GATES CORPORATION
2018 TOXIC SUBSTANCE ACCOUNTING – SUMMARY REPORT

Gates Corporation (Gates) retained XCG Consulting Limited (XCG) to perform calculations and prepare the annual report required by the Ontario Ministry of Environment, Conservation and Parks (MECP) under the Toxics Reduction Action (TRA) Regulation 455/09 for the Gates Corporation facility in Brantford, Ontario.

The Gates facility fabricates metal parts. Primary emissions come from the sulphuric acid storage tank, used to balance the pH of the waste water treatment system, and the hydrochloric acid used in the metal plating lines.

The reportable contaminants for 2018 for which a reduction plan is required are sulphuric acid and hydrochloric acid.

Gates has identified a reduction option that is both technically and economically feasible to implement at the facility in the future:

- Materials and Feedstock Substitution.

In addition to completing the required annual summary, this summary has been submitted to the MECP on-line using the web based Single Window Information Manager (SWIM) portal. A copy of the submission report is attached.

SECTION 1: GENERAL FACILITY INFORMATION

Business Name:	Gates Corporation
Street/Mailing Address:	Gates Corporation 369 Elgin Street, P.O. Box 36 Brantford, Ontario N3T 5M3
NAICS Code:	332912
Latitude/Longitude:	43.150/-80.23135
Number of Employees:	350
Certifying Official	Richard Kouwen Technical Director 369 Elgin Street, P.O. Box 36 Brantford, Ontario N3T 5M3 (519)-756-7781 x287

SECTION 2: PRESCRIBED TOXIC SUBSTANCES ON-SITE

Three substances were identified to be reported on a facility wide basis under O. Reg. 455/09 as identified in Table 1 below.

Table 1 Toxic Substance Reported on a Facility Wide Basis

Substance	Enters the Facility (Use) (kg)	Creation (kg)	Contained in Product (kg)	Total Quantity Released (kg)	Disposals and Transfers (kg)	Change
2018 Sulphuric acid (93%)	11,994	0	0	17.3 (as Hydrogen Sulfide)	0	1,406 kg decrease in overall use
2018 Hydrochloric Acid (37%)	85,440	0	0	1,594 (as 100%)	19,526 (as 100%)	32,910 kg increase in overall use
2018 Zinc	19,513	0	18,287	61.8	1,558	6,089 kg increase in overall use
2018 Cobalt	101.4	0	74.6	0	26.5	N/A (first year reporting)

To quantify sulphuric acid and hydrochloric acid use Gates tracked the purchasing records for 2018.

To quantify zinc used Gates tracked the amount of zinc anode, ecolozinc zinc solution, and brazing rods used at the facility.

To quantify the cobalt use Gates tracked the purchasing records of Ecotri WF which contains Cobalt(II)Nitrate.

To track the sulphuric acid emissions released the standing loss and working loss of the sulphuric acid tank were calculated.

To track the hydrochloric acid emissions a mass balance was calculated based on the amount of hydrochloric acid brought onsite, the amount that remained in the process tanks, and bulk tanks, the amount of spent acid removed for disposal, and the amount released to air. This determined the amount of hydrochloric acid that was sent for wastewater treatment. The final hydrochloric acid emissions was based on an engineering calculation for the amount released after being processed through the scrubber.

To track the zinc emissions, emission factors were used to determine the amount of zinc particulate released to air, and a combination of chemical analysis and engineering calculations were used to determine the amount lost to wastewater carryout and precipitated filter cake.

To track the cobalt emissions, a combination of chemical analysis and engineering calculations were used to determine the amount lost to wastewater carryout and precipitated filter cake.

SECTION 3: CERTIFICATION BY HIGHEST RANKING EMPLOYEE

As of June 18, 2019, I, Richard Kouwen, certify that I have read the report on the toxic substance accounting and am familiar with its contents, and to my knowledge the information contained in the report is factually accurate and the report complies with the Toxic Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under the Act.

Richard Kouwen

6/18/19
Date