705	-	-	0.705	-	-	-	-
2001	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.770	-	-	0.770	-	-	-	-
2000	193-39-5	Indeno[1,2,3-c d]pyrene	kg	0.855	-	-	0.855	-	-	-	-
2012	78-84-2	Isobutyraldehy de	tonnes	-	-	-	0.000	-	-	-	-
2011	78-84-2	Isobutyraldehy de	tonnes	-	-	-	0.000	-	-	-	-
2024	78-79-5	Isoprene	kg	204.633	-	-	204.633	-	-	-	-
2023	78-79-5	Isoprene	kg	217.979	-	-	217.979	-	-	-	-
2021	78-79-5	Isoprene	kg	467.557	-	-	467.557	-	-	-	-
2020	78-79-5	Isoprene	kg	376.821	-	-	376.821	-	-	-	-
2019	78-79-5	Isoprene	kg	177.781	-	-	177.781	-	-	-	-
2013	78-79-5	Isoprene	tonnes	-	-	-	0.000	-	-	-	-
2012	78-79-5	Isoprene	tonnes	-	-	-	0.000	-	-	-	-
2011	78-79-5	Isoprene	tonnes	-	-	-	0.000	-	-	-	-
2020	67-63-0	Isopropyl alcohol	tonnes	7.228	-	-	7.228	-	-	-	-
2019	67-63-0	Isopropyl alcohol	tonnes	5.661	-	-	5.661	-	-	-	-
2018	67-63-0	Isopropyl alcohol	tonnes	8.786	-	-	8.786	-	-	-	-
2017	67-63-0	Isopropyl alcohol	tonnes	2.266	-	-	2.266	-	-	-	-
2016	67-63-0	Isopropyl alcohol	tonnes	18.359	-	-	18.359	-	-	-	-
2015	67-63-0	Isopropyl alcohol	tonnes	0.341	-	-	0.341	-	-	-	-
2014	67-63-0	Isopropyl alcohol	tonnes	1.826	-	-	1.826	-	-	-	-
2013	67-63-0	Isopropyl alcohol	tonnes	-	-	-	0.000	-	-	-	-
2012	67-63-0	Isopropyl alcohol	tonnes	-	-	-	0.000	-	-	-	-
2011	67-63-0	Isopropyl alcohol	tonnes	-	-	-	0.000	-	-	-	-
2024	NA - 08	Lead (and its compounds)	kg	128.904	0.187	0.052	129.142	485527.510	0.001	-	-
2023	NA - 08	Lead (and its compounds)	kg	127.607	0.437	-	128.044	196111.520	-	-	-
2021	NA - 08	Lead (and its compounds)	kg	56.523	1.863	-	58.386	172328.380	-	-	-
2020	NA - 08	Lead (and its compounds)	kg	108.113	1.153	-	109.266	167624.720	-	-	-
2019	NA - 08	Lead (and its compounds)	kg	81.626	1.561	-	83.187	173279.944	-	-	-
2018	NA - 08	Lead (and its compounds)	kg	79.925	0.734	-	80.659	155260.160	0.399	-	-
2017	NA - 08	Lead (and its compounds)	kg	69.460	1.176	-	70.636	147511.664	126.997	-	-
2016	NA - 08	Lead (and its compounds)	kg	100.571	-	-	100.571	170783.350	0.000	-	-
2015	NA - 08	Lead (and its compounds)	kg	105.868	-	-	105.868	168932.906	0.000	-	-
2014	NA - 08	Lead (and its compounds)	kg	290.882	-	-	290.882	162988.366	61.449	-	-
2013	NA - 08	Lead (and its compounds)	kg	237.663	-	-	237.663	170738.420	-	-	-
2012	NA - 08	Lead (and its compounds)	kg	174.607	-	-	174.607	166270.400	-	-	-
2011	NA - 08	Lead (and its compounds)	kg	150.268	-	-	150.268	165578.150	-	-	-
2010	NA - 08	Lead (and its compounds)	kg	253.393	-	-	253.393	167039.490	-	-	30.000
2009	NA - 08	Lead (and its compounds)	kg	220.308	-	-	220.308	137026.000	-	-	26.000
2008	NA - 08	Lead (and its compounds)	kg	272.800	-	-	272.800	143037.000	-	-	-

2007	NA - 08	Lead (and its compounds)	kg	298.753	-	-	298.753	139041.000	-	-	-
2006	NA - 08	Lead (and its compounds)	kg	347.238	-	-	347.238	101344.000	-	-	-
2005	NA - 08	Lead (and its compounds)	kg	229.855	-	-	229.855	-	-	-	40.000
2004	NA - 08	Lead (and its compounds)	kg	180.137	-	-	180.137	-	-	15.700	14500.000
2003	NA - 08	Lead (and its compounds)	kg	196.475	-	-	196.475	-	-	67.600	-
2002	NA - 08	Lead (and its compounds)	kg	225.279	-	-	225.279	-	27.000	-	-
2024	NA - 09	Manganese (and its compounds)	tonnes	0.867	0.026	-	0.893	16150.363	-	-	0.006
2023	NA - 09	Manganese (and its compounds)	tonnes	0.767	0.050	-	0.817	9861.010	0.006	-	0.010
2021	NA - 09	Manganese (and its compounds)	tonnes	0.268	0.410	-	0.678	9142.940	-	-	-
2020	NA - 09	Manganese (and its compounds)	tonnes	0.512	0.150	-	0.662	8925.780	-	-	-
2019	NA - 09	Manganese (and its compounds)	tonnes	0.384	0.158	-	0.542	9459.910	-	-	-
2018	NA - 09	Manganese (and its compounds)	tonnes	0.666	0.118	-	0.784	8185.170	-	-	-
2017	NA - 09	Manganese (and its compounds)	tonnes	0.329	0.114	-	0.443	7776.710	-	-	-
2016	NA - 09	Manganese (and its compounds)	tonnes	0.525	-	-	0.525	8976.210	0.000	-	-
2015	NA - 09	Manganese (and its compounds)	tonnes	0.505	-	-	0.505	9014.610	0.000	-	-
2014	NA - 09	Manganese (and its compounds)	tonnes	1.431	-	-	1.431	8791.050	0.246	-	-
2013	NA - 09	Manganese (and its compounds)	tonnes	1.240	-	-	1.240	9222.540	-	-	-
2012	NA - 09	Manganese (and its compounds)	tonnes	0.845	-	-	0.845	8908.290	1.096	-	-
2011	NA - 09	Manganese (and its compounds)	tonnes	-	-	-	0.000	8765.490	-	-	-
2010	NA - 09	Manganese (and its compounds)	tonnes	1.183	-	-	1.183	9416.900	-	-	-
2009	NA - 09	Manganese (and its compounds)	tonnes	1.034	-	-	1.034	7655.290	-	-	-
2008	NA - 09	Manganese (and its compounds)	tonnes	-	-	-	0.000	7812.850	-	-	-
2007	NA - 09	Manganese (and its compounds)	tonnes	-	-	-	0.000	7567.310	-	-	-
2006	NA - 09	Manganese (and its compounds)	tonnes	-	-	-	0.000	5429.290	-	-	-
2024	NA - 10	Mercury (and its compounds)	kg	11.713	0.001	-	11.714	1026.988	1.678	-	0.000
2023	NA - 10	Mercury (and its compounds)	kg	11.596	0.002	-	11.598	474.520	0.297	-	569.052
2021	NA - 10	Mercury (and its compounds)	kg	5.136	0.009	-	5.145	456.500	144.012	-	482.536
2020	NA - 10	Mercury (and its compounds)	kg	9.824	0.001	-	9.825	441.300	492.587	-	-
2019	NA - 10	Mercury (and its compounds)	kg	7.358	0.004	-	7.362	483.795	482.536	-	-
2018	NA - 10	Mercury (and its compounds)	kg	7.617	0.036	-	7.653	405.751	121.237	-	-

2018	NA - 10	its compounds)	kg	7.617	0.036	-	7.653	405.751	121.237	-	-
2017	NA - 10	Mercury (and its compounds)	kg	6.312	0.034	-	6.346	334.722	230.028	-	-
2016	NA - 10	Mercury (and its compounds)	kg	12.769	-	-	12.769	419.754	18.705	-	449.000
2015	NA - 10	Mercury (and its compounds)	kg	9.851	-	-	9.851	454.010	16.400	-	394.930
2014	NA - 10	Mercury (and its compounds)	kg	30.377	-	-	30.377	447.080	17.090	-	1183.143
2013	NA - 10	Mercury (and its compounds)	kg	22.606	-	-	22.606	423.450	0.008	-	301.000
2012	NA - 10	Mercury (and its compounds)	kg	17.233	-	-	17.233	474.600	21.000	-	501.000
2011	NA - 10	Mercury (and its compounds)	kg	14.889	-	-	14.889	429.577	16.000	-	385.000
2010	NA - 10	Mercury (and its compounds)	kg	22.712	-	-	22.712	478.295	-	93.000	200.000
2009	NA - 10	Mercury (and its compounds)	kg	20.587	-	-	20.587	355.325	-	376.000	0.092
2008	NA - 10	Mercury (and its compounds)	kg	26.247	-	-	26.247	337.396	-	430.000	-
2007	NA - 10	Mercury (and its compounds)	kg	30.734	-	-	30.734	318.396	-	411.000	-
2006	NA - 10	Mercury (and its compounds)	kg	33.653	-	-	33.653	225.325	-	535.026	-
2005	NA - 10	Mercury (and its compounds)	kg	21.173	-	-	21.173	0.409	-	500.000	-
2004	NA - 10	Mercury (and its compounds)	kg	19.186	-	-	19.186	0.374	-	455.000	-
2003	NA - 10	Mercury (and its compounds)	kg	18.150	-	-	18.150	0.365	-	590.000	-
2002	NA - 10	Mercury (and its compounds)	kg	20.694	-	-	20.694	0.358	607.000	-	-
2001	NA - 10	Mercury (and its compounds)	kg	18.325	-	-	18.325	0.300	275.000	-	-
2000	NA - 10	Mercury (and its compounds)	kg	27.189	-	-	27.189	0.500	837.000	-	-
2017	67-56-1	Methanol	tonnes	-	-	-	0.000	-	-	-	-
2016	67-56-1	Methanol	tonnes	25.346	-	-	25.346	-	-	-	-
2015	67-56-1	Methanol	tonnes	0.608	-	-	0.608	-	-	-	-
2014	67-56-1	Methanol	tonnes	1.861	-	-	1.861	-	-	-	-
2021	78-93-3	Methyl ethyl ketone	tonnes	11.103	-	-	11.103	-	-	-	-
2020	78-93-3	Methyl ethyl ketone	tonnes	5.986	-	-	5.986	-	-	-	-
2019	78-93-3	Methyl ethyl ketone	tonnes	7.850	-	-	7.850	-	-	-	-
2018	78-93-3	Methyl ethyl ketone	tonnes	3.901	-	-	3.901	-	-	-	-
2017	78-93-3	Methyl ethyl ketone	tonnes	6.734	-	-	6.734	-	-	-	-
2016	78-93-3	Methyl ethyl ketone	tonnes	14.933	-	-	14.933	-	-	-	-
2015	78-93-3	Methyl ethyl ketone	tonnes	0.044	-	-	0.044	-	-	-	-
2014	78-93-3	Methyl ethyl ketone	tonnes	1.740	-	-	1.740	-	-	-	-
2015	108-10-1	Methyl isobutyl ketone	tonnes	-	-	-	0.000	-	-	-	-
2014	108-10-1	Methyl isobutyl ketone	tonnes	1.594	-	-	1.594	-	-	-	-
2024	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	24.274	-	-
2023	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	67.546	-	140.786
2021	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	44.956	-	119.382
2020	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	126.635	-	18.630
2019	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	203.123	-	112.320
2018	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	124.469	-	17.298
2017	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	68.710	-	94.780
2016	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	14.290	-	175.778

2015	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	7.047	-	151.446
2014	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	17.028	-	210.991
2013	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	29.085	-	99.934
2012	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	25.514	-	124.980
2011	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	172.761	-	124.980
2010	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	-	2.110	232.978
2009	1313-27-5	Molybdenum trioxide	tonnes	-	-	-	0.000	-	-	-	-
2021	91-20-3	Naphthalene	tonnes	3.211	-	-	3.211	-	-	-	-
2020	91-20-3	Naphthalene	tonnes	4.996	-	-	4.996	-	-	-	-
2019	91-20-3	Naphthalene	tonnes	0.221	-	-	0.221	-	-	-	-
2018	91-20-3	Naphthalene	tonnes	6.927	-	-	6.927	-	-	-	-
2017	91-20-3	Naphthalene	tonnes	6.226	-	-	6.226	-	-	-	-
2016	91-20-3	Naphthalene	tonnes	14.617	-	-	14.617	-	-	-	-
2015	91-20-3	Naphthalene	tonnes	0.648	-	-	0.648	-	-	-	-
2014	91-20-3	Naphthalene	tonnes	17.871	-	-	17.871	-	-	-	-
2013	91-20-3	Naphthalene	tonnes	0.262	-	-	0.262	-	-	-	-
2012	91-20-3	Naphthalene	tonnes	-	-	-	0.000	-	-	-	-
2011	91-20-3	Naphthalene	tonnes	-	-	-	0.000	-	-	-	-
1997	91-20-3	Naphthalene	tonnes	4.419	-	-	4.419	-	-	-	-
2024	NA - 47	Naphthenic acid fraction compounds (and their salts)	tonnes	-	-	-	0.000	12542.740	-	-	-
2023	NA - 47	Naphthenic acid fraction compounds (and their salts)	tonnes	-	-	-	0.000	11579.000	-	-	-
2024	110-54-3	n-Hexane	tonnes	45.079	-	-	45.079	-	1.130	-	0.036
2023	110-54-3	n-Hexane	tonnes	52.492	-	-	52.492	-	1.391	-	-
2021	110-54-3	n-Hexane	tonnes	239.388	-	-	239.388	-	-	-	-
2020	110-54-3	n-Hexane	tonnes	76.501	-	-	76.501	-	-	-	-
2019	110-54-3	n-Hexane	tonnes	68.224	-	-	68.224	-	-	-	-
2018	110-54-3	n-Hexane	tonnes	75.834	-	-	75.834	-	-	-	-
2017	110-54-3	n-Hexane	tonnes	54.441	-	-	54.441	-	-	-	-
2016	110-54-3	n-Hexane	tonnes	176.593	-	-	176.593	-	-	-	-
2015	110-54-3	n-Hexane	tonnes	221.093	-	-	221.093	-	-	-	-
2014	110-54-3	n-Hexane	tonnes	183.647	-	-	183.647	-	-	-	-
2013	110-54-3	n-Hexane	tonnes	121.132	-	-	121.132	-	-	-	-
2012	110-54-3	n-Hexane	tonnes	85.072	-	-	85.072	-	-	-	-
2011	110-54-3	n-Hexane	tonnes	83.085	-	-	83.085	-	-	-	-
2010	110-54-3	n-Hexane	tonnes	89.381	-	-	89.381	-	-	-	-
2009	110-54-3	n-Hexane	tonnes	59.573	-	-	59.573	-	-	-	-
2008	110-54-3	n-Hexane	tonnes	103.911	-	-	103.911	-	-	-	-
2007	110-54-3	n-Hexane	tonnes	111.008	-	-	111.008	-	-	-	-
2006	110-54-3	n-Hexane	tonnes	111.063	-	-	111.063	-	-	-	-
2005	110-54-3	n-Hexane	tonnes	117.270	-	-	117.270	-	-	-	-
2004	110-54-3	n-Hexane	tonnes	130.311	-	-	130.311	-	-	-	-
2003	110-54-3	n-Hexane	tonnes	111.149	-	-	111.149	-	-	-	-
2002	110-54-3	n-Hexane	tonnes	111.918	-	-	111.918	-	-	-	-
2001	110-54-3	n-Hexane	tonnes	112.120	-	-	112.120	-	-	-	-
2000	110-54-3	n-Hexane	tonnes	111.172	-	-	111.172	-	-	-	-
1999	110-54-3	n-Hexane	tonnes	81.072	-	-	81.072	-	-	-	-
2024	NA - 11	Nickel (and its compounds)	tonnes	1.656	0.001	-	1.657	759.772	74.378	-	-
2023	NA - 11	Nickel (and its compounds)	tonnes	1.467	0.002	-	1.469	334.626	18.212	-	171.542
2021	NA - 11	Nickel (and its compounds)	tonnes	0.531	0.008	-	0.539	286.100	45.899	-	145.461
2020	NA - 11	Nickel (and its compounds)	tonnes	0.989	0.006	-	0.995	280.950	165.095	-	4.782
2019	NA - 11	Nickel (and its compounds)	tonnes	0.748	0.006	-	0.754	282.458	184.729	-	28.829
2018	NA - 11	Nickel (and its compounds)	tonnes	0.749	0.005	-	0.754	252.577	109.311	-	4.440
2017	NA - 11	Nickel (and its compounds)	tonnes	0.646	0.004	-	0.650	250.707	105.719	-	35.726
2016	NA - 11	Nickel (and its compounds)	tonnes	1.025	-	-	1.025	267.626	10.724	-	187.718
2015	NA - 11	Nickel (and its compounds)	tonnes	0.976	-	-	0.976	267.630	23.820	-	135.402

2014	NA - 11	Nickel (and its compounds)	tonnes	2.723	-	-	2.723	258.390	15.276	-	224.873
2013	NA - 11	Nickel (and its compounds)	tonnes	2.467	-	-	2.467	280.490	21.467	-	99.800
2012	NA - 11	Nickel (and its compounds)	tonnes	1.618	-	-	1.618	274.127	6.235	-	166.957
2011	NA - 11	Nickel (and its compounds)	tonnes	1.398	-	-	1.398	267.580	4.792	-	179.455
2010	NA - 11	Nickel (and its compounds)	tonnes	2.254	-	-	2.254	260.034	-	2.710	137.497
2009	NA - 11	Nickel (and its compounds)	tonnes	1.973	-	-	1.973	226.214	1.414	-	135.720
2008	NA - 11	Nickel (and its compounds)	tonnes	2.490	-	-	2.490	244.614	-	-	154.731
2007	NA - 11	Nickel (and its compounds)	tonnes	2.782	-	-	2.782	238.214	-	-	146.962
2006	NA - 11	Nickel (and its compounds)	tonnes	3.168	-	-	3.168	177.044	-	-	304.890
2005	NA - 11	Nickel (and its compounds)	tonnes	2.077	-	-	2.077	0.524	-	-	276.279
2004	NA - 11	Nickel (and its compounds)	tonnes	1.707	-	-	1.707	0.524	-	-	200.506
2003	NA - 11	Nickel (and its compounds)	tonnes	1.783	-	-	1.783	1.076	-	-	304.897
2002	NA - 11	Nickel (and its compounds)	tonnes	2.007	-	-	2.007	-	-	-	226.320
2001	NA - 11	Nickel (and its compounds)	tonnes	1.298	-	-	1.298	-	-	-	137.325
2000	NA - 11	Nickel (and its compounds)	tonnes	2.185	-	-	2.185	-	-	-	320.730
1999	NA - 11	Nickel (and its compounds)	tonnes	1.605	-	-	1.605	-	-	-	233.470
1998	NA - 11	Nickel (and its compounds)	tonnes	2.529	-	-	2.529	-	-	-	227.850
1997	NA - 11	Nickel (and its compounds)	tonnes	4.730	-	-	4.730	-	-	-	209.850
2024	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	14075.456	-	-	14075.456	-	-	-	-
2023	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	16029.732	-	-	16029.732	-	-	-	-
2021	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	12957.461	-	-	12957.461	-	-	-	-
2020	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	15739.989	-	-	15739.989	-	-	-	-
2019	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	13321.744	-	-	13321.744	-	-	-	-
2018	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	13991.443	-	-	13991.443	-	-	-	-
2017	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	14014.164	-	-	14014.164	-	-	-	-
2016	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	13885.303	-	-	13885.303	-	-	-	-
2015	11104-93-1	Nitrogen	tonnes	14894.256	-	-	14894.256	-	-	-	-

2015	11104-93-1	oxides (expressed as nitrogen dioxide)	tonnes	14894.256	-	-	14894.256	-	-	-	-
2014	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	14453.151	-	-	14453.151	-	-	-	-
2013	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	14119.801	-	-	14119.801	-	-	-	-
2012	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	13577.661	-	-	13577.661	-	-	-	-
2011	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	15701.027	-	-	15701.027	-	-	-	-
2010	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	14074.150	-	-	14074.150	-	-	-	-
2009	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	13931.800	-	-	13931.800	-	-	-	-
2008	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	12731.799	-	-	12731.799	-	-	-	-
2007	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	15057.801	-	-	15057.801	-	-	-	-
2006	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	14617.300	-	-	14617.300	-	-	-	-
2005	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	11602.926	-	-	11602.926	-	-	-	-
2004	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	11410.000	-	-	11410.000	-	-	-	-
2003	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	11488.000	-	-	11488.000	-	-	-	-
2002	11104-93-1	Nitrogen oxides (expressed as nitrogen dioxide)	tonnes	11962.730	-	-	11962.730	-	-	-	-
2013	106-46-7	p-Dichloroben zene	tonnes	-	-	-	0.000	-	-	-	-
2012	106-46-7	p-Dichloroben zene	tonnes	-	-	-	0.000	-	-	-	-
2011	106-46-7	p-Dichloroben zene	tonnes	-	-	-	0.000	-	-	-	-
2024	198-55-0	Perylene	kg	0.056	-	-	0.056	16699.992	-	-	0.002
2023	198-55-0	Perylene	kg	0.025	-	-	0.025	3041.233	-	-	0.002

2021	198-55-0	Perylene	kg	-	-	-	0.000	2718.270	-	-	-
2020	198-55-0	Perylene	kg	-	-	-	0.000	2683.140	-	-	-
2019	198-55-0	Perylene	kg	-	-	-	0.000	2854.860	-	-	-
2018	198-55-0	Perylene	kg	0.318	-	-	0.318	2416.400	-	-	-
2017	198-55-0	Perylene	kg	0.304	-	-	0.304	2198.300	-	-	-
2016	198-55-0	Perylene	kg	0.463	-	-	0.463	2661.800	-	-	-
2015	198-55-0	Perylene	kg	0.301	-	-	0.301	2529.760	-	-	-
2014	198-55-0	Perylene	kg	0.547	-	-	0.547	2446.760	-	-	-
2013	198-55-0	Perylene	kg	0.368	-	-	0.368	2657.930	-	-	-
2012	198-55-0	Perylene	kg	0.365	-	-	0.365	2606.700	-	-	-
2011	198-55-0	Perylene	kg	0.363	-	-	0.363	2537.800	-	-	-
2010	198-55-0	Perylene	kg	0.362	-	-	0.362	2589.210	-	-	-
2009	198-55-0	Perylene	kg	0.454	-	-	0.454	2234.000	-	-	-
2008	198-55-0	Perylene	kg	0.393	-	-	0.393	2219.000	-	-	-
2007	198-55-0	Perylene	kg	0.561	-	-	0.561	2131.000	-	-	-
2006	198-55-0	Perylene	kg	0.391	-	-	0.391	1575.000	-	-	-
2005	198-55-0	Perylene	kg	0.224	-	-	0.224	-	-	-	-
2004	198-55-0	Perylene	kg	0.415	-	-	0.415	-	-	-	-
2003	198-55-0	Perylene	kg	0.221	-	-	0.221	-	-	-	-
2002	198-55-0	Perylene	kg	0.228	-	-	0.228	-	-	-	-
2001	198-55-0	Perylene	kg	0.393	-	-	0.393	-	-	-	-
2000	198-55-0	Perylene	kg	0.371	-	-	0.371	-	-	-	-
2024	85-01-8	Phenanthrene	kg	11.308	-	0.017	11.326	160085.389	-	-	0.009
2023	85-01-8	Phenanthrene	kg	36.768	-	-	36.768	12975.088	-	-	0.009
2021	85-01-8	Phenanthrene	kg	1.523	-	-	1.523	12051.880	-	-	-
2020	85-01-8	Phenanthrene	kg	2.608	-	-	2.608	11688.673	-	-	-
2019	85-01-8	Phenanthrene	kg	2.600	-	-	2.600	12892.850	-	-	-
2018	85-01-8	Phenanthrene	kg	65.361	-	-	65.361	10533.090	-	-	-
2017	85-01-8	Phenanthrene	kg	63.572	-	-	63.572	8653.310	-	-	-
2016	85-01-8	Phenanthrene	kg	84.777	-	-	84.777	11299.300	-	-	-
2015	85-01-8	Phenanthrene	kg	62.125	-	-	62.125	11637.660	-	-	-
2014	85-01-8	Phenanthrene	kg	100.765	-	-	100.765	11416.810	-	-	-
2013	85-01-8	Phenanthrene	kg	73.515	-	-	73.515	11234.630	-	-	-
2012	85-01-8	Phenanthrene	kg	71.777	-	-	71.777	10988.530	-	-	-
2011	85-01-8	Phenanthrene	kg	70.906	-	-	70.906	11429.300	-	-	-
2010	85-01-8	Phenanthrene	kg	73.068	-	-	73.068	12135.260	-	-	-
2009	85-01-8	Phenanthrene	kg	84.021	-	-	84.021	9344.000	-	-	-
2008	85-01-8	Phenanthrene	kg	77.569	-	-	77.569	8688.000	-	-	-
2007	85-01-8	Phenanthrene	kg	102.724	-	-	102.724	8283.000	-	-	-
2006	85-01-8	Phenanthrene	kg	74.026	-	-	74.026	5980.000	-	-	-
2005	85-01-8	Phenanthrene	kg	46.585	-	-	46.585	-	-	-	-
2004	85-01-8	Phenanthrene	kg	76.718	-	-	76.718	-	-	-	-
2003	85-01-8	Phenanthrene	kg	46.066	-	-	46.066	-	-	-	-
2002	85-01-8	Phenanthrene	kg	47.367	-	-	47.367	-	-	-	-
2001	85-01-8	Phenanthrene	kg	73.428	-	-	73.428	-	-	-	-
2000	85-01-8	Phenanthrene	kg	71.411	-	-	71.411	-	-	-	-
2020	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	5.870	-	-	-
2019	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	8.100	-	-	-
2018	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	7.520	-	-	-
2017	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	8.180	-	-	-
2013	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	18.270	-	-	-
2012	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	17.450	-	-	-
2011	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	15.710	-	-	-
2010	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	0.000	-	-	-
2009	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	0.000	-	-	-
2008	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	0.000	-	-	-
2007	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	0.000	-	-	-
2006	108-95-2	Phenol (and its tonnes salts)		-	-	-	0.000	0.000	-	-	-
2005	108-95-2	Phenol (and its tonnes salts)		0.000	-	-	0.000	-	-	-	-
2004	108-95-2	Phenol (and its tonnes salts)		0.000	-	-	0.000	-	-	-	-
2003	108-95-2	Phenol (and its tonnes salts)		0.000	-	-	0.000	-	-	-	-
2002	108-95-2	Phenol (and its tonnes salts)		0.000	-	-	0.000	-	-	-	-

2002	108-95-2	salts)	tonnes	0.000	-	-	0.000	-	-	-	-
2001	108-95-2	Phenol (and its salts)	tonnes	0.000	-	-	0.000	-	-	-	-
2000	108-95-2	Phenol (and its salts)	tonnes	-	-	-	0.000	-	-	-	-
1999	108-95-2	Phenol (and its salts)	tonnes	-	-	-	0.000	-	-	-	-
1998	108-95-2	Phenol (and its salts)	tonnes	-	-	-	0.000	-	-	-	-
1997	108-95-2	Phenol (and its salts)	tonnes	-	-	-	0.000	-	-	-	-
1996	108-95-2	Phenol (and its salts)	tonnes	-	-	-	0.000	-	-	-	-
1995	108-95-2	Phenol (and its salts)	tonnes	-	-	-	0.000	-	-	-	-
1993	7664-38-2	Phosphoric acid	tonnes	-	-	-	0.000	-	-	-	-
2024	NA - 22	Phosphorus (total)	tonnes	2.637	0.013	-	2.650	15181.030	0.946	-	-
2023	NA - 22	Phosphorus (total)	tonnes	2.364	0.021	-	2.385	4649.870	1.413	-	-
2021	NA - 22	Phosphorus (total)	tonnes	0.831	-	-	0.831	4086.380	-	-	-
2020	NA - 22	Phosphorus (total)	tonnes	1.589	0.082	-	1.671	3982.310	-	-	-
2019	NA - 22	Phosphorus (total)	tonnes	1.190	0.061	-	1.251	4094.210	-	-	-
2018	NA - 22	Phosphorus (total)	tonnes	1.170	0.072	-	1.242	3623.550	-	-	-
2017	NA - 22	Phosphorus (total)	tonnes	1.021	0.048	-	1.069	3619.580	-	-	-
2016	NA - 22	Phosphorus (total)	tonnes	1.434	-	-	1.434	4184.780	-	-	-
2015	NA - 22	Phosphorus (total)	tonnes	1.780	-	-	1.780	4098.700	-	-	-
2014	NA - 22	Phosphorus (total)	tonnes	4.227	-	-	4.227	3984.900	-	-	-
2013	NA - 22	Phosphorus (total)	tonnes	3.881	-	-	3.881	4285.180	-	-	-
2012	NA - 22	Phosphorus (total)	tonnes	2.550	-	-	2.550	4161.140	-	-	-
2011	NA - 22	Phosphorus (total)	tonnes	2.193	-	-	2.193	4030.160	-	-	-
2010	NA - 22	Phosphorus (total)	tonnes	3.669	-	-	3.669	4291.130	-	-	-
2009	NA - 22	Phosphorus (total)	tonnes	3.101	-	-	3.101	3574.310	-	-	-
2008	NA - 22	Phosphorus (total)	tonnes	3.991	-	-	3.991	3649.900	-	-	-
2007	NA - 22	Phosphorus (total)	tonnes	4.347	-	-	4.347	3513.340	-	-	-
2006	NA - 22	Phosphorus (total)	tonnes	5.077	-	-	5.077	2571.400	-	-	-
2005	NA - 22	Phosphorus (total)	tonnes	3.375	-	-	3.375	-	-	-	-
2004	NA - 22	Phosphorus (total)	tonnes	2.612	-	-	2.612	-	-	-	-
2003	NA - 22	Phosphorus (total)	tonnes	-	-	-	0.000	-	-	-	-
2024	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	7026.110	-	-	7026.110	-	-	-	-
2023	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	5400.196	-	-	5400.196	-	-	-	-
2021	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	4501.430	-	-	4501.430	-	-	-	-
2020	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	3777.063	-	-	3777.063	-	-	-	-
2019	NA - M09	PM10 - Particulate	tonnes	3801.403	-	-	3801.403	-	-	-	-

2019	NA - M09	Matter <= 10 Micrometers	tonnes	3801.403	-	-	3801.403	-	-	-	-
2018	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	3933.139	-	-	3933.139	-	-	-	-
2017	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	3868.509	-	-	3868.509	-	-	-	-
2016	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	5694.602	-	-	5694.602	-	-	-	-
2015	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	4697.352	-	-	4697.352	-	-	-	-
2014	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	5659.785	-	-	5659.785	-	-	-	-
2013	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	4158.004	-	-	4158.004	-	-	-	-
2012	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	3897.506	-	-	3897.506	-	-	-	-
2011	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	3628.434	-	-	3628.434	-	-	-	-
2010	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	4294.980	-	-	4294.980	-	-	-	-
2009	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	3322.567	-	-	3322.567	-	-	-	-
2008	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	3598.026	-	-	3598.026	-	-	-	-
2007	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	4145.024	-	-	4145.024	-	-	-	-
2006	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	3010.625	-	-	3010.625	-	-	-	-
2005	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	1878.130	-	-	1878.130	-	-	-	-
2004	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	1676.360	-	-	1676.360	-	-	-	-
2003	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	1563.388	-	-	1563.388	-	-	-	-
2002	NA - M09	PM10 - Particulate Matter <= 10 Micrometers	tonnes	1787.590	-	-	1787.590	-	-	-	-
2024	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	1489.822	-	-	1489.822	-	-	-	-
2023	NA - M10	PM2.5 - Particulate Matter <= 2.5	tonnes	1202.443	-	-	1202.443	-	-	-	-

2023	NA - M10	Micrometers	tonnes	1202.443	-	-	1202.443	-	-	-	-
2021	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	961.030	-	-	961.030	-	-	-	-
2020	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	754.729	-	-	754.729	-	-	-	-
2019	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	677.211	-	-	677.211	-	-	-	-
2018	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	730.808	-	-	730.808	-	-	-	-
2017	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	702.214	-	-	702.214	-	-	-	-
2016	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	923.711	-	-	923.711	-	-	-	-
2015	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	813.169	-	-	813.169	-	-	-	-
2014	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	1278.080	-	-	1278.080	-	-	-	-
2013	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	989.563	-	-	989.563	-	-	-	-
2012	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	861.562	-	-	861.562	-	-	-	-
2011	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	788.940	-	-	788.940	-	-	-	-
2010	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	1058.825	-	-	1058.825	-	-	-	-
2009	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	899.494	-	-	899.494	-	-	-	-
2008	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	992.017	-	-	992.017	-	-	-	-
2007	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	1855.642	-	-	1855.642	-	-	-	-
2006	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	1773.656	-	-	1773.656	-	-	-	-
2005	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	664.832	-	-	664.832	-	-	-	-
2004	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	574.000	-	-	574.000	-	-	-	-
2003	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	531.467	-	-	531.467	-	-	-	-

2002	NA - M10	PM2.5 - Particulate Matter <= 2.5 Micrometers	tonnes	605.635	-	-	605.635	-	-	-	-
2024	115-07-1	Propylene	tonnes	83.742	-	-	83.742	-	-	-	0.101
2023	115-07-1	Propylene	tonnes	43.907	-	-	43.907	-	-	-	-
2021	115-07-1	Propylene	tonnes	43.185	-	-	43.185	-	-	-	-
2020	115-07-1	Propylene	tonnes	33.297	-	-	33.297	-	-	-	-
2019	115-07-1	Propylene	tonnes	49.609	-	-	49.609	-	-	-	-
2018	115-07-1	Propylene	tonnes	46.802	-	-	46.802	-	-	-	-
2017	115-07-1	Propylene	tonnes	68.038	-	-	68.038	-	-	-	-
2016	115-07-1	Propylene	tonnes	49.745	-	-	49.745	-	-	-	-
2015	115-07-1	Propylene	tonnes	67.897	-	-	67.897	-	-	-	-
2014	115-07-1	Propylene	tonnes	70.423	-	-	70.423	-	-	-	-
2013	115-07-1	Propylene	tonnes	65.639	-	-	65.639	-	-	-	-
2012	115-07-1	Propylene	tonnes	69.818	-	-	69.818	-	-	-	-
2011	115-07-1	Propylene	tonnes	102.069	-	-	102.069	-	-	-	-
2010	115-07-1	Propylene	tonnes	94.840	-	-	94.840	-	-	-	-
2009	115-07-1	Propylene	tonnes	85.382	-	-	85.382	-	-	-	-
2008	115-07-1	Propylene	tonnes	65.630	-	-	65.630	-	-	-	-
2007	115-07-1	Propylene	tonnes	69.120	-	-	69.120	-	-	-	-
2006	115-07-1	Propylene	tonnes	69.335	-	-	69.335	-	-	-	-
2005	115-07-1	Propylene	tonnes	72.004	-	-	72.004	-	-	-	-
2004	115-07-1	Propylene	tonnes	68.516	-	-	68.516	-	-	-	-
2003	115-07-1	Propylene	tonnes	108.058	-	-	108.058	-	-	-	-
2002	115-07-1	Propylene	tonnes	94.406	-	-	94.406	-	-	-	-
2001	115-07-1	Propylene	tonnes	183.460	-	-	183.460	-	-	-	-
2000	115-07-1	Propylene	tonnes	109.449	-	-	109.449	-	-	-	-
1999	115-07-1	Propylene	tonnes	86.088	-	-	86.088	-	-	-	-
1998	115-07-1	Propylene	tonnes	79.667	-	-	79.667	-	-	-	-
1997	115-07-1	Propylene	tonnes	86.479	-	-	86.479	-	-	-	-
1996	115-07-1	Propylene	tonnes	78.152	-	-	78.152	-	-	-	-
1995	115-07-1	Propylene	tonnes	72.403	-	-	72.403	-	-	-	-
1994	115-07-1	Propylene	tonnes	78.551	-	-	78.551	-	-	-	-
1993	115-07-1	Propylene	tonnes	70.780	-	-	70.780	-	-	-	-
2024	129-00-0	Pyrene	kg	2.609	-	-	2.609	38265.900	-	-	0.012
2023	129-00-0	Pyrene	kg	1.866	-	-	1.866	6471.976	-	-	0.012
2021	129-00-0	Pyrene	kg	1.097	-	-	1.097	5840.270	-	-	-
2020	129-00-0	Pyrene	kg	1.171	-	-	1.171	5739.188	-	-	-
2019	129-00-0	Pyrene	kg	1.166	-	-	1.166	6133.840	-	-	-
2018	129-00-0	Pyrene	kg	6.967	-	-	6.967	5144.900	-	-	-
2017	129-00-0	Pyrene	kg	6.624	-	-	6.624	4619.000	-	-	-
2016	129-00-0	Pyrene	kg	10.620	-	-	10.620	5660.670	-	-	-
2015	129-00-0	Pyrene	kg	6.587	-	-	6.587	5453.620	-	-	-
2014	129-00-0	Pyrene	kg	12.465	-	-	12.465	5291.920	-	-	-
2013	129-00-0	Pyrene	kg	8.167	-	-	8.167	5658.920	-	-	-
2012	129-00-0	Pyrene	kg	8.155	-	-	8.155	5547.070	-	-	-
2011	129-00-0	Pyrene	kg	8.105	-	-	8.105	5457.320	-	-	-
2010	129-00-0	Pyrene	kg	8.003	-	-	8.003	5597.610	-	-	-
2009	129-00-0	Pyrene	kg	10.349	-	-	10.349	4753.000	-	-	-
2008	129-00-0	Pyrene	kg	12.820	-	-	12.820	4686.000	-	-	-
2007	129-00-0	Pyrene	kg	12.820	-	-	12.820	4493.000	-	-	-
2006	129-00-0	Pyrene	kg	8.833	-	-	8.833	3314.000	-	-	-
2005	129-00-0	Pyrene	kg	4.885	-	-	4.885	-	-	-	-
2004	129-00-0	Pyrene	kg	9.508	-	-	9.508	-	-	-	-
2003	129-00-0	Pyrene	kg	4.853	-	-	4.853	-	-	-	-
2002	129-00-0	Pyrene	kg	4.987	-	-	4.987	-	-	-	-
2001	129-00-0	Pyrene	kg	8.964	-	-	8.964	-	-	-	-
2000	129-00-0	Pyrene	kg	8.341	-	-	8.341	-	-	-	-
2024	91-22-5	Quinoline	kg	1.808	-	-	1.808	-	-	-	-
2023	91-22-5	Quinoline	kg	0.817	-	-	0.817	-	-	-	-
2021	91-22-5	Quinoline	kg	0.180	-	-	0.180	-	-	-	-
2020	91-22-5	Quinoline	kg	0.265	-	-	0.265	-	-	-	-
2019	91-22-5	Quinoline	kg	0.269	-	-	0.269	-	-	-	-
2024	NA - 12	Selenium (and its compounds)	kg	50.201	0.032	0.052	50.285	5016.030	-	-	-
2023	NA - 12	Selenium (and its compounds)	kg	49.695	0.219	-	49.914	712.490	-	-	-
2021	NA - 12	Selenium (and its compounds)	kg	22.012	0.580	-	22.592	368.630	-	-	-
2020	NA - 12	Selenium (and its compounds)	kg	42.104	1.168	-	43.272	473.790	-	-	-
2019	NA - 12	Selenium (and its compounds)	kg	31.536	0.576	-	32.112	937.627	-	-	-
2018	NA - 12	Selenium (and its compounds)	kg	31.017	0.262	-	31.279	1206.985	0.080	-	-
2017	NA - 12	Selenium (and its compounds)	kg	27.050	0.205	-	27.255	1168.760	126.997	-	-

2017	NA - 12	its compounds)	kg	27.050	0.205	-	27.255	1168.760	126.997	-	-
2016	NA - 12	Selenium (and its compounds)	kg	38.048	-	-	38.048	1392.270	-	-	-
2015	NA - 12	Selenium (and its compounds)	kg	41.159	-	-	41.159	1543.191	-	-	-
2014	NA - 12	Selenium (and its compounds)	kg	112.006	-	-	112.006	1557.771	61.449	-	-
2013	NA - 12	Selenium (and its compounds)	kg	92.245	-	-	92.245	1259.670	-	-	-
2012	NA - 12	Selenium (and its compounds)	kg	0.058	-	-	0.058	1250.000	-	-	-
2011	NA - 12	Selenium (and its compounds)	kg	0.058	-	-	0.058	1560.000	-	-	-
2010	NA - 12	Selenium (and its compounds)	tonnes	0.097	-	-	0.097	1.580	-	-	-
2009	NA - 12	Selenium (and its compounds)	tonnes	0.087	-	-	0.087	1.190	-	-	-
2008	NA - 12	Selenium (and its compounds)	tonnes	-	-	-	0.000	0.940	-	-	-
2007	NA - 12	Selenium (and its compounds)	tonnes	-	-	-	0.000	0.680	-	-	-
2006	NA - 12	Selenium (and its compounds)	tonnes	-	-	-	0.000	0.110	-	-	-
2013	NA - 13	Silver (and its compounds)	tonnes	0.084	-	-	0.084	0.200	-	-	-
2012	NA - 13	Silver (and its compounds)	tonnes	-	-	-	0.000	0.190	-	-	-
2011	NA - 13	Silver (and its compounds)	tonnes	-	-	-	0.000	0.180	-	-	-
2010	NA - 13	Silver (and its compounds)	tonnes	0.088	-	-	0.088	0.020	-	-	-
2009	NA - 13	Silver (and its compounds)	tonnes	0.075	-	-	0.075	0.017	-	-	-
2008	NA - 13	Silver (and its compounds)	tonnes	-	-	-	0.000	0.200	-	-	-
2007	NA - 13	Silver (and its compounds)	tonnes	-	-	-	0.000	0.190	-	-	-
2006	NA - 13	Silver (and its compounds)	tonnes	-	-	-	0.000	0.130	-	-	-
2020	100-42-5	Styrene	tonnes	0.486	-	-	0.486	-	-	-	-
2019	100-42-5	Styrene	tonnes	0.336	-	-	0.336	-	-	-	-
2018	100-42-5	Styrene	tonnes	0.646	-	-	0.646	-	-	-	-
2017	100-42-5	Styrene	tonnes	1.471	-	-	1.471	-	-	-	-
2016	100-42-5	Styrene	tonnes	1.665	-	-	1.665	-	-	-	-
2015	100-42-5	Styrene	tonnes	0.519	-	-	0.519	-	-	-	-
2014	100-42-5	Styrene	tonnes	3.165	-	-	3.165	-	-	-	-
2013	100-42-5	Styrene	tonnes	-	-	-	0.000	-	-	-	-
2012	100-42-5	Styrene	tonnes	5.755	-	-	5.755	-	-	-	-
2011	100-42-5	Styrene	tonnes	5.762	-	-	5.762	-	-	-	-
2024	7446-09-5	Sulphur dioxide	tonnes	31548.997	-	-	31548.997	-	-	-	-
2023	7446-09-5	Sulphur dioxide	tonnes	27733.817	-	-	27733.817	-	-	-	-
2021	7446-09-5	Sulphur dioxide	tonnes	25273.046	-	-	25273.046	-	-	-	-
2020	7446-09-5	Sulphur dioxide	tonnes	22545.898	-	-	22545.898	-	-	-	-
2019	7446-09-5	Sulphur dioxide	tonnes	27672.683	-	-	27672.683	-	-	-	-
2018	7446-09-5	Sulphur dioxide	tonnes	31581.407	-	-	31581.407	-	-	-	-
2017	7446-09-5	Sulphur dioxide	tonnes	28731.296	-	-	28731.296	-	-	-	-
2016	7446-09-5	Sulphur dioxide	tonnes	22555.414	-	-	22555.414	-	-	-	-
2015	7446-09-5	Sulphur dioxide	tonnes	29046.148	-	-	29046.148	-	-	-	-
2014	7446-09-5	Sulphur dioxide	tonnes	27987.255	-	-	27987.255	-	-	-	-
2013	7446-09-5	Sulphur dioxide	tonnes	63132.081	-	-	63132.081	-	-	-	-
2012	7446-09-5	Sulphur dioxide	tonnes	72970.909	-	-	72970.909	-	-	-	-
2011	7446-09-5	Sulphur dioxide	tonnes	64726.988	-	-	64726.988	-	-	-	-
2010	7446-09-5	Sulphur dioxide	tonnes	72769.288	-	-	72769.288	-	-	-	-

2009	7446-09-5	Sulphur dioxide	tonnes	81470.739	-	-	81470.739	-	-	-	-
2008	7446-09-5	Sulphur dioxide	tonnes	70538.170	-	-	70538.170	-	-	-	-
2007	7446-09-5	Sulphur dioxide	tonnes	83972.670	-	-	83972.670	-	-	-	-
2006	7446-09-5	Sulphur dioxide	tonnes	80862.599	-	-	80862.599	-	-	-	-
2005	7446-09-5	Sulphur dioxide	tonnes	83987.601	-	-	83987.601	-	-	-	-
2004	7446-09-5	Sulphur dioxide	tonnes	78322.000	-	-	78322.000	-	-	-	-
2003	7446-09-5	Sulphur dioxide	tonnes	78240.000	-	-	78240.000	-	-	-	-
2002	7446-09-5	Sulphur dioxide	tonnes	81751.900	-	-	81751.900	-	-	-	-
2024	7664-93-9	Sulphuric acid	tonnes	211.590	-	-	211.590	-	-	-	-
2023	7664-93-9	Sulphuric acid	tonnes	136.510	-	-	136.510	-	-	-	-
2021	7664-93-9	Sulphuric acid	tonnes	137.020	-	-	137.020	-	-	-	-
2020	7664-93-9	Sulphuric acid	tonnes	124.463	-	-	124.463	-	-	-	-
2019	7664-93-9	Sulphuric acid	tonnes	134.427	-	-	134.427	-	-	-	-
2018	7664-93-9	Sulphuric acid	tonnes	160.189	-	-	160.189	-	-	-	-
2017	7664-93-9	Sulphuric acid	tonnes	121.860	-	-	121.860	-	-	-	-
2016	7664-93-9	Sulphuric acid	tonnes	148.424	-	-	148.424	-	-	-	-
2015	7664-93-9	Sulphuric acid	tonnes	102.602	-	-	102.602	-	-	-	-
2014	7664-93-9	Sulphuric acid	tonnes	90.928	-	-	90.928	-	-	-	-
2013	7664-93-9	Sulphuric acid	tonnes	209.548	-	-	209.548	-	-	-	-
2012	7664-93-9	Sulphuric acid	tonnes	317.296	-	-	317.296	-	-	-	-
2011	7664-93-9	Sulphuric acid	tonnes	189.192	-	-	189.192	-	-	-	-
2010	7664-93-9	Sulphuric acid	tonnes	125.037	-	-	125.037	-	-	-	-
2009	7664-93-9	Sulphuric acid	tonnes	176.108	-	-	176.108	-	-	-	-
2008	7664-93-9	Sulphuric acid	tonnes	113.925	-	-	113.925	-	-	-	-
2007	7664-93-9	Sulphuric acid	tonnes	164.674	-	-	164.674	-	-	-	-
2006	7664-93-9	Sulphuric acid	tonnes	381.138	-	-	381.138	-	-	-	-
2005	7664-93-9	Sulphuric acid	tonnes	1129.425	-	-	1129.425	-	-	-	-
2004	7664-93-9	Sulphuric acid	tonnes	990.528	-	-	990.528	-	-	-	-
2003	7664-93-9	Sulphuric acid	tonnes	821.511	-	-	821.511	-	-	-	-
2002	7664-93-9	Sulphuric acid	tonnes	897.527	-	-	897.527	-	-	-	-
2001	7664-93-9	Sulphuric acid	tonnes	866.798	-	-	866.798	-	-	-	-
2000	7664-93-9	Sulphuric acid	tonnes	839.556	-	-	839.556	-	-	-	-
1999	7664-93-9	Sulphuric acid	tonnes	829.273	-	-	829.273	-	-	-	-
1998	7664-93-9	Sulphuric acid	tonnes	935.800	-	-	935.800	-	-	-	-
1997	7664-93-9	Sulphuric acid	tonnes	786.700	-	-	786.700	-	-	-	-
1996	7664-93-9	Sulphuric acid	tonnes	571.640	-	-	571.640	-	-	-	-
1995	7664-93-9	Sulphuric acid	tonnes	461.400	-	-	461.400	-	-	-	-
1994	7664-93-9	Sulphuric acid	tonnes	767.000	-	-	767.000	-	-	-	-
1993	7664-93-9	Sulphuric acid	tonnes	-	-	-	0.000	-	-	-	-
2015	127-18-4	Tetrachloroethylene	tonnes	-	-	-	0.000	-	-	-	-
2014	127-18-4	Tetrachloroethylene	tonnes	1.191	-	-	1.191	-	-	-	-
2012	127-18-4	Tetrachloroethylene	tonnes	-	-	-	0.000	-	-	-	-
2011	127-18-4	Tetrachloroethylene	tonnes	-	-	-	0.000	-	-	-	-
2024	NA - 37	Thallium (and its compounds)	kg	-	-	17.171	17.171	-	-	-	-
2024	108-88-3	Toluene	tonnes	137.757	-	-	137.757	39.930	1.876	-	4.805
2023	108-88-3	Toluene	tonnes	162.438	-	-	162.438	412.160	1.601	-	5.496
2021	108-88-3	Toluene	tonnes	232.425	-	-	232.425	393.380	-	-	-
2020	108-88-3	Toluene	tonnes	175.332	-	-	175.332	166.590	-	-	-
2019	108-88-3	Toluene	tonnes	229.571	-	-	229.571	427.880	-	-	-
2018	108-88-3	Toluene	tonnes	117.089	-	-	117.089	351.150	-	-	-
2017	108-88-3	Toluene	tonnes	211.571	-	-	211.571	274.290	-	-	-
2016	108-88-3	Toluene	tonnes	690.123	-	-	690.123	895.770	-	-	-
2015	108-88-3	Toluene	tonnes	391.653	-	-	391.653	970.350	-	-	-
2014	108-88-3	Toluene	tonnes	227.110	-	-	227.110	963.460	-	-	-
2013	108-88-3	Toluene	tonnes	136.372	-	-	136.372	774.100	0.045	-	-
2012	108-88-3	Toluene	tonnes	99.732	-	-	99.732	1038.390	-	-	-
2011	108-88-3	Toluene	tonnes	98.725	-	-	98.725	1057.280	-	-	-
2010	108-88-3	Toluene	tonnes	87.145	-	-	87.145	985.267	-	-	0.640
2009	108-88-3	Toluene	tonnes	73.628	-	-	73.628	969.880	-	0.237	0.640
2008	108-88-3	Toluene	tonnes	197.088	-	-	197.088	874.091	-	-	-
2007	108-88-3	Toluene	tonnes	211.234	-	-	211.234	830.281	-	-	-
2006	108-88-3	Toluene	tonnes	209.405	-	-	209.405	731.091	-	-	-
2005	108-88-3	Toluene	tonnes	218.615	-	-	218.615	-	-	0.567	-
2004	108-88-3	Toluene	tonnes	246.443	-	-	246.443	-	-	-	-

2003	108-88-3	Toluene	tonnes	208.705	-	-	208.705	-	-	-	-
2002	108-88-3	Toluene	tonnes	210.290	-	-	210.290	-	-	-	-
2001	108-88-3	Toluene	tonnes	210.290	-	-	210.290	-	-	-	-
2000	108-88-3	Toluene	tonnes	208.990	-	-	208.990	-	-	-	-
1999	108-88-3	Toluene	tonnes	154.473	-	-	154.473	-	-	-	-
1998	108-88-3	Toluene	tonnes	156.553	-	-	156.553	-	-	-	-
1997	108-88-3	Toluene	tonnes	159.992	-	-	159.992	-	-	-	-
1996	108-88-3	Toluene	tonnes	10.130	-	-	10.130	-	-	-	-
1995	108-88-3	Toluene	tonnes	10.038	-	-	10.038	-	-	-	-
1994	108-88-3	Toluene	tonnes	11.555	-	-	11.555	0.127	-	-	-
1993	108-88-3	Toluene	tonnes	10.464	-	-	10.464	0.012	-	-	-
2024	NA - M08	Total particulate matter	tonnes	20551.331	-	-	20551.331	-	-	-	-
2023	NA - M08	Total particulate matter	tonnes	15408.036	-	-	15408.036	-	-	-	-
2021	NA - M08	Total particulate matter	tonnes	12516.179	-	-	12516.179	-	-	-	-
2020	NA - M08	Total particulate matter	tonnes	10631.565	-	-	10631.565	-	-	-	-
2019	NA - M08	Total particulate matter	tonnes	11731.401	-	-	11731.401	-	-	-	-
2018	NA - M08	Total particulate matter	tonnes	12060.885	-	-	12060.885	-	-	-	-
2017	NA - M08	Total particulate matter	tonnes	12004.255	-	-	12004.255	-	-	-	-
2016	NA - M08	Total particulate matter	tonnes	18185.884	-	-	18185.884	-	-	-	-
2015	NA - M08	Total particulate matter	tonnes	14568.328	-	-	14568.328	-	-	-	-
2014	NA - M08	Total particulate matter	tonnes	14747.464	-	-	14747.464	-	-	-	-
2013	NA - M08	Total particulate matter	tonnes	10713.710	-	-	10713.710	-	-	-	-
2012	NA - M08	Total particulate matter	tonnes	10586.432	-	-	10586.432	-	-	-	-
2011	NA - M08	Total particulate matter	tonnes	10070.464	-	-	10070.464	-	-	-	-
2010	NA - M08	Total particulate matter	tonnes	10720.305	-	-	10720.305	-	-	-	-
2009	NA - M08	Total particulate matter	tonnes	8163.038	-	-	8163.038	-	-	-	-
2008	NA - M08	Total particulate matter	tonnes	8208.779	-	-	8208.779	-	-	-	-
2007	NA - M08	Total particulate matter	tonnes	9042.613	-	-	9042.613	-	-	-	-
2006	NA - M08	Total particulate matter	tonnes	4987.320	-	-	4987.320	-	-	-	-
2005	NA - M08	Total particulate matter	tonnes	3115.196	-	-	3115.196	-	-	-	-
2004	NA - M08	Total particulate matter	tonnes	2799.000	-	-	2799.000	-	-	-	-
2003	NA - M08	Total particulate matter	tonnes	2620.379	-	-	2620.379	-	-	-	-
2002	NA - M08	Total particulate matter	tonnes	2999.094	-	-	2999.094	-	-	-	-

2024	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	114.152	-	-	114.152	-	-	-	-
2023	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	99.885	-	-	99.885	-	-	-	-
2021	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	59.911	-	-	59.911	-	-	-	-
2020	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	50.198	-	-	50.198	-	-	-	-
2019	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	44.923	-	-	44.923	-	-	-	-
2018	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	53.447	-	-	53.447	-	-	-	-
2017	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	96.456	-	-	96.456	-	-	-	-
2016	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	177.418	-	-	177.418	-	-	-	-
2015	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	90.557	-	-	90.557	-	-	-	-
2014	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	449.760	-	-	449.760	-	-	-	-
2013	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	123.724	-	-	123.724	1.830	-	-	-
2012	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	118.471	-	-	118.471	2.000	-	-	-
2011	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	117.719	-	-	117.719	2.000	-	-	-
2010	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	99.325	-	-	99.325	-	-	-	-
2009	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	233.073	-	-	233.073	-	-	-	-
2008	NA - M14	Total reduced sulphur	tonnes	140.328	-	-	140.328	-	-	-	-

2008	NA - M14	(expressed as hydrogen sulphide)	tonnes	140.328	-	-	140.328	-	-	-	-
2007	NA - M14	Total reduced sulphur (expressed as hydrogen sulphide)	tonnes	223.461	-	-	223.461	-	-	-	-
2024	NA - 40	Vanadium (and its compounds)	tonnes	3.854	0.001	-	3.855	1038.418	3.022	-	-
2023	NA - 40	Vanadium (and its compounds)	tonnes	3.436	0.002	-	3.438	417.181	9.121	-	383.810
2021	NA - 40	Vanadium (and its compounds)	tonnes	1.204	0.008	-	1.212	368.890	98.366	-	325.457
2020	NA - 40	Vanadium (and its compounds)	tonnes	2.302	0.001	-	2.303	358.400	337.940	-	2.464
2019	NA - 40	Vanadium (and its compounds)	tonnes	1.724	0.005	-	1.729	371.747	334.266	-	14.851
2018	NA - 40	Vanadium (and its compounds)	tonnes	1.708	0.005	-	1.713	331.730	-	-	2.287
2017	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	1.479	0.004	-	1.483	313.044	156.630	-	21.273
2016	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	2.202	-	-	2.202	362.613	13.753	-	365.012
2015	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	2.258	-	-	2.258	362.820	11.071	-	266.836
2014	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	6.181	-	-	6.181	350.840	12.720	-	391.768
2013	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	5.677	-	-	5.677	365.160	6.655	-	200.753
2012	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	3.740	-	-	3.740	356.780	16.236	-	331.495
2011	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	3.220	-	-	3.220	356.650	24.831	-	261.257
2010	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	5.318	-	-	5.318	379.800	-	5.750	211.173
2009	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	4.537	-	-	4.537	293.020	-	-	259.440
2008	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	5.833	-	-	5.833	304.720	-	-	296.980
2007	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	6.421	-	-	6.421	296.370	-	-	290.152
2006	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	7.429	-	-	7.429	215.660	-	-	370.350
2005	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	4.900	-	-	4.900	-	-	-	486.710
2004	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	3.882	-	-	3.882	-	-	-	454.974
2003	7440-62-2	Vanadium	tonnes	4.183	-	-	4.183	-	-	-	584.390

2003	7440-62-2	(except when in an alloy) and its compounds	tonnes	4.183	-	-	4.183	-	-	-	584.390
2002	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	4.808	-	-	4.808	-	-	-	416.530
2001	7440-62-2	Vanadium (except when in an alloy) and its compounds	tonnes	2.955	-	-	2.955	-	-	-	230.648
2024	NA - M16	Volatile Organic Compounds (Total)	tonnes	8903.667	-	-	8903.667	-	-	-	-
2023	NA - M16	Volatile Organic Compounds (Total)	tonnes	11045.558	-	-	11045.558	-	-	-	-
2021	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	8272.152	-	-	8272.152	-	-	-	-
2020	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	7309.252	-	-	7309.252	-	-	-	-
2019	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	5727.566	-	-	5727.566	-	-	-	-
2018	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	8927.363	-	-	8927.363	-	-	-	-
2017	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	8262.092	-	-	8262.092	-	-	-	-
2016	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	10216.768	-	-	10216.768	-	-	-	-
2015	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	17592.901	-	-	17592.901	-	-	-	-
2014	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	15282.323	-	-	15282.323	-	-	-	-
2013	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	20732.322	-	-	20732.322	-	-	-	-
2012	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	7769.980	-	-	7769.980	-	-	-	-
2011	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	7704.115	-	-	7704.115	-	-	-	-
2010	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	8590.570	-	-	8590.570	-	-	-	-
2009	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	8401.978	-	-	8401.978	-	-	-	-
2008	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	10693.904	-	-	10693.904	-	-	-	-
2007	NA - M16	Volatile Organic	tonnes	11313.098	-	-	11313.098	-	-	-	-

2007	NA - M16	Compounds (VOCs)	tonnes	11313.098	-	-	11313.098	-	-	-	-
2006	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	11518.990	-	-	11518.990	-	-	-	-
2005	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	7678.416	-	-	7678.416	-	-	-	-
2004	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	8592.000	-	-	8592.000	-	-	-	-
2003	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	11644.086	-	-	11644.086	-	-	-	-
2002	NA - M16	Volatile Organic Compounds (VOCs)	tonnes	11666.552	-	-	11666.552	-	-	-	-
2024	1330-20-7	Xylene (all isomers)	tonnes	55.948	-	-	55.948	214.811	1.201	0.207	5.906
2023	1330-20-7	Xylene (all isomers)	tonnes	241.105	-	-	241.105	568.010	1.602	-	6.772
2021	1330-20-7	Xylene (all isomers)	tonnes	325.631	-	-	325.631	540.790	-	-	-
2020	1330-20-7	Xylene (all isomers)	tonnes	388.255	-	-	388.255	514.520	-	-	-
2019	1330-20-7	Xylene (all isomers)	tonnes	552.471	-	-	552.471	589.240	-	-	-
2018	1330-20-7	Xylene (all isomers)	tonnes	223.980	-	-	223.980	477.140	-	-	-
2017	1330-20-7	Xylene (all isomers)	tonnes	469.822	-	-	469.822	357.460	-	-	-
2016	1330-20-7	Xylene (all isomers)	tonnes	1126.206	-	-	1126.206	487.630	-	-	-
2015	1330-20-7	Xylene (all isomers)	tonnes	876.319	-	-	876.319	531.750	-	-	-
2014	1330-20-7	Xylene (all isomers)	tonnes	412.899	-	-	412.899	524.310	-	-	-
2013	1330-20-7	Xylene (all isomers)	tonnes	275.297	-	-	275.297	476.210	-	-	-
2012	1330-20-7	Xylene (all isomers)	tonnes	265.094	-	-	265.094	464.440	-	-	-
2011	1330-20-7	Xylene (all isomers)	tonnes	265.130	-	-	265.130	511.280	-	-	-
2010	1330-20-7	Xylene (all isomers)	tonnes	133.748	-	-	133.748	560.090	-	0.015	-
2009	1330-20-7	Xylene (all isomers)	tonnes	134.432	-	-	134.432	390.810	-	0.015	-
2008	1330-20-7	Xylene (all isomers)	tonnes	471.076	-	-	471.076	336.680	-	-	-
2007	1330-20-7	Xylene (all isomers)	tonnes	478.238	-	-	478.238	318.850	-	-	-
2006	1330-20-7	Xylene (all isomers)	tonnes	477.212	-	-	477.212	217.400	-	-	-
2005	1330-20-7	Xylene (all isomers)	tonnes	501.461	-	-	501.461	-	-	0.035	-
2004	1330-20-7	Xylene (all isomers)	tonnes	561.758	-	-	561.758	-	-	-	-
2003	1330-20-7	Xylene (all isomers)	tonnes	475.911	-	-	475.911	-	-	-	-
2002	1330-20-7	Xylene (all isomers)	tonnes	476.466	-	-	476.466	-	-	-	-
2001	1330-20-7	Xylene (all isomers)	tonnes	477.436	-	-	477.436	-	-	-	-
2000	1330-20-7	Xylene (all isomers)	tonnes	476.634	-	-	476.634	-	-	-	-
1999	1330-20-7	Xylene (mixed isomers)	tonnes	315.467	-	-	315.467	-	-	-	-
1998	1330-20-7	Xylene (mixed isomers)	tonnes	315.836	-	-	315.836	-	-	-	-
1997	1330-20-7	Xylene (mixed isomers)	tonnes	317.511	-	-	317.511	-	-	-	-
1996	1330-20-7	Xylene (mixed isomers)	tonnes	16.360	-	-	16.360	-	-	-	-

1996	1330-20-7	isomers)	tonnes	16.360	-	-	16.360	-	-	-	-
1995	1330-20-7	Xylene (mixed isomers)	tonnes	16.250	-	-	16.250	0.199	-	-	-
1994	1330-20-7	Xylene (mixed isomers)	tonnes	17.155	-	-	17.155	0.300	-	-	-
1993	1330-20-7	Xylene (mixed isomers)	tonnes	18.436	-	0.400	18.836	0.017	-	-	-
2024	NA - 14	Zinc (and its compounds)	tonnes	2.140	0.012	-	2.152	1758.815	0.597	-	1.191
2023	NA - 14	Zinc (and its compounds)	tonnes	1.915	0.006	-	1.921	389.601	0.000	-	0.400
2021	NA - 14	Zinc (and its compounds)	tonnes	0.672	0.040	-	0.712	373.630	0.101	-	0.340
2020	NA - 14	Zinc (and its compounds)	tonnes	1.286	0.010	-	1.296	364.010	0.422	-	-
2019	NA - 14	Zinc (and its compounds)	tonnes	0.963	0.011	-	0.974	398.177	0.830	-	-
2018	NA - 14	Zinc (and its compounds)	tonnes	0.949	0.005	-	0.954	337.094	0.257	-	-
2017	NA - 14	Zinc (and its compounds)	tonnes	0.826	0.010	-	0.836	280.924	74.539	-	0.068
2016	NA - 14	Zinc (and its compounds)	tonnes	1.181	-	-	1.181	347.533	0.090	-	0.316
2015	NA - 14	Zinc (and its compounds)	tonnes	1.259	-	-	1.259	375.500	0.520	-	0.360
2014	NA - 14	Zinc (and its compounds)	tonnes	3.444	-	-	3.444	368.900	36.119	-	0.362
2013	NA - 14	Zinc (and its compounds)	tonnes	3.123	-	-	3.123	351.260	0.006	-	0.212
2012	NA - 14	Zinc (and its compounds)	tonnes	2.072	-	-	2.072	338.684	62.035	-	0.353
2011	NA - 14	Zinc (and its compounds)	tonnes	1.783	-	-	1.783	354.940	29.264	-	0.271
2010	NA - 14	Zinc (and its compounds)	tonnes	2.974	-	-	2.974	396.620	-	5.630	0.198
2009	NA - 14	Zinc (and its compounds)	tonnes	2.532	-	-	2.532	294.930	1.188	-	6.240
2008	NA - 14	Zinc (and its compounds)	tonnes	3.239	-	-	3.239	280.010	-	-	0.300
2007	NA - 14	Zinc (and its compounds)	tonnes	0.408	-	-	0.408	264.480	-	-	27.800
2006	NA - 14	Zinc (and its compounds)	tonnes	4.122	-	-	4.122	187.070	-	-	27.800
2005	NA - 14	Zinc (and its compounds)	tonnes	2.734	-	-	2.734	-	-	-	21.900
2004	NA - 14	Zinc (and its compounds)	tonnes	2.130	-	-	2.130	-	0.320	-	-
2003	NA - 14	Zinc (and its compounds)	tonnes	2.332	-	-	2.332	-	0.420	-	-
2002	NA - 14	Zinc (and its compounds)	tonnes	2.683	-	-	2.683	-	-	-	6.420
2001	NA - 14	Zinc (and its compounds)	tonnes	2.839	-	-	2.839	-	-	-	10.000
2000	NA - 14	Zinc (and its compounds)	tonnes	5.291	-	-	5.291	-	-	-	0.590
1999	NA - 14	Zinc (and its compounds)	tonnes	0.783	-	-	0.783	-	-	-	-
1998	NA - 14	Zinc (and its compounds)	tonnes	11.938	-	-	11.938	-	-	-	0.000
1997	NA - 14	Zinc (and its compounds)	tonnes	23.944	-	-	23.944	-	-	-	40.190

## Substance detail

### Ethylbenzene

#### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.067000000	E1 - Site Specific Emission Factors

Storage / Handling	tonnes	1.046000000	M3 - Source Testing
Fugitive	tonnes	20.638000000	M3 - Source Testing
Other Non-Point	tonnes	0.131000000	M3 - Source Testing

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound off the ponds and mine face.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.40000000
<b>Average Concentration (ppm)</b>	0.200000
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )

## Substance detail

# Ethylene glycol

## Additional information

## Contextual information

Nature of activities related to the substance	Otherwise Use - Ancillary/Other use
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10%)
Comments on releases	
Comments on releases to land – other	

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10%)
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Organic Substances (not solvents)	tonnes	188.850000000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	188.850000000

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

# Substance detail

## Toluene

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.947000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	3.112000000	M3 - Source Testing
Fugitive	tonnes	54.616000000	M3 - Source Testing
Other Non-Point	tonnes	0.128000000	M3 - Source Testing

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Ancillary/Other use
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Disposals and Transfers

### On-site disposals

Type	Units	Quantity	Basis of estimate
Landfill	tonnes	0.000399000	O - Engineering Estimates

### Off-site disposals

Type	Units	Quantity	Basis of estimate
Landfill	tonnes	1.124637000	O - Engineering Estimates
			Receiving facility
			Suncor Base Plant
			Quantity transferred
			0.000670000
			Landfill,Lease 86/17at
			SE 26-92-10
			W4M,Fort McMurray
			Fort McMurray
			0.000742000
			Landfill□,Section 16
			& 21, Township 88,
			Range 9, west of the
			4th meridian.□,Fort
			McMurray□□
			GFL Environmental -
			1.123225000
			Onoway,4423
			Industrial Ave,Onoway

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00040000
<b>Average Concentration (ppm)</b>	0.000040
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Contaminated materials
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<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10%)
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Organic Substances (not solvents)	tonnes	4.377025000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	4.377025000
Refining or Re-use of Used Oil	tonnes	0.358957000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	0.358957000

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	Contaminated materials
<b>Reasons for change from previous year</b>	Not Applicable (First year reporting this substance)

# Substance detail

## n-Hexane

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.180000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	2.596000000	M3 - Source Testing
Fugitive	tonnes	29.602000000	M3 - Source Testing
Other Non-Point	tonnes	0.274000000	M3 - Source Testing

## Additional information

### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000

Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	77.704992000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	77.704992000

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)
Comments on disposals	Waste Grease and Oil
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10%)

# Substance detail

## Cyclohexane

## Releases

## Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.450000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	1.026000000	M3 - Source Testing
Fugitive	tonnes	44.770000000	M3 - Source Testing
Other Non-Point	tonnes	0.857000000	M3 - Source Testing

## Additional information

## Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound off the ponds and mine face.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	48.565620000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	48.565620000

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)
Comments on disposals	Waste Grease
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10%)

# Substance detail

## Nitrogen oxides (expressed as nitrogen dioxide)

## Releases

## Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	14456.817000000	E2 - Published Emission Factors
Other Non-Point	tonnes	3.978000000	E2 - Published Emission Factors

## Additional information

## Contextual information

Nature of activities related to the substance	
Reasons for change from previous year	Other (specify in comments field)

**Comments on releases**

The increase is attributed to the CO Boilers running with higher excess oxygen as a prevention strategy against premature tube failures, resulting in an increase in NOx from the Main Stack.

**Comments on releases to land – other**

# Substance detail

## Propylene

**Releases****Releases to air**

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	51.877000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	0.098000000	M3 - Source Testing
Fugitive	tonnes	1.822000000	M3 - Source Testing
Other Non-Point	tonnes	0.046000000	M3 - Source Testing

**Additional information****Contextual information**

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Increase was due to change in calculations for stacks >25M, speciated VOCs now included for more stacks at the Mildred Lake facility.
<b>Comments on releases to land – other</b>	

**Quarterly releases**

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

**Additional information on disposals****Contextual information**

<b>Reason(s) for substance disposal</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10%)
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

**Additional information on off-site recycling****Contextual information****Transfers for off-site recycling**

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10%)

# Substance detail

## Pyrene

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	1.592000000	E1 - Site Specific Emission Factors

#### Additional information

#### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

#### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

#### Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	All samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	No
Method Detection Limit (ppm)	0.00002000
Average Concentration (ppm)	0.000027
More than one method detection limit applies	No
Concentration Comment(s)	

#### Additional information on disposals

#### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

#### Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate
Refining or Re-use of Used Oil	kg	8.375660000	O - Engineering Estimates
			Receiving facility GFL Environmental - 8.375660000 Onoway,4423 Industrial Ave,Onoway

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

## Substance detail

# Molybdenum trioxide

### Additional information

### Contextual information

Nature of activities related to the substance	Otherwise Use - Physical or Chemical Processing aid
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on releases	
Comments on releases to land – other	

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	52.844000000	M3 - Source Testing	Clean Harbors Canada Inc.,2 Km N of Highway 14 on SR 854,Ryley	52.844000000

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Unusable parts or discards
Reasons for change from previous year	Other (specify in comments field)
Comments on disposals	Increased amount of Plant 22 catalyst disposed of in 2022
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Catalysts	tonnes	89.589000000	M3 - Source Testing	AMG Vanadium Inc,60790 Southgate Road,Cambridge	89.589000000

### Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Unusable parts or discards
Reasons for change from previous year	Other (specify in comments field)

# Substance detail

## Xylene (all isomers)

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.274000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	3.692000000	M3 - Source Testing
Fugitive	tonnes	108.923000000	M3 - Source Testing
Other Non-Point	tonnes	0.598000000	M3 - Source Testing

### Additional information

#### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.
Comments on releases to land – other	

#### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

### Disposals and Transfers

#### On-site disposals

Type	Units	Quantity	Basis of estimate
Landfill	tonnes	0.000556000	O - Engineering Estimates

#### Off-site disposals

Type	Units	Quantity	Basis of estimate
Landfill	tonnes	1.125193000	O - Engineering Estimates
			Receiving facility
			Fort McMurray
			Quantity transferred
			0.001035000
			Landfill, Section 16
			& 21, Township 88,
			Range 9, west of the
			4th meridian, Fort
			McMurray
			GFL Environmental -
			1.123225000
			Onoway, 4423
			Industrial Ave, Onoway
			Suncor Base Plant
			0.000933000
			Landfill, Lease 86/17 at
			SE 26-92-10
			W4M, Fort McMurray

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.00080000
<b>Average Concentration (ppm)</b>	0.051000
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

### Additional information on disposals

### Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Contaminated materials
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

### Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Organic Substances (not solvents)	tonnes	4.377025000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	4.377025000
Refining or Re-use of Used Oil	tonnes	1.215667000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	1.215667000

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	Contaminated materials
<b>Reasons for change from previous year</b>	Not Applicable (First year reporting this substance)

## Substance detail

# Benzo[ghi]perylene

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	2.835000000	E1 - Site Specific Emission Factors

### Additional information

## Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	Half or more than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00001000
Average Concentration (ppm)	0.000012
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	3.828873000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	3.828873000

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

## Substance detail

# Benzo[e]pyrene

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.44000000	E1 - Site Specific Emission Factors

### Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

### Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	Half or more than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00005000
Average Concentration (ppm)	0.000065
More than one method detection limit applies	No
Concentration Comment(s)	

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate
Refining or Re-use of Used Oil	kg	2.393046000	O - Engineering Estimates
			Receiving facility
			GFL Environmental - 2.393046000
			Onoway,4423
			Industrial Ave,Onoway

### Additional information on off-site recycling

## Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

## Substance detail

### Indeno[1,2,3-cd]pyrene

#### Releases

##### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.91300000	E1 - Site Specific Emission Factors

#### Additional information

## Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on releases	
Comments on releases to land – other	

#### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

### Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	Half or more than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00001000
Average Concentration (ppm)	0.011500
More than one method detection limit applies	No
Concentration Comment(s)	

#### Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste	

**Transfers for off-site recycling**

Type	Units	Quantity	Basis of estimate	
Refining or Re-use of Used Oil	kg	1.196523000	O - Engineering Estimates	Receiving facility GFL Environmental - 1.196523000 Onoway,4423 Industrial Ave,Onoway

**Additional information on off-site recycling****Contextual information****Transfers for off-site recycling**

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

**Substance detail****Perylene****Releases****Releases to air**

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.014000000	E1 - Site Specific Emission Factors

**Additional information****Contextual information**

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

**Quarterly releases**

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

**Concentration of the Substance (Tailings)**

Information in Sampling and Detection Limits	Half or more than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00005000
Average Concentration (ppm)	0.000065

More than one method detection limit applies No  
Concentration Comment(s)

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	1.196523000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	1.196523000

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

## Substance detail

## Benzo[j]fluoranthene

### Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.036000000	E1 - Site Specific Emission Factors

### Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000

Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Benzo[b]fluoranthene

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.178000000	M3 - Source Testing

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

### Contextual information

<b>Reason(s) for substance disposal</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	2.632350000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	2.632350000

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	Contaminated materials
<b>Reasons for change from previous year</b>	Not Applicable (First year reporting this substance)

# Substance detail

## Fluoranthene

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.971000000	E1 - Site Specific Emission Factors

### Additional information

### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Increase in production levels
<b>Comments on releases</b>	
<b>Comments on releases to land – other</b>	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated</b>	Yes

using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00001000
Average Concentration (ppm)	0.000014
More than one method detection limit applies	No
Concentration Comment(s)	

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	2.632350000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	2.632350000

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

## Substance detail

### Benzo[k]fluoranthene

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.145000000	E1 - Site Specific Emission Factors

### Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	1.196523000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	1.196523000

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

# Substance detail

## Acenaphthylene

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.903000000	E1 - Site Specific Emission Factors

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	1.603341000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	1.603341000

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

# Substance detail

## Chrysene

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.117000000	E1 - Site Specific Emission Factors

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on releases	
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

# Substance detail

## Dibenz[a,j]acridine

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.006000000	E1 - Site Specific Emission Factors

### Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10%)
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10%)

## Substance detail

# Carbonyl sulphide

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	17.994000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	0.002000000	M3 - Source Testing
Fugitive	tonnes	8.566000000	M3 - Source Testing
Other Non-Point	tonnes	0.010000000	M3 - Source Testing

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Diverter stack use in 2022 increased the emissions of this substance.
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	All samples above detection limit
Was the quantity reported above estimated	No

using half the detection limit for some or all values?	No
Method Detection Limit (ppm)	0.01000000
Average Concentration (ppm)	0.010000
More than one method detection limit applies	No
Concentration Comment(s)	

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

## Benzo[a]pyrene

### Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.48300000	E1 - Site Specific Emission Factors

### Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00001000
<b>Average Concentration (ppm)</b>	0.000010
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

### Additional information on disposals

### Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

### Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	40.442473000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	40.442473000

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	Contaminated materials
<b>Reasons for change from previous year</b>	Not Applicable (First year reporting this substance)

## Substance detail

## Dibenz[a,h]anthracene

### Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.059000000	E1 - Site Specific Emission Factors

### Additional information

### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
--	--------------------------

Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

### Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	Half or more than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00001000
Average Concentration (ppm)	0.000010
More than one method detection limit applies	No
Concentration Comment(s)	

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10%)
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	1.196523000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	1.196523000

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

## Substance detail

# Benz[a]anthracene

### Additional information

## Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on releases	
Comments on releases to land – other	

## Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	Less than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00001000
Average Concentration (ppm)	0.000012
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	2.632350000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	2.632350000

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

# Substance detail

## Carbon monoxide

### Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
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Stack / Point	tonnes	5561.137715000	E2 - Published Emission Factors
Other Non-Point	tonnes	0.500000000	E2 - Published Emission Factors

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	CO laser installed in Main Stack for year round values, no longer based on survey results. Survey results were also available for some of the stack >25m due to MSAPR testing which is more accurate than using USEPA factors.
<b>Comments on releases to land – other</b>	

## Substance detail

### Benzene

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	2.070000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	0.578000000	M3 - Source Testing
Fugitive	tonnes	11.392000000	M3 - Source Testing
Other Non-Point	tonnes	0.290000000	M3 - Source Testing

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound off the ponds.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00040000
<b>Average Concentration (ppm)</b>	0.003400

More than one method detection limit applies No  
Concentration Comment(s)

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Sulphur dioxide

### Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	29501.226000000	E2 - Published Emission Factors

### Additional information

### Contextual information

Nature of activities related to the substance	
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	The increase in the All Sources SO2 emission value is attributed to a full operating year from Plant 52-1, usage of the diverter stacks in 2022, and Plant 12-0 being off line for an extended period in 2022 for maintenance and upgrades. Plant 12-0 outage resulted in HV 225 being opened, which is the alternative routing for tail gas, sending Plant 12-1/2/3/4 tail gas to Plant 29-1 during 2022, which is done to manage SO2 loading to Plant 26-1. In addition, HV 225 was opened in Q4 to maintain a continuous flow to minimize corrosion in the tail gas line/header to Plant 29-1. As sulphur recovery is lower in Plant 29-1 (approximately 65%) than it is in Plant 26-1 (typical route where recovery is approx. 90%) overall SO2 emission was higher.
Comments on releases to land – other	

## Substance detail

### Ethylene

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	46.558000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	0.018000000	M3 - Source Testing
Fugitive	tonnes	1.272000000	M3 - Source Testing
Other Non-Point	tonnes	0.041000000	M3 - Source Testing

### Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Increase was due to increased speciation data availability with stack height changing from >50 M to >25M for the 2022 reporting cycle.
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

# Carbon disulphide

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	11.772000000	E1 - Site Specific Emission Factors
Fugitive	tonnes	22.132000000	M3 - Source Testing
Other Non-Point	tonnes	0.001000000	M3 - Source Testing

## Additional information

## Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Venting from non-tank sources, and emissions from the fine fluid tails cake deposits.
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	All samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	No
Method Detection Limit (ppm)	0.01000000
Average Concentration (ppm)	0.070000
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

# Substance detail

## Sulphuric acid

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	110.261000000	M3 - Source Testing

### Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Reduced emissions from the Main Stack in 2022 due to one of the cokers feeding to the Main Stack being offline for turnaround maintenance in 2022.
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

# Hydrogen sulphide

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	11.423000000	M3 - Source Testing

Storage / Handling	tonnes	0.11000000	M3 - Source Testing
Fugitive	tonnes	3.18800000	M3 - Source Testing
Other Non-Point	tonnes	0.14700000	M3 - Source Testing

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Nature of activities results in annual variation in releases/disposals/transfers
<b>Comments on releases</b>	Reduction in amount of sour gas going to flare in 2022.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )

# Substance detail

## Isoprene

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Storage / Handling	kg	56.44300000	M3 - Source Testing
Fugitive	kg	362.87100000	M3 - Source Testing
Other Non-Point	kg	0.60500000	M3 - Source Testing

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Fugitive emissions study performed in 2022 measured an increase in emissions of this compound at the mine face and off the surface impoundments(ponds).
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Methyl ethyl ketone

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.22800000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	0.00400000	M3 - Source Testing
Fugitive	tonnes	7.67000000	M3 - Source Testing
Other Non-Point	tonnes	0.00100000	M3 - Source Testing

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Acenaphthene

#### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.694000000	E1 - Site Specific Emission Factors

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00010000
<b>Average Concentration (ppm)</b>	0.000135
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

### Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Phenanthrene

#### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	3.832000000	E1 - Site Specific Emission Factors
Storage / Handling	kg	1.000000000	E1 - Site Specific Emission Factors

## Additional information

### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Increase in production levels

Comments on releases

Comments on releases to land – other

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	All samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	No
Method Detection Limit (ppm)	0.00005000
Average Concentration (ppm)	0.000065
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Refining or Re-use of Used Oil	kg	5.982614000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	5.982614000

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

# Substance detail

## Fluorene

### Releases

## Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.26700000	E1 - Site Specific Emission Factors

## Additional information

## Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	Less than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00005000
Average Concentration (ppm)	0.000065
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate
Refining or Re-use of Used Oil	kg	1.914437000	O - Engineering Estimates
			Receiving facility
			Quantity transferred
			GFL Environmental - 1.914437000
			Onoway,4423
			Industrial Ave,Onoway

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials
Reasons for change from previous year	Not Applicable (First year reporting this substance)

## Substance detail

### Quinoline

#### Releases

##### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	0.449000000	E1 - Site Specific Emission Factors

#### Additional information

#### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Increase in production levels
Comments on releases	
Comments on releases to land – other	

#### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

#### Additional information on disposals

#### Contextual information

Reason(s) for substance disposal	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

#### Additional information on off-site recycling

#### Contextual information

#### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### 1,2,4-Trimethylbenzene

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.009000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	0.435000000	M3 - Source Testing
Fugitive	tonnes	11.990000000	M3 - Source Testing
Other Non-Point	tonnes	0.073000000	M3 - Source Testing

### Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Fugitive emissions study performed in 2022 measured a significant decrease in emissions of this compound off the ponds and mine face.
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

### Concentration of the Substance (Tailings)

Information in Sampling and Detection Limits	All samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	No
Method Detection Limit (ppm)	0.01000000
Average Concentration (ppm)	1.520000
More than one method detection limit applies	No
Concentration Comment(s)	

### Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
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**Reasons for change from previous year**

No Significant Change (i.e. &lt; 0 - 10%)

## Substance detail

### Cumene

#### Releases

##### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.002000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	0.131000000	M3 - Source Testing
Fugitive	tonnes	5.384000000	M3 - Source Testing
Other Non-Point	tonnes	0.076000000	M3 - Source Testing

#### Additional information

#### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound off the ponds and mine face.
<b>Comments on releases to land – other</b>	

#### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

#### Additional information on disposals

#### Contextual information

<b>Reason(s) for substance disposal</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10%)
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

#### Additional information on off-site recycling

#### Contextual information

#### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10%)

## Substance detail

# Arsenic (and its compounds)

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	9.48700000	E1 - Site Specific Emission Factors

### Releases to water

Type	Units	Quantity	Basis of estimate
Direct Discharges	kg	2.691217000	M3 - Source Testing
			Receiving waterbody Athabasca River
			Quantity released to waterbody 2.691217000

## Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.00020000
<b>Average Concentration (ppm)</b>	0.001767
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information

### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.  Discharge volume decreased -0.6 Mm3 and average concentration decreased.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate
Landfill	kg	1.070000000	M3 - Source Testing
			Receiving facility Clean Harbors Canada Inc.,2 Km N of Highway 14 on SR 854,Ryley
			Quantity transferred 1.070000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
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Was the quantity reported above estimated using half the detection limit for some or all values?	No
Method Detection Limit (ppm)	0.00020000
Average Concentration (ppm)	0.019400
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Production Residues,Unusable parts or discards
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Catalysts	kg	413.117000000	M3 - Source Testing	AMG Vanadium Inc,60790 Southgate Road,Cambridge	413.117000000

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Unusable parts or discards
Reasons for change from previous year	Other (specify in comments field)

# Substance detail

## Cadmium (and its compounds)

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	3.953000000	E1 - Site Specific Emission Factors

#### Releases to water

Type	Units	Quantity	Basis of estimate	Receiving waterbody	Quantity released to waterbody
Direct Discharges	kg	0.022209000	M3 - Source Testing	Athabasca River	0.022209000

## Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00002000
<b>Average Concentration (ppm)</b>	0.018969
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00002000
<b>Average Concentration (ppm)</b>	0.000190
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on disposals</b>	Net amount of substance increased to Tailings due to decreased concentration in the recycle water.
<b>Comments on exclusions in tailing and waste rock</b>	

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
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# Substance detail

## Chromium (and its compounds)

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.13000000	E1 - Site Specific Emission Factors
Other Non-Point	tonnes	0.01100000	O - Engineering Estimates

#### Releases to water

Type	Units	Quantity	Basis of estimate	Receiving waterbody	Quantity released to waterbody
Direct Discharges	tonnes	0.004862000	M3 - Source Testing	Athabasca River	0.004862000

### Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00500000
<b>Average Concentration (ppm)</b>	0.003047
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

### Additional information

### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Diverter stack use in 2022 increased the emissions of this substance.  Discharge volume decreased -0.6 Mm3 and average concentration increased. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.
<b>Comments on releases to land – other</b>	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

### Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	0.83000000	M3 - Source Testing	Clean Harbors Canada	0.83000000

Type	Units	Quantity	Basis of estimate		
Landfill	tonnes	0.830000000	M3 - Source Testing	Inc.,2 Km N of Highway 14 on SR 854,Ryley	0.830000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00500000
<b>Average Concentration (ppm)</b>	0.002500
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

### Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Unusable parts or discards
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Cobalt (and its compounds)

#### Releases

##### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	31.22800000	E1 - Site Specific Emission Factors

##### Releases to water

Type	Units	Quantity	Basis of estimate
Direct Discharges	kg	1.901146000	M3 - Source Testing
			Receiving waterbody
			Athabasca River
			Quantity released to waterbody
			1.901146000

## Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.00010000
<b>Average Concentration (ppm)</b>	0.001130
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	kg	0.205000000	M3 - Source Testing	Clean Harbors Canada Inc.,2 Km N of Highway 14 on SR 854,Ryley	0.205000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00010000
<b>Average Concentration (ppm)</b>	0.000500
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Unusable parts or discards
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on disposals</b>	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
<b>Comments on exclusions in tailing and waste rock</b>	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate		
Recovery of Catalysts	kg	413.117000000	M3 - Source Testing	Receiving facility AMG Vanadium Inc,60790 Southgate Road,Cambridge	Quantity transferred 413.117000000

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	Unusable parts or discards
Reasons for change from previous year	Other (specify in comments field)

# Substance detail

## Copper (and its compounds)

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate	
Stack / Point	tonnes	0.118000000	E1 - Site Specific Emission Factors	

#### Releases to water

Type	Units	Quantity	Basis of estimate		
Direct Discharges	tonnes	0.007023000	M3 - Source Testing	Receiving waterbody Athabasca River	Quantity released to waterbody 0.007023000

## Concentration of the Substance (Waterbody)

Information in Sampling and Detection Limits	Less than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00020000
Average Concentration (ppm)	0.004447
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Divertter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.
Comments on releases to land – other	Discharge volume decreased -0.6 Mm3 and average concentration increased.

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	0.570000000	M3 - Source Testing	Clean Harbors Canada Inc.,2 Km N of Highway 14 on SR 854,Ryley	0.570000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00020000
<b>Average Concentration (ppm)</b>	0.001250
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Unusable parts or discards
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Catalysts	tonnes	0.425000000	M3 - Source Testing	AMG Vanadium Inc,60790 Southgate Road,Cambridge	0.425000000

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	Unusable parts or discards
<b>Reasons for change from previous year</b>	Other (specify in comments field)

## Substance detail

# Lead (and its compounds)

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	60.90200000	E1 - Site Specific Emission Factors

### Releases to water

Type	Units	Quantity	Basis of estimate
Direct Discharges	kg	2.405071000	M3 - Source Testing
			Receiving waterbody Athabasca River
			Quantity released to waterbody 2.405071000

## Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00010000
<b>Average Concentration (ppm)</b>	0.001435
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information

### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
<b>Comments on releases to land – other</b>	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00010000
<b>Average Concentration (ppm)</b>	0.000500
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

### Contextual information

Reason(s) for substance disposal	Production Residues
Reasons for change from previous year	Other (specify in comments field)
Comments on disposals	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
Comments on exclusions in tailing and waste rock	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Manganese (and its compounds)

#### Releases

##### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	0.603000000	E1 - Site Specific Emission Factors

##### Releases to water

Type	Units	Quantity	Basis of estimate
Direct Discharges	tonnes	0.277994000	M3 - Source Testing
			Receiving waterbody
			Athabasca River
			Quantity released to waterbody
			0.277994000

### Concentration of the Substance (Waterbody)

Information in Sampling and Detection Limits	All samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	No
Method Detection Limit (ppm)	0.00400000
Average Concentration (ppm)	0.140617
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
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<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Diverter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.
<b>Comments on releases to land – other</b>	Discharge volume decreased -0.6 Mm3 and average concentration decreased.

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.00400000
<b>Average Concentration (ppm)</b>	0.045800
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

### Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )

# Substance detail

## Mercury (and its compounds)

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	5.534000000	E1 - Site Specific Emission Factors

## Releases to water

Type	Units	Quantity	Basis of estimate	Receiving waterbody	Quantity released to waterbody
Direct Discharges	kg	0.005722000	M3 - Source Testing	Athabasca River	0.005722000

## Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00000200
<b>Average Concentration (ppm)</b>	0.004969
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.  Discharge volume decreased -0.6 Mm3 and average concentration decreased.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	kg	179.579000000	M3 - Source Testing	AMG Vanadium Inc,60790 Southgate Road,Cambridge	179.579000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00000200
<b>Average Concentration (ppm)</b>	0.000001
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

Reason(s) for substance disposal	Production Residues,Unusable parts or discards
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )
Comments on disposals	
Comments on exclusions in tailing and waste rock	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Catalysts	kg	362.110000000	M3 - Source Testing	AMG Vanadium Inc,60790 Southgate Road,Cambridge	362.110000000

## Additional information on off-site recycling

## Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Contaminated materials,Unusable parts or discards
Reasons for change from previous year	No Significant Change (i.e. < 0 - 10% )

# Substance detail

## Nickel (and its compounds)

## Releases

### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	1.130000000	E1 - Site Specific Emission Factors
Other Non-Point	tonnes	0.030000000	O - Engineering Estimates

### Releases to water

Type	Units	Quantity	Basis of estimate	Receiving waterbody	Quantity released to waterbody
Direct Discharges	tonnes	0.009338000	M3 - Source Testing	Athabasca River	0.009338000

## Concentration of the Substance (Waterbody)

Information in Sampling and Detection Limits	All samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	No
Method Detection Limit (ppm)	0.00050000
Average Concentration (ppm)	0.006167
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Diverter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	56.332000000	M3 - Source Testing	Clean Harbors Canada Inc.,2 Km N of Highway 14 on SR 854,Ryley	56.332000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Half or more than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.00050000
<b>Average Concentration (ppm)</b>	0.005700
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Unusable parts or discards
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on disposals</b>	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
<b>Comments on exclusions in tailing and waste rock</b>	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Catalysts	tonnes	109.159000000	M3 - Source Testing	AMG Vanadium Inc,60790 Southgate Road,Cambridge	109.159000000

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

Reason(s) for substance recycling	Unusable parts or discards
Reasons for change from previous year	Other (specify in comments field)

## Substance detail

### Selenium (and its compounds)

#### Releases

##### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	kg	23.71800000	E1 - Site Specific Emission Factors

##### Releases to water

Type	Units	Quantity	Basis of estimate
Direct Discharges	kg	0.572711000	M3 - Source Testing
			Receiving waterbody
			Athabasca River
			Quantity released to waterbody
			0.572711000

## Concentration of the Substance (Waterbody)

Information in Sampling and Detection Limits	Less than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.00020000
Average Concentration (ppm)	0.000395
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Decrease in the particulate concentration from the 2021 UE1 FGD Stack Surveys.
Comments on releases to land – other	

#### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.00020000
<b>Average Concentration (ppm)</b>	0.031700
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

### Additional information on disposals

#### Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on disposals</b>	Net amount of substance decreased to Tailings due to increase concentration in recycle water.
<b>Comments on exclusions in tailing and waste rock</b>	

### Additional information on off-site recycling

#### Contextual information

#### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Zinc (and its compounds)

#### Releases

##### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	1.506000000	E1 - Site Specific Emission Factors

##### Releases to water

Type	Units	Quantity	Basis of estimate
Direct Discharges	tonnes	0.117926000	M3 - Source Testing
			Receiving waterbody Athabasca River
			Quantity released to waterbody 0.117926000

## Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes

<b>Method Detection Limit (ppm)</b>	0.02500000
<b>Average Concentration (ppm)</b>	0.065708
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	<p>Diverter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.</p> <p>Discharge volume decreased -0.6 Mm3 and average concentration increased.</p>
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	0.126000000	M3 - Source Testing	Clean Harbors Canada Inc.,2 Km N of Highway 14 on SR 854,Ryley	0.126000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.02500000
<b>Average Concentration (ppm)</b>	0.012500
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Unusable parts or discards
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Catalysts	tonnes	0.255000000	M3 - Source Testing	AMG Vanadium Inc,60790 Southgate Road,Cambridge	0.255000000

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

Reason(s) for substance recycling	Unusable parts or discards
Reasons for change from previous year	Other (specify in comments field)

## Substance detail

### Ammonia (total)

### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	1220.001000000	M3 - Source Testing

#### Releases to water

Type	Units	Quantity	Basis of estimate	Receiving waterbody	Quantity released to waterbody
Direct Discharges	tonnes	0.108654000	M3 - Source Testing	Athabasca River	0.108654000

## Concentration of the Substance (Waterbody)

Information in Sampling and Detection Limits	Less than half of samples above detection limit
Was the quantity reported above estimated using half the detection limit for some or all values?	Yes
Method Detection Limit (ppm)	0.01500000
Average Concentration (ppm)	0.097624
More than one method detection limit applies	No
Concentration Comment(s)	

## Additional information

### Contextual information

Nature of activities related to the substance	Manufacture - By-Product,Process - Reactant,Process - By-Product,Otherwise Use - Physical or Chemical Processing aid
Reasons for change from previous year	Other (specify in comments field)
Comments on releases	Discharge volume decreased -0.6 Mm3 and average concentration decreased.
Comments on releases to land – other	

### Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.01500000
<b>Average Concentration (ppm)</b>	11.000000
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

### Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

## Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Phosphorus (total)

#### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	4.125000000	E1 - Site Specific Emission Factors

#### Releases to water

Type	Units	Quantity	Basis of estimate
Direct Discharges	tonnes	0.324737000	M3 - Source Testing
			Receiving waterbody
			Athabasca River
			Quantity released to waterbody
			0.324737000

## Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.01000000
<b>Average Concentration (ppm)</b>	0.186110
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Diverter stack use in 2022 increased the emissions of this substance.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	78.919133000	O - Engineering Estimates	GFL Environmental - Onoway,4423 Industrial Ave,Onoway	78.919133000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.01000000
<b>Average Concentration (ppm)</b>	0.160000
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

## Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Contaminated materials
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on disposals</b>	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand for cell construction.
<b>Comments on exclusions in tailing and waste rock</b>	

## Additional information on off-site recycling

### Contextual information

## Transfers for off-site recycling

### Reason(s) for substance recycling

#### Reasons for change from previous year

No Significant Change (i.e. < 0 - 10% )

## Substance detail

### Total particulate matter

#### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	2516.392717000	E2 - Published Emission Factors
Fugitive	tonnes	611.942098000	E2 - Published Emission Factors
Other Non-Point	tonnes	18.267000000	O - Engineering Estimates
Road dust	tonnes	9600.585935000	E2 - Published Emission Factors

#### Additional information

### Contextual information

#### Nature of activities related to the substance

#### Reasons for change from previous year

#### Comments on releases

#### Comments on releases to land – other

Changes in estimation methods, including changes in emission factors ,Other (specify in comments field)

Fugitive dust values were calculated using the aggregate and wind erosion method supplied by ECCC which is a more accurate representation. This was a change for the Syncrude facilities in 2022. Previously they were calculated using a different stockpile calculation method provided by ECCC.

Diverting was utilized in 2022.

## Substance detail

### PM10 - Particulate Matter <= 10 Micrometers

#### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	1638.384197000	E2 - Published Emission Factors
Fugitive	tonnes	302.030367000	E2 - Published Emission Factors
Other Non-Point	tonnes	5.789000000	O - Engineering Estimates
Road dust	tonnes	2755.180504000	E2 - Published Emission Factors

#### Additional information

### Contextual information

<b>Nature of activities related to the substance</b>	
<b>Reasons for change from previous year</b>	Changes in estimation methods, including changes in emission factors ,Nature of activities results in annual variation in releases/disposals/transfers
<b>Comments on releases</b>	Fugitive dust values were calculated using the aggregate and wind erosion method supplied by ECCC which is a more accurate representation. This was a change for the Syncrude facilities in 2022. Previously they were calculated using a different stockpile calculation method provided by ECCC.
<b>Comments on releases to land – other</b>	Diverters were utilized in 2022.

## Substance detail

### PM2.5 - Particulate Matter <= 2.5 Micrometers

#### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	781.790519000	E2 - Published Emission Factors
Fugitive	tonnes	45.403072000	E2 - Published Emission Factors
Road dust	tonnes	273.660758000	E2 - Published Emission Factors

#### Additional information

#### Contextual information

<b>Nature of activities related to the substance</b>	
<b>Reasons for change from previous year</b>	Changes in estimation methods, including changes in emission factors ,Nature of activities results in annual variation in releases/disposals/transfers
<b>Comments on releases</b>	Fugitive dust values were calculated using the aggregate and wind erosion method supplied by ECCC which is a more accurate representation. This was a change for the Syncrude facilities in 2022. Previously they were calculated using a different stockpile calculation method provided by ECCC.
<b>Comments on releases to land – other</b>	Diverting utilized in 2022.

## Substance detail

### Total reduced sulphur (expressed as hydrogen sulphide)

#### Releases

#### Releases to air

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	32.330000000	E1 - Site Specific Emission Factors
Storage / Handling	tonnes	0.125000000	M3 - Source Testing
Fugitive	tonnes	37.551000000	M3 - Source Testing
Other Non-Point	tonnes	0.154000000	M3 - Source Testing

#### Additional information

#### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
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**Reasons for change from previous year****Comments on releases****Comments on releases to land – other**

Other (specify in comments field)

Fugitive emissions study performed in 2022 measured an increase in emissions of this compound off the ponds and mine face. Diverter stack use in 2022 increased the emission of this substance at point sources.

**Quarterly releases**

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

**Substance detail****Volatile Organic Compounds (Total)****Releases****Releases to air**

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	511.993346000	E2 - Published Emission Factors
Storage / Handling	tonnes	77.130060000	E1 - Site Specific Emission Factors
Fugitive	tonnes	6196.648893000	M3 - Source Testing
Other Non-Point	tonnes	25.360400000	M3 - Source Testing

**Additional information****Contextual information****Nature of activities related to the substance****Reasons for change from previous year****Comments on releases****Comments on releases to land – other**

Other (specify in comments field)

Fugitive emissions study performed in 2022 measured a decrease in emissions of this compound at the mine face, and off the tanks. LDAR program increased inventory for 2021 increasing the amount of this compound estimated to be released from the components.

**Substance detail****Vanadium (and its compounds)****Releases****Releases to air**

Type	Units	Quantity	Basis of estimate
Stack / Point	tonnes	2.701000000	E1 - Site Specific Emission Factors

**Releases to water**

Type	Units	Quantity	Basis of estimate
Direct Discharges	tonnes	0.009467000	M3 - Source Testing
			Receiving waterbody
			Athabasca River
			Quantity released to waterbody
			0.009467000

## Concentration of the Substance (Waterbody)

<b>Information in Sampling and Detection Limits</b>	Less than half of samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	Yes
<b>Method Detection Limit (ppm)</b>	0.02500000
<b>Average Concentration (ppm)</b>	0.005832
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

### Additional information

## Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product,Otherwise Use - Physical or Chemical Processing aid
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	Diverter stack use in 2022 increased the emissions of this substance. Corrected emissions as part of the point sources total was mistakenly reported as kg not T.  Discharge volume decreased -0.6 Mm3 and average concentration increased.
<b>Comments on releases to land – other</b>	

## Quarterly releases

Quarter	Release percentage
Q1	25.000000
Q2	25.000000
Q3	25.000000
Q4	25.000000

## Off-site disposals

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Landfill	tonnes	122.234000000	M3 - Source Testing	Clean Harbors Canada Inc.,2 Km N of Highway 14 on SR 854,Ryley	122.234000000

## Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	All samples above detection limit
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	0.02500000
<b>Average Concentration (ppm)</b>	0.032000
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

### Additional information on disposals

## Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues,Unusable parts or discards
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on disposals</b>	Net amount of substance increased to Tailings due to no longer subtracting quantity in sand

<b>Comments on disposals</b>	for cell construction.
<b>Comments on exclusions in tailing and waste rock</b>	

### Transfers for off-site recycling

Type	Units	Quantity	Basis of estimate	Receiving facility	Quantity transferred
Recovery of Catalysts	tonnes	244.235000000	M3 - Source Testing	AMG Vanadium Inc,60790 Southgate Road,Cambridge	244.235000000

### Additional information on off-site recycling

#### Contextual information

### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	Unusable parts or discards
<b>Reasons for change from previous year</b>	Other (specify in comments field)

## Substance detail

### Speciated VOCs (62 substances)

#### Additional information

#### Contextual information

<b>Nature of activities related to the substance</b>	
<b>Reasons for change from previous year</b>	Other (specify in comments field)
<b>Comments on releases</b>	The addition of >25 m stacks to the stack/flare section increased, the other sources decreased as those stack emissions were removed and added to the stack/flare section.  LDAR measurements of this compound are reduced when following the Federal Regulation "Reduction in the Release of Volatile Organic Compound Regulation (Petroleum Sector) SOR/2020-231, Schedule 3.
<b>Comments on releases to land – other</b>	

## Substance detail

### Naphthenic acid fraction compounds (and their salts)

#### Additional information

#### Contextual information

<b>Nature of activities related to the substance</b>	Manufacture - By-Product
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )
<b>Comments on releases</b>	
<b>Comments on releases to land – other</b>	

### Concentration of the Substance (Tailings)

<b>Information in Sampling and Detection Limits</b>	No sampling - other information used to estimate
<b>Was the quantity reported above estimated using half the detection limit for some or all values?</b>	No
<b>Method Detection Limit (ppm)</b>	2.00000000
<b>Average Concentration (ppm)</b>	
<b>More than one method detection limit applies</b>	No
<b>Concentration Comment(s)</b>	

### Additional information on disposals

### Contextual information

<b>Reason(s) for substance disposal</b>	Production Residues
<b>Reasons for change from previous year</b>	Not Applicable (First year reporting this substance)
<b>Comments on disposals</b>	
<b>Comments on exclusions in tailing and waste rock</b>	

### Additional information on off-site recycling

### Contextual information

### Transfers for off-site recycling

<b>Reason(s) for substance recycling</b>	
<b>Reasons for change from previous year</b>	No Significant Change (i.e. < 0 - 10% )