Nadan Consulting Ltd.

NATIONAL POLLUTANT RELEASE INVENTORY (NPRI) MONITORING & REPORTING

Mobile Climate Control

7540 Jane St Vaughan, ON. L4K 0A6

July 2, 2020

NATIONAL POLLUTANT RELEASE INVENTORY (NPRI)

MCC exceeded the reporting threshold of Group 1 substance chromium.

Part 1A Substances

MCC did exceeded the reporting threshold of chromium. The reporting threshold for Group 1A substances is 10,000 kg manufactured, processed or otherwise used at a concentration greater than or equal to one percent.

Chromium is present at a concentration greater than 1% as a component in the stainless steel used to produce the finish units. Usage of chromium in 2019 at concentrations above one percent was 20,711 kg. There were no releases to air or discharges to sewer of chromium.

Excess steel is shipped off-site for recycling. It has been assumed that the scrap metal has the same composition as the original product used at the plant. Of the 20,711 kg of total chromium used in 2019, 7,785 kg was shipped off-site for recycling to Combined Metal Industries at 505 Garyray Dr, Toronto.

The data quality of the quantity of chromium used in the year is considered good as the calculation was based on the certified composition of the metal provided by the metal supplier and the quantity of each grade of metal purchased.

The data quality of the quantity of steel shipped offsite for recycling is average as it is supplied by the recycler.

The composition of the waste metal shipped offsite with respect to chromium was obtained by taking a weighted average of stainless steel used in the facility in 2019.

Usage of nickel in 2019 was 9,138 kg, below the reporting threshold of 10,000 kg MPO.

GREENHOUSE GAS REPORTING

Emissions of carbon dioxide in 2019 from combustion of natural gas was 265 T. The reporting threshold is 10,000T.

Disclaimer

Reasonable efforts have been made to obtain relevant information, statements and documents concerning MCC facility from MCC management and staff. The accuracy of this report is subject to any errors or omissions, refusals, or inability to provide that information.



Number or Permit Number:

Government Department, Agency, or Program Name:

6135-83PJJK

MOE - ECA Air

Contacts Details

Contact Type

Technical Contact, Public Contact

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Independent contractor/consultant company	Nadan Consulting Ltd

Independent contractor/consultant company name:

General Information

Number of employees:

Activities for Which the 20,000-Hour Employee Threshold Does Not Apply:

Activities Relevant to Reporting Dioxins, Furans and Hexacholorobenzene:

Activities Relevant to Reporting of Polycyclic Aromatic Hydrocarbons (PAHs):

Does this facility release less than the reporting threshold for each Part 4 substance AND have one or more light or medium crude oil batteries with a total oil throughput for the battery components of the facility of $\geq\!1,900$ m3 per year?

Did the facility operate one or more electricity generation units that had a capacity of 25 MW or more and that distributed or sold to the grid 33% or more of its potential electrical output in the calendar year?

Is this the first time the facility is reporting to the NPRI (under current or past ownership):

Is the facility controlled by another Canadian company or companies:

Did the facility report under other environmental regulations or permits?

Does this facility solely consist of compression equipment in the oil and gas extraction sector?

Is the facility required to report one or more NPRI Part 4 substances (Criteria Air Contaminants):

308
None of the above
None of the above
Wood preservation using creosote: No

NO

No

No		
No		
Yes		
No		
No		

Substance List

CAS RN	Substance Name	Releases	Releases (Speciated VOCs)	Disposals	Recycling	Unit
NA - 04	Chromium (and its compounds)	N/A	N/A	N/A	7.785000	tonnes

Applicable Programs

CAS RN	Substance Name	NPRI	ON MECP TRA	First report for this substance to the ON MECP TRA
NA - 04	Chromium (and its compounds)	Yes	Yes	No

General Information about the Substance - Releases and Transfers of the Substance

CAS RN	Substance Name	Was the substance released on-site	The substance will be reported as the sum of releases to all media (total of 1 tonne or less)	1 tonne or more of a Part 5 Substance (Speciated VOC) was released to air
NA - 04	Chromium (and its compounds)	No	No	No

General Information about the Substance - Disposals and Off-site Transfers for Recycling

CAS RN	Substance Name	Was the substance disposed of (on-site or off- site), or transferred for treatment prior to final disposal	Is the facility required to report on disposals of tailings and waste rock for the selected reporting period	Was the substance transferred off-site for recycling
NA - 04	Chromium (and its compounds)	No	No	Yes

General Information about the Substance - Nature of Activities

CAS RN	Substance Name	Manufacture the Substance	Process the Substance	Otherwise Use of the Substance
NA - 04	Chromium (and its compounds)		As a formulation component	

TRA Quantifications

CAS RN	Substance Name	Use, Creation, Contained in Product	Quantity	Use ranges for public reporting
NA - 04	Chromium (and its compounds)	Use	20.711 tonnes	Yes
NA - 04	Chromium (and its compounds)	Creation	0.0000 tonnes	Yes
NA - 04	Chromium (and its compounds)	Contained in Product	12.926 tonnes	Yes

TRA Quantifications - Others

CAS RN	Substance Name	Change in Method of Quantification	Reasons for Change	Description of how the change impact tracking and quantification of the substance	Description of how an incident(s) affected quantifications	Significant Process Change	Reason for the significant process change
NA - 04	Chromium (and its compounds)					No	

On-site Releases - Reasons for Changes in Quantities Released from Previous Year

CAS RN	Substance Name	Reasons for Changes in Quantities from Previous Year	Comments
NA - 04	Chromium (and its compounds)	No significant change (i.e. <10% or no change)	

Disposals - Reasons and Comments

CAS RN	Substance Name	Reasons Why Substance Was Disposed	Reasons for Changes in Quantities from Previous Year	Comments
NA - 04	Chromium (and its compounds)		No significant change (i.e. <10% or no change)	

Recycling - Off-site Transfers for Recycling

CAS RN Substance Name Category Basis of Estimate Detail Code Qu	uantity
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NA - 04	Chromium (and its compounds)	Recovery of Metals and Metal Compounds	O - Engineering Estimates	7.785 tonnes
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Recycling - Off-site Transfers for Recycling - Total

CAS RN	Substance Name	Total - Off-site Transfers for Recycling
NA - 04	Chromium (and its compounds)	7.785 tonnes

Recycling - Off-site Transfers for Recycling - By Facility

CAS RN	Substance Name	Category	Off-site Name	Off-site Address	Quantity
NA - 04	Chromium (and its compounds)	Recovery of Metals and Metal Compounds	Combined Metal Industries	505 Garyray Drive, Toronto, ON, Canada	7.785 tonnes

Recycling - Reasons and Comments

CAS RN	CAS RN Substance Name Reasons Why Substance Was Recycled		Reasons for Changes in Quantities Recycled from Previous Year	Comments
NA - 04	Chromium (and its compounds)	Unusable parts or discards	No significant change (i.e. <10% or no change)	

Comparison Report - Enters, Creation, Contained in Product

CAS RN	Substance Name	Is Breakdown	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - 04	Chromium (and its compounds)	No	Enters the facility (Use)	20.711 tonnes	21.287 tonnes	2017	-0.576	-2.71
NA - 04	Chromium (and its compounds)	No	Creation	0.0000 tonnes	0.0000 tonnes	2017	0.0000	
NA - 04	Chromium (and its compounds)	No	Contained in Product	12.926 tonnes	13.436 tonnes	2017	-0.510	-3.80

Comparison Report - Enters, Creation, Contained in Product : Reason(s) for Change

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 04	Chromium (and its compounds)	No reasons - quantities approximately the same	

Comparison Report - Transfers off-site for Recycling

CAS RN	Substance Name	Is Breakdowr	Category	Quantity	Last Reported Quantity	Reporting Period of Last Reported Quantity	Change	% Change
NA - 04	Chromium (and its compounds)	No	Total off-site Transfers for Recycling	7.785 tonnes	7.851 tonnes	2017	-0.066	-0.84

Comparison Report - Transfers off-site for Recycling - Reason(s) for Change

CAS RN	Substance Name	Reason(s) for Change	Other Reason
NA - 04	Chromium (and its compounds)	No reasons - quantities approximately the same	

Pollution Prevention

available).

in your plan (this information will be publicly

Does the facility have a documented pollution prevention plan?	Yes
a) Please check all that apply	Plan was prepared or implemented for another government jurisdiction (i.e. other Federal government department, province, municipality). Specify name in comments field below.
b) Did the facility update their plan in the current reporting year?	No
c) Does the plan address substances, energy conservation, or water conservation?	Substances (provide the name of the primary Substances in the comments field below)
Please summarize your pollution prevention plan. If you selected "Substances", please specify the substances that were addressed	toxics reduction plan for chromium

Did the facility complete any pollution prevention activities in the current NPRI reporting year

If no, please select all applicable reasons from the list below:

0									-
	Substance,	process	or technoloav	alternatives	are	unknown	or	unavailable	

Progress on TRA Plan - Objectives

CAS RN Substance Name		Objectives	
NA - 04	Chromium (and its compounds)	none	

No

Progress on TRA Plan - Use Targets

CAS RN	Substance Name	Quantity	Years	Description of Target
NA - 04	Chromium (and its compounds)	No quantity target	No timeline target	

Progress on TRA Plan - Creation Targets

CAS RN Substance Name		Quantity	Years	Description of Target
NA - 04	Chromium (and its compounds)	No quantity target	No timeline target	

Progress on TRA Plan - Additional Actions

CAS RN	Substance Name	Were there any additional actions outside the plan taken during the reporting period to reduce the use and/or creation of the substance?	Describe any additional actions that were taken during the reporting period to achieve the plan's objectives	Provide a public summary of the description of the additional action taken
NA - 04	Chromium (and its compounds)	No		

Progress on TRA Plan - Reductions due to additional actions taken

CAS RN	Substance Name	Reductions due to additional actions taken	Quantity
NA - 04	Chromium (and its compounds)	The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions.	
NA - 04	Chromium (and its compounds)	The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions.	
NA - 04	Chromium (and its compounds)	The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions.	
NA - 04	Chromium (and its compounds)	The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions.	
NA - 04	Chromium (and its compounds)	The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions.	
NA - 04	Chromium (and its compounds)	The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions.	
NA - 04	Chromium (and its compounds)	The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	
NA - 04	Chromium (and its compounds)	The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions.	
NA - 04	Chromium (and its compounds)	The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions.	

Progress on TRA Plan - Amendments

CAS RN	Substance Name	Were any amendments made to the toxic substance reduction plan during the reporting period	Description any amendments that were made to the toxic substance reduction plan during the reporting period	Provide a public summary of the description of any amendments that were made to the toxic substance reduction plan during the reporting period
NA - 04	Chromium (and its compounds)	No		

Feedback

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healthycanadians.gc.ca	travel.gc.ca	servicecanada.gc.ca	jobbank.gc.ca	actionplan.gc.ca	Odilada.go.od

Nickel Material Balance and Process Flow Diagram

Facility Inputs:

Air emissions: none - no external exhaust



Material Balance

Purchased	Created	Contained in Product	Shipped Off-Site	Released On-site (air)	Destroyed	Discrepancy
9,137.7	0.0	5,715.7	3,422.0	0.0	0.0	0.0

Comment: Material balance is perfect, since amount in product is obtained by difference between purchased and off-site transfers

Chromium Material Balance and Process Flow Diagram

Facility Inputs:



Air emissions: none - no external exhaust

Material Balance

Purchased	Created	Contained in Product	Shipped Off-Site	Released On-site (air)	Destroyed	Discrepancy
20,711	0.0	12,926	7,785	0.0	0.0	0.0

Comment: Material balance is perfect, since amount in product is obtained by difference between purchased and off-site transfers

Source: Natural Gas Combustion annual natural gas 137,910 usage, m3

Combustion products	emission factor kg/m ³	emissions, kg	Reporting threshold, kg	
PM, total	0.00012160	17	20,000	
PM, 2.5	0.00012160	17	300	
PM, 10	0.00012160	17	500	
Carbon dioxide	1.92	264,787	100,000,000	
Carbon monoxide	0.001344	185	20,000	
Nitrous oxide	0.001602	221	2,700	

Emission factors are taken from the US EPA FIRE database .

Mobile Climate 2019 Sales By Product

Aluminum Totals = 198,696 lbs Stainless Totals = 250,964 lbs

	January	February	March	April	May	June	July	August	September	October	November	December
Aluminum (LBS)	23,491	18,858	11,037	18,939	22,471	8,117	14,912	17,825	13,268	16,828	15,651	17,299
Stainless (LBS)	26,126	28,277	7,758	36,866	27,510	14,307	18,552	21,001	20,253	29,039	3,826	17,449
Combined Monthly Totals	49,617	47,135	18,795	55,805	49,981	22,424	33,464	38,826	33,521	45,867	19,477	34,748

2019 Totals lbs	kg
198,696	
250,964	113795

January	Grade	Weight in Ibs	Weight in MT	Totals in MT
	304	504	0.2286	
	304	3,760	1.7055	
	304	5,587	2.5342	4.4684
	Copper	3,862	1.7518	
	Cooper	2,732	1.2392	2.9910
	Aluminum MLC NP	426	0.1932	
	Aluminum Copper Rads- Dirty	551	0.2499	
	Aluminum MLC	2,605	1.1816	
	Aluminum Old Sheet	138	0.0626	
	Aluminum MLC	4,727	2.1442	
	Aluminum MLC NP	376	0.1706	
	Aluminum Copper Rads- Dirty	762	0.3456	
	Aluminum Old Sheet	121	0.0549	
			0.0000	4.4026
	Finstock	1,376	0.6241	
	Finstock	5,086	2.3070	2.9311
	Mixed Clips	27,200	12.3378	
	Mixed Clips	29,220	13.2541	25.5919

February	Grade	Weight in lbs	Weight in MT	Totals in MT
	304	3,293	1.4937	
	304	2,555	1.1589	2.6526
	Cooper	1,957	0.8877	0.8877
	Aluminum MLC	4,149	1.8820	
	Aluminum MLC NP	385	0.1746	
	Aluminum Copper Rads- Dirty	1,794	0.8138	
	Aluminum MLC	3,034	1.3762	
			0.0000	4.2466
	Finstock	3,403	1.5436	1.5436
	Mixed Clips	35,300	16.0120	
	Mixed Clips	32,140	14.5786	30.5906

March	Grade	Weight in Ibs	Weight in MT	Totals in MT
	304	4,740	2.1500	
	304	766	0.3475	
	304	500	0.2268	2.7243
	Copper	3,549	1.6098	
	Copper	1,884	0.8546	
	Cooper	535	0.2427	2.7071
	Aluminum MLC	1,796	0.8147	
	Aluminum Extrusion	459	0.2082	
	Aluminum Copper Rads- Dirty	528	0.2395	

42.775

Aluminum MLC	2,471	1.1208	
Aluminum MLC	1,091	0.4949	
Aluminum Copper Rads- Dirty	501	0.2273	
Aluminum MLC	1,202	0.5452	
Mix	376	0.1706	
Aluminum Copper Rads- Dirty	1,816	0.8237	4.6448
Finstock	4,186	1.8988	
Finstock	4,228	1.9178	
Finstock	4,412	2.0013	5.8178
Mixed Clips	19,080	8.6546	
Mixed Clips	27,920	12.6644	
Mixed Clips	29,080	13.1906	34.5097

April	Grade	Weight in Ibs	Weight in MT	Totals in MT
	304	3,994	1.8117	
	304	939	0.4259	
	304	4,231	1.9192	
	304	3,097	1.4048	5.5616
	Copper	3,108	1.4098	
	Cooper	2,036	0.9235	2.3333
	Aluminum MLC	2,535	1.1499	
	Aluminum MLC	1,383	0.6273	
	6063 Aluminum Extrusion	451	0.2046	
	Aluminum Copper Rads- Dirty	477	0.2164	
	Aluminum MLC	2,133	0.9675	
	Aluminum MLC	2,244	1.0179	
	Aluminum MLC	191	0.0866	
	6063 Aluminum Extrusion	363	0.1647	
	Aluminum Copper Rads- Dirty	1,088	0.4935	4.9283
	Finstock	3,291	1.4928	
	Finstock	4,889	2.2176	3.7104
	Mixed Clips	28,600	12.9729	
	Mixed Clips	31,180	14.1432	27.1160

Мау	Grade	Weight in lbs	Weight in MT	Totals in MT
	304	5,422	2.4594	
	304	719	0.3261	
	304	3,889	1.7640	4.5496
	Copper	2,264	1.0269	
	Cooper	2,569	1.1653	2.1922
	Aluminum MLC	2,590	1.1748	
	Aluminum MLC	1,468	0.6659	
	Aluminum MLC NP	321	0.1456	
	Aluminum Copper Rads- Dirty	603	0.2735	
	Aluminum MLC	3,544	1.6075	

Aluminum MLC	1,534	0.6958	
Mixed	1,679	0.7616	
Aluminum Copper Rads- Dirty	836	0.3792	5.7040
Finstock	4,278	1.9405	
Finstock	5,345	2.4245	4.3650
Mixed Clips	23,560	10.6867	
Mixed Clips	28,040	12.7189	23.4056

June	Grade	Weight in Ibs	Weight in MT	Totals in MT
	304	4,838	2.1945	
	304	4,221	1.9146	4.1091
	Cooper	3,228	1.4642	1.4642
	Aluminum MLC	1,711	0.7761	
	Aluminum MLC	845	0.3833	
	Aluminum Copper Rads- Dirty	984	0.4463	
	Aluminum MLC	2,193	0.9947	2.6005
	Finstock	6,767	3.0695	3.0695
	Mixed Clips	28,620	12.9819	
	Mixed Clips	24,080	10.9226	23.9046

July	Grade	Weight in lbs	Weight in MT	Totals in MT
	304	3,818	1.7318	
	304	2,325	1.0546	2.7864
	Cooper	5,286	2.3977	2.3977
	Aluminum MLC	2,399	1.0882	
	Aluminum MLC	1,221	0.5538	
	Aluminum MLC	1,877	0.8514	2.4934
	Finstock	5,356	2.4295	2.4295
	Mixed Clips	22,800	10.3420	
	Mixed Clips	26,280	11.9205	22.2625

Aug	Grade	Weight in Ibs	Weight in MT	Totals in MT
	304	3,249	1.4737	
	304	2,040	0.9253	
	304	2,938	1.3327	3.7317
	Copper	1,696	0.7693	
	Cooper	2,733	1.2397	2.0090
	Aluminum Copper Rads- Dirty	858	0.3892	
	Aluminum MLC	1,298	0.5888	
	Aluminum MLC	1,754	0.7956	
	Aluminum Copper Rads- Dirty	1,829	0.8296	
	Aluminum MLC	2,131	0.9666	3.5698
	Finstock	5,056	2.2934	
	Finstock	5,382	2.4413	4.7346

Mixed Clips	20,300	9.2080	
Mixed Clips	24,960	11.3218	20.5298

Sept	Grade	Weight in Ibs	Weight in MT	Totals in MT
	304	2,995	1.3585	
	304	1,219	0.5529	
	304	3,907	1.7722	3.6837
	Cooper	3,698	1.6774	1.6774
	Aluminum MLC	695	0.3152	
	Aluminum MLC	1,523	0.6908	
	Aluminum MLC NP	348	0.1579	
	Aluminum Copper Rads- Dirty	590	0.2676	
	Aluminum MLC	1,549	0.7026	2.1342
	Finstock	4,697	2.1305	2.1305
	Mixed Clips	25,740	11.6756	
	Mixed Clips	27,420	12.4376	24.1132

Oc	t Grade	Weight in lbs	Weight in MT	Totals in MT
	304	3,409	1.5463	
	304	2,771	1.2569	2.8032
	Copper	4,752	2.1555	2.1555
	Aluminum MLC	2,111	0.9575	
	Aluminum Old Sheet	49	0.0222	
	Aluminum MLC	3,027	1.3730	
	Aluminum MLC	895	0.4060	
	Aluminum Copper Rads- Dirty	663	0.3007	3.0595
	Finstock	4,908	2.2263	2.2263
	Mixed Clips	29,420	13.3448	13.3448

Nov	Grade	Weight in lbs	Weight in MT	Totals in MT
	304	2,698	1.2238	
	304	2,354	1.0678	
	304	2,779	1.2605	
	304	522	0.2368	3.7889
	Copper	2,707	1.2279	
	Cooper	2,379	1.0791	2.3070
	Aluminum MLC	2,965	1.3449	
	Aluminum MLC	1,270	0.5761	
	Aluminum Old Sheet	55	0.0249	
	Aluminum MLC	2,906	1.3182	
	Aluminum MLC NP	676	0.3066	
	Aluminum Copper Rads- Dirty	1,040	0.4717	
	Aluminum Condensers NP	7,660	3.4746	
	Aluminum MLC	2,642	1.1984	

Aluminum MLC	491	0.2227	
Aluminum Copper Rads- Dirty	1,381	0.6264	9.5645
Finstock	4,220	1.9142	
Finstock	3,881	1.7604	3.6746
Mixed Clips	28,580	12.9638	
Mixed Clips	28,000	12.7007	25.6645

Dec	Grade	Weight in lbs	Weight in MT	Totals in MT
	304	1,771	0.8033	
	304	1,599	0.7253	
	304	852	0.3865	1.9151
	Aluminum MLC	1,456	0.6604	
	Aluminum MLC	1,829	0.8296	
	Aluminum Condensers NP	7,080	3.2115	
	Aluminum MLC	1,965	0.8913	5.5929
	Mixed Clips	28,180	12.7824	12.7824