



# Memorandum

January 21, 2021

To: Tony Corr, Canadian Babbitt Bearings Ltd. Ref. No.: 11186355-19

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From: Matthew Griffin/cb/4

**Subject: Documentation Report for 2019 Reporting Year  
National Pollutant Release Inventory, Toxics Reduction Act and  
Greenhouse Gas Assessment, Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

This memorandum has been prepared to provide documentation for the National Pollutant Release Inventory (NPRI) and Toxics Reduction Act (TRA) reporting and Greenhouse Gas Assessment for 2019 for the Canadian Babbitt Bearings Ltd. (CBB) facility in Brantford, Ontario (Facility).

The memorandum is summarized in the following sections:

1. NAICS Code Classification
2. NPRI Applicability
3. Manufacture, Process, or Otherwise Use Threshold Determinations
4. NPRI CAC Air Emission Release Estimates
5. NPRI Off-site Transfer and Disposal
6. Toxics Reduction Act, O. Reg. 455/09
7. Environment Canada GHG Summary
8. Ontario GHG Reporting
9. Section A Administrative Information
10. Conclusions

## **1. NAICS Code Classification**

CBB's primary North American Industrial Classification System (NAICS) Code is 332710– Machine Shops.



## **2. NPRI Parts 1, 2, 3 Applicability**

The Facility will be required to calculate and report the emissions of substances listed in NPRI annually only if both of the following criteria are met:

- The equivalent of 20,000-hours of labour or more annually (equal to 10 full time employees)
- Any substance in NPRI has MPO quantities that are equal to or greater than the corresponding MPO threshold identified in NPRI

The MPO quantities for the Facility were compared with the NPRI MPO thresholds to determine reporting status.

Since the Facility employs more than 10 people, the first criterion is met and the Facility did use compounds listed on NPRI as raw materials during the 2019 reporting year, as summarized in Table 1. Therefore, NPRI MPO criteria were assessed, as summarized in Table 2. No compounds were deemed to be reportable.

## **3. Manufacture, Process, or Otherwise use Threshold Determinations**

The 2019 chemical usage information was provided by CBB and was evaluated to determine the annual MPO quantities applicable to NPRI thresholds. The sum of the amount of products MPO were determined and compared with the NPRI MPO thresholds to determine reporting status.

No compounds met the MPO thresholds for the 2019 reporting year as summarized in Table 2.

## **4. NPRI Part 4 CAC Air Emission Release Estimates**

CBB provided the monthly natural gas consumption rates for the Facility. Emissions due to natural gas consumption were calculated using US EPA AP-42 Chapter 1.4 emission factors for natural gas combustion equipment smaller than 100 MMBTU. These estimated annual emissions are provided in Table 4.

Part 4 Substance emissions are compared to the NPRI Threshold in Table 5. CBB did not exceed the release threshold for any Part 4 Substance.

## **5. NPRI Off-Site Transfers for Disposal and Treatment**

No compounds met the reporting thresholds and therefore CBB is not required to report off-Site transfers.

## **6. Toxics Reduction Act Reporting**

TRA evaluation is provided in Table 7. CBB is not TRA reportable for 2019.



## **7. Environment Canada GHG Summary**

Federally, Facilities must report their GHG emissions to Environment Canada if they exceed 10,000 tonnes carbon dioxide equivalent (CO<sub>2</sub>e).

The federal reporting requirements and sources to include in the reporting are described in the Canada Gazette. CBB does not exceed the reporting threshold and therefore is not required to report GHG emissions to Environment Canada. The applicability threshold value calculated from the Federal GHG sources are presented in Table 6.

## **8. Ontario GHG Reporting**

Provincially, Facilities are required to report in June 2020 for the 2019 calendar year emissions if they exceed 10,000 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e). The regulation sets out sources that must be included in the threshold determination as well as reporting requirements.

CBB sources do not exceed the reportable threshold and therefore the Facility is not required to report GHG emissions to the Ministry of the Environment. The applicability threshold value calculated from the GHG sources are presented in Table 6.

## **9. Section A Administrative Information**

The administrative information provided by CBB is summarized in Table 11.

## **10. Conclusions**

CBB is not required to report under NPRI for 2019.

Changes in MPO quantities, off-site transfers and amounts contained in final products are summarized in Tables 7, 8 and 9.

Should you have any questions on the above, please do not hesitate to contact us.

Table 1

**Raw Material Usage Summary  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>Compound</b>	<b>CAS Number</b>	<b>MPO Amount (kg/year)</b>	<b>NPRI Part</b>
Tin	7440-31-5	27,594.7	
Antimony	7440-36-0	2,313.0	1A
Arsenic	7440-38-2	0.8	1B
Silver	7440-22-4	0.5	1A
Iron	7439-89-6	0.6	
Bismuth	7440-69-9	0.7	
Nickel	7440-02-0	0.1	1A
Cadmium	7440-43-9	0.06	1B
Zinc	7440-66-6	313.2	
Sulphur	7704-34-9	–	
Lead	7439-92-1	7.5	1B
Tin	7440-31-5	27,594.7	
Copper	7440-50-8	1,080.1	1A
Aluminum	7429-90-5	0.12	
Gold	7440-57-5	–	
Indium	7440-74-6	–	
Chlorine	7782-50-5	555.3	
Ammonia	7664-41-7	104.9	1A

Table 2

**MPO Threshold Table  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>Compound</b>	<b>CAS Number</b>	<b>MPO Quantity (kg/year)</b>	<b>NPRI Part</b>	<b>MPO Threshold (kg/year)</b>	<b>Reportable?</b>
Antimony	7440-36-0	2,313.0	1A	10,000	No
Arsenic	7440-38-2	0.8	1B	50	No
Silver	7440-22-4	0.5	1A	10,000	No
Nickel	7440-02-0	0.1	1A	10,000	No
Cadmium	7440-43-9	0.060	1B	5	No
Lead	7439-92-1	7.5	1B	50	No
Copper	7440-50-8	1,080.1	1A	10,000	No
Aluminum	7429-90-5	0.1		10,000	No
Chlorine	7782-50-5	555.3		10,000	No
Ammonia	7664-41-7	104.9	1A	10,000	No

Table 3

**NPRI Reportable Part 1A Metals Recycling Estimate Calculations  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>Compound</b>	<b>C.A.S. Number</b>	<b>Amount Processed (kg/year)</b>	<b>Amount Recycled<sup>(1)</sup> (kg/year)</b>	<b>Amount Released to Air<sup>(2)</sup> (kg/year)</b>	<b>Amount Sent to Landfill (kg/year)</b>	<b>Amount in Final Product (kg)</b>
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No Reportable Compounds in 2019

Table 4

**Natural Gas Combustion Emissions  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

Total natural gas combustion: 57,984 m<sup>3</sup>

Compound	CAS Number	Emission Factor (kg/10 <sup>6</sup> m <sup>3</sup> ) <sup>(1)</sup>	Annual Emissions (kg/year)
Carbon dioxide	124-38-9	1,920,000	111,329.3
Methane	74-82-8	37.0	2.1
Nitrous oxide	10024-97-2	35.2	2.0
Nitrogen oxides	11104-93-1	1,600.0	92.8
Sulphur dioxide	7446-09-5	9.6	0.6
Carbon monoxide	630-08-0	1,344.0	77.9
Particulate matter	NA - PM	30.4	1.8
10µm Particulate Matter	NA - PM10	30.0	1.7
2.5µm Particulate Matter <sup>(2)</sup>	NA - PM2.5	30.0	1.7
Volatile organic compounds	NA - VOC	88.0	5.1

## Notes:

Release estimates resulting from natural gas combustion were calculated using the emission factors presented in the USEPA AP42, Section 1.4: Natural Gas Combustion

(1) Emission Factors are from USEPA AP-42 for boilers < 100MMBtu.

(2) AP-42 defines natural gas combustion PM emissions as less than 2.5 µm diameter, NPRI requires filterable portion only.

Table 5

**NPRI Part 4 Substance Threshold Assessment  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>Compound</b>	<b>CAS Number</b>	<b>Total Emissions (kg/year)</b>	<b>NPRI Threshold (kg/year)</b>	<b>Reportable?</b>
Nitrogen oxides	11104-93-1	92.8	20,000	No
Sulphur dioxide	7446-09-5	0.6	20,000	No
Carbon monoxide	630-08-0	77.9	20,000	No
Particulate matter	NA - PM <sup>1</sup>	1.8	20,000	No
PM <sub>10</sub>	NA - PM10	1.7	500	No
PM <sub>2.5</sub>	NA - PM2.5	1.7	300	No
Volatile organic compounds	NA - VOC	5.1	10,000	No



Table 6

**Greenhouse Gas Substance Threshold Assessment  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>Compound</b>	<b>CAS Number</b>	<b>Emissions (kg/year)</b>	<b>Federal Global Warming Potential</b>	<b>Provincial Global Warming Potential</b>	<b>CO<sub>2</sub> Equivalent Emissions (kg/year)</b>
Carbon dioxide	124-38-9	111,329.3	1	1	111,329
Methane	74-82-8	2.1	25	21	54
Nitrous oxide	10024-97-2	2.0	298	310	608
<b>Total</b>					<b>111,991</b>
<b>Threshold</b>					<b>10,000,000</b>
<b>Reportable?</b>					<b>No</b>

**Table 7**

**Summary of NPRI and TRA Reportable Quantities  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

CAS No.	Reportable Release Quantity		
	Air (kg)	Landfill (kg)	Off-Site Recycling (kg) <sup>(1)</sup>

Table 8

**Summary of Reasons for Changes Year over Year for Recycling  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>Compound</b>	<b>CAS No.</b>	<b>2018 Recycling (kg/year)</b>	<b>2019 Recycling (kg/yr)</b>	<b>Year over Year (%)</b>	<b>NPRI Code</b>	<b>Recycling Description</b>
Lead	7439-92-1	56.0	0.4	-99%	A	No Pure Lead Ingots used

## Notes:

NPRI Software Reasons for Change must be selected from the following list for each reportable substance:

- |                                     |  |
|-------------------------------------|--|
| A - Changes in Production Levels    | F - Changes in Off-Site Transfers for Recycling          |
| B - Changes in Estimation Methods   | G - Other (specify in comments field B14.2)              |
| C - Pollution Prevention Activities | H - No Significant Change (< 10%) or No Change           |
| D - Changes in On-Site Treatment    | I - Not Applicable (First year reporting this substance) |
| E - Changes in Disposal             |  |

**Table 9**

**Summary of Reasons for Changes Year over Year for Amount Released to Air  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>Compound</b>	<b>CAS No.</b>	<b>2018 Amount Released to Air In Product (kg/year)</b>	<b>2019 Amount Released to Air In Product (kg/yr)</b>	<b>Change Year over Year (%)</b>	<b>NPRI Code</b>	<b>Amount Contained in Product Description</b>
Lead	7439-92-1	0.120	0.000	-100%	H	No Pure Lead Ingots used

Notes:

NPRI Software Reasons for Change must be selected from the following list for each reportable substance:

- |                                     |  |
|-------------------------------------|--|
| A - Changes in Production Levels    | F - Changes in Off-Site Transfers for Recycling          |
| B - Changes in Estimation Methods   | G - Other (specify in comments field B14.2)              |
| C - Pollution Prevention Activities | H - No Significant Change (< 10%) or No Change           |
| D - Changes in On-Site Treatment    | I - Not Applicable (First year reporting this substance) |
| E - Changes in Disposal             |  |

Table 10

**Summary of Reasons for Changes Year over Year for Amount Contained in Product  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>Compound</b>	<b>CAS No.</b>	<b>2018 Amount Contained In Product (kg/year)</b>	<b>2019 Amount Contained In Product (kg/yr)</b>	<b>Change Year over Year (%)</b>	<b>NPRI Code</b>	<b>Amount Contained in Product Description</b>
Lead	7439-92-1	1,070	7	-99%	A	No Pure Lead Ingots used

## Notes:

NPRI Software Reasons for Change must be selected from the following list for each reportable substance:

- A - Changes in Production Levels
- B - Changes in Estimation Methods
- C - Pollution Prevention Activities
- D - Changes in On-Site Treatment
- E - Changes in Disposal

- F - Changes in Off-Site Transfers for Recycling
- G - Other (specify in comments field B14.2)
- H - No Significant Change (< 10%) or No Change
- I - Not Applicable (First year reporting this substance)

Table 11

**Administrative Information  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>A1.0</b>	<b>Reporting Year, NPRI ID, Language and Web Site Address</b>	
A1.1	NPRI ID	10938
A1.2	Language	English
A1.4	Web Site Address	<a href="https://www.cbb.ca/">https://www.cbb.ca/</a>
A1.6	Business Number	132216862
<b>A2.0</b>	<b>Facility Identification and Site Address</b>	
A2.1	Company Name	Canadian Babbitt Bearings Ltd.
A2.2	Facility Name	Canadian Babbitt Bearings Ltd.
A2.3	Street Address	64 Dalkeith Drive
A2.5	City/District	Brantford
A2.6	Province or Territory Code	Ontario
A2.7	Postal Code	N3P 1N6
A2.11	Is this a rural address?	No
A2.12	MOE ID	
<b>A3.0</b>	<b>Identification of Parent Companies</b>	
P1.0	D&B D-U-N-S Number	
P1.1	% Ownership	
P1.2	Parent Company Name	
P1.3	Address	
P1.5	City/District	
P1.6	Province/Territory	
P1.7	Postal Code	
P1.8	State	
P1.9	ZIP Code	
P1.10	Country	
P1.12	Business Number	
<b>A4.0</b>	<b>Facility Public Contact</b>	
A4.1	Title (Mr./Ms./etc)	Mr.
A4.2	First Name	Tony
A4.3	Last Name	Corr
A4.4	Position	Quality Manager
A4.5	Phone	519-752-5471
A4.6	Phone Extension	234
A4.7	Fax	
A4.8	e-mail address	<a href="mailto:tony.corr@cbb.ca">tony.corr@cbb.ca</a>
<b>A5.0</b>	<b>Facility Public Contact Address</b>	
A5.1	Company Name	Canadian Babbitt Bearings Ltd.
A5.2	Facility Name	Canadian Babbitt Bearings Ltd.
A5.3	Mailing Address	64 Dalkeith Drive
A5.4	(Mailing Address)	Brantford
A5.5	City/District	Brantford
A5.6	Province/Territory	Ontario
A5.7	Postal Code	N3P 1N6
A5.10	Country	Canada

Table 11

**Administrative Information  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>A6.0</b>	<b>Facility Technical Contact</b>	
A6.1	Title (Mr./Ms./etc)	Mr.
A6.2	First Name	Tony
A6.3	Last Name	Corr
A6.4	Position	Quality Manager
A6.5	Phone	519-752-5471
A6.6	Phone Extension	234
A6.7	Fax	
A6.8	e-mail address	<a href="mailto:tony.corr@cbb.ca">tony.corr@cbb.ca</a>
<b>A7.0</b>	<b>Facility Technical Contact Address</b>	<b>(same as Public Contact)</b>
<b>A8.0</b>	<b>Company Coordinator</b>	<b>(same as Public Contact)</b>
<b>A9.0</b>	<b>Company Coordinator Address</b>	<b>(same as Public Contact)</b>
<b>A10.0</b>	<b>Industrial Classification Codes</b>	
A10.1	Two-digit Canadian SIC Code	
A10.2	Four-digit Canadian SIC Code	
A10.3	Four-digit U.S. SIC Code	
A10.4	Two-digit NAICS Code	33
A10.5	Four-digit NAICS Code	3327
A10.6	Six-digit NAICS Canada Code	332710
<b>A11.0</b>	<b>Full-time Employees</b>	
	= total worker hours per year/2,000 hrs per worker	
A11.1	Number of (Eq.) Full-time Employees	33
A11.2	Activities to Which the 20 000 hr Employee Threshold does not Apply	h) none of the above
<b>A12.0</b>	<b>Activities Relevant to the Reporting of Dioxins/Furans and HCB</b>	
A12.1	Facility Used for Wood Preservation (PCP)	r) none of the above
<b>A13.0</b>	<b>Activities Relevant to the Reporting of PAH</b>	
A13.1	Facility Used for Wood Preservation (creosote)	no
<b>A14.0</b>	<b>Other Environmental Regulations or Permits (optional)</b>	
A14.1	Other Environmental Reporting/Permits	
<b>A15.0</b>	<b>Comments</b>	
A15.1	Comments (Facility)	no
A15.2	Comments (Pollution Prevention)	no
<b>A16.0</b>	<b>Company Official Certifying this Submission</b>	
A16.1	Title (Mr./Ms./etc)	Mr.
A16.2	First Name	Tony
A16.3	Last Name	Corr
A16.4	Position	Quality Manager
A16.5	Phone	519-752-5471
A16.6	Phone Extension	234
A16.7	Fax	
A16.8	e-mail address	<a href="mailto:tony.corr@cbb.ca">tony.corr@cbb.ca</a>
<b>A17.0</b>	<b>Company Official Address</b>	<b>(same as Public Contact)</b>

Table 11

**Administrative Information  
Canadian Babbitt Bearings Ltd.  
Brantford, Ontario**

<b>A19.0</b>	<b>Facility Latitude and Longitude</b>	
A19.1	Facility Latitude (decimal degrees)	43.1782
A19.2	Facility Longitude (decimal degrees)	-80.2348
<b>A21.0</b>	<b>Independent Contractor</b>	
A21.1	Title/First Name	Mr. Matthew
A21.3	Last Name	Griffin
A21.4	Position	Environmental Engineer
A21.5	Telephone	(519) 340-3794
A21.7	Facsimile No.	(519) 884-0525
A21.8	Email Address	<a href="mailto:matthew.griffin@ghd.com">matthew.griffin@ghd.com</a>
<b>A22.0</b>	<b>Independent Contractor Address</b>	
A22.1	Company Name	GHD
A22.3	Mailing Address	455 Phillip Street
A22.5	City	Waterloo
A22.6	Province	Ontario
A22.7	Postal Code	N2L 3X2
A22.10	Country	Canada
<b>A25.0</b>	<b>Criteria Air Contaminants (CACs)</b>	
A25.1	Required to report for one or more CACs?	No
T1.0	Facility Operating Schedule (Temporal Variation)	
T1.1	Days of Operation	Days M-F, A M-Thurs
T1.2 a)	Hours of Operation	Days 7:00AMto 3:30PM
T1.2 a)	Hours of Operation	Afternoon 3:30PM to 2:00 AM
T1.2 b)	Average daily start time	7:00 a.m.
T1.3	Shut down longer than one week?	No
T1.4	Date/time of shutdown longer than one week	NA
T1.5	Comments (Shutdown periods) (optional)	No Shutdowns
<b>A26.0</b>	<b>Pollution Prevention</b>	
A26.1	Pollution Prevention Plans	no
	Off-Site Transfer Facility Name	AIM Metal Corp
	Street Address	9100, blou Henri-Bourassa
	City	Montreal
	Province	QB
	Postal Code	H1E 2S4
	Country	Canada