

Toxic Substance Reduction Plan 2019 Public Summary Update


| Company Information | | Basic Facility Information | | | |
|------------------------------|--|----------------------------|--------|---|--|
| Company Legal Name | CAMECO | Company Trade Name | CAMECO | Facility Name | BLIND RIVER REFINERY |
| Mailing and Physical Address | 2121 11th Street West, Saskatoon, SK, S7M1J3 | | | Mailing and Physical Address | 328 Eldorado Road, Blind River, ON P.O. Box 1539 P0R1B0 |
| | | | | UTM Coordinates, Zone, Easting, Northing | Zone 17 344311.8 Easting 5116013.8 Northing |
| | | | | Public Contact Name, Position, and Phone Number | Kristine MacIver, Corrective Action Specialist, 705-576-5837 |

| Substance | Quantification and Comparison | | | Reason for Change |
|-----------------------|-------------------------------|-------------------|----------------|--------------------------|
| | 2019 | 2018 | Percent Change | |
| Used | 10 - 100 tonnes | 10 - 100 tonnes | 18% | Increase production |
| Created | 0 | 0 | 0% | No Significant Change |
| Contained in product | 0 | 0 | 0% | No Significant Change |
| Released | 0 | 0 | 0% | No Significant Change |
| Transferred | 0 | 0 | 0% | No Significant Change |
| Disposed | 0 | 0 | 0% | No Significant Change |
| Used | 100 - 1000 kg | 100 - 1000 kg | 8% | Normal Process Variation |
| Created | 0 | 0 | 0% | No Significant Change |
| Contained in product | 1 - 10 kg | 1 - 10 kg | 38% | Increase production |
| Released to Air | 0.07 kg | 0.07 kg | 5% | Normal Process Variation |
| Released to Water | 0.005 kg | 0.00 kg | 10% | Normal Process Variation |
| Transferred | 520.8 kg | 284.4 kg | 83% | Increase production |
| Disposed | 0 | 0 | 0% | No Significant Change |
| Used | 100 - 1000 kg | | | New reportable substance |
| Created | 0 | | | New reportable substance |
| Contained in product | 1 - 10 kg | | | New reportable substance |
| Released to Air | 0.16 kg | | | New reportable substance |
| Released to Water | 0.000 kg | | | New reportable substance |
| Transferred | 7.58 kg | | | New reportable substance |
| Disposed | 0 | | | New reportable substance |
| Used | | | | |
| Created | | | | |
| Contained in product | | | | |
| Released | | | | |
| Transferred | | | | |
| Disposed | | | | |
| Used | | | | |
| Created | | | | |
| Contained in product | | | | |
| Released | | | | |
| Transferred | | | | |
| Disposed | | | | |
| Used | 0 | 0 | 0% | No Significant Change |
| Created | N.A | N.A | N.A | N.A |
| Contained in product | 0 | 0 | 0% | No Significant Change |
| Released | 0.20 | 0.20 | 0% | No Significant Change |
| Transferred | 0 | 0 | 0% | No Significant Change |
| Disposed | 0 | 0 | 0% | No Significant Change |
| Used | 0 | 0 | 0% | No Significant Change |
| Created | 10 - 100 tonnes | 10 - 100 tonnes | 62% | Increase production |
| Contained in product | 0 | 0 | 0% | No Significant Change |
| Released to Air | 10 - 100 tonnes | 10 - 100 tonnes | 62% | Increase production |
| Transferred | 0 | 0 | 0% | No Significant Change |
| Disposed | 0 | 0 | 0% | No Significant Change |
| Used | 100 - 1000 tonnes | 100 - 1000 tonnes | 58% | Increase production |
| Created | 0 | 0 | 0% | No Significant Change |
| Contained in product | 0 | 0 | 0% | No Significant Change |
| Released | 0 | 0 | 0% | No Significant Change |
| Transferred | 0 | 0 | 0% | No Significant Change |
| Disposed | 0 | 0 | 0% | No Significant Change |
| Used | 0 - 10 tonnes | 0 - 10 tonnes | 41% | Increase production |
| Contained in product | 0 | 0 | 0% | No Significant Change |
| Released to Water | 5.0 tonnes | 3.5 tonnes | 41% | Increase production |
| Transferred | 0 | 0 | 0% | No Significant Change |
| Disposed | 0 | 0 | 0% | No Significant Change |
| Used | 10 - 100 tonnes | 10 - 100 tonnes | 32% | Increase production |
| Created | 0 | 0 | 0% | No Significant Change |
| Contained in product | 0 - 10 tonnes | 0 - 10 tonnes | 44% | Increase production |
| Released to All Media | 0.015 tonnes | 0.015 tonnes | -2% | Normal Process Variation |
| Transferred | 49.3 tonnes | 18.5 tonnes | 167% | Increase production |
| Disposed | 0 | 0 | 0% | No Significant Change |

N.A. - not applicable as creation quantities are not reported to ECCO's SWIM for hexachlorobenzene.

| Objectives and Targets | |
|--------------------------|---|
| Sulphuric Acid | Cameco's goal is to reduce the use of sulphuric acid where technically and economically feasible. |
| Arsenic | Arsenic is present as an impurity in very small quantities in the incoming uranium concentrate, which is the raw material for the UO3 plant. The concentration of arsenic is typically at or below the detection limit of the analytical method used for quantification in uranium concentrates. Cameco's objective is to try to lower the analytical method detection limit, if technically and economically feasible, in order to more accurately quantify the amount of arsenic being received in incoming uranium concentrates. |
| Selenium | Selenium is present as an impurity in very small quantities in the incoming uranium concentrate, which is the raw material for the UO3 plant. The concentration of selenium is typically at or below the detection limit of the analytical method used for quantification in uranium concentrates. Cameco's objective is to try to lower the analytical method detection limit, if technically and economically feasible, in order to more accurately quantify the amount of selenium being received in incoming uranium concentrates. |
| Dioxins, Furans, and HCB | In 2007 Cameco upgraded its on-site incinerator, installing state of the art pollution control equipment to minimize dioxins, furans, HCB and other contaminant emissions. Quantities of dioxins, furans and HCB are consistently well below the Level of Quantification (LoQ), which according to the Canadian Environmental Protection Act, 1999, is the lowest concentration that can be accurately measured using sensitive but routine sampling and analytical methods. Despite being below LoQ, Cameco's objective is to continue to implement practices to minimize the potential for air emissions of these substances through process modifications, procedure improvements and other opportunities. |
| Nitrogen oxides | Cameco's objective is to continue to implement practices to minimize the potential for air emissions through process modifications, procedure improvements and other opportunities. |
| Nitric Acid | Cameco's objective is to reduce the use of nitric acid where technically and economically feasible. |
| Nitrate ion | Cameco's objective is to reduce the use of nitric acid which would result in a reduction in nitrates where technically and economically feasible. |
| Phosphorous | Cameco's objective is to reduce the use of phosphoric acid where technically and economically feasible which will reduce the use of phosphorous. |

| Progress in Implementing Plan | | | |
|-------------------------------|--|--|------------------------|
| Substance | Estimate of Reduction Achieved | Difference Between Steps Taken and Those in Plan | Amendments to the Plan |
| Dioxins, Furans, and HCB | | N.A. Exemption Record Completed | |
| Sulphuric Acid | | | |
| Arsenic | Difficult to quantify reduction amount due to variation in production levels | No difference | None |
| Selenium | | | |
| Nitrogen oxides | | | |
| Nitric Acid | | | |
| Nitrate ion | | | |
| Phosphorous | | | |

| Certification Statements | | | | | |
|---|---|------|--------------|--------------|--|
| Highest Ranking Employee | | | | | |
| As of 26/05/2020, I certify that I have read the report on the toxic substance reduction plans for the substances referred to below and am familiar with the contents and to my knowledge the information contained in the reports is factually accurate and the reports comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under the Act. | | | | | |
| Sulphuric Acid (CAS # 7665-93-9) | | | | | |
| Arsenic (CAS # NA - 02) | | | | | |
| Selenium (CAS # NA - 12) | | | | | |
| Nitric Acid (CAS # 7697-37-2) | | | | | |
| NOx (CAS # 11104-93-1) | | | | | |
| Nitrate ion in solution at pH >=6 (CAS # NA - 17) | | | | | |
| Phosphorous (CAS # NA - 22) | | | | | |
| Hexachlorobenzene (HCB) (CAS # 118-74-1) | | | | | |
| and the following dioxins and furans which include all listed dioxins and furans within NPRI: 2,3,7,8-Tetrachlorodibenzo-p-dioxin (CAS# 1746-01-6), 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (CAS# 19408-74-3) Octachlorodibenzo-p-dioxin (CAS# 3258-87-9), 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (CAS# 35822-46-9), Octachlorodibenzofuran (CAS# 39001-02-0), 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (CAS# 35227-28-6) 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (CAS# 40321-76-4), 2,3,7,8-Tetrachlorodibenzofuran (CAS# 51207-31-9), 1,2,3,4,7,8,9-Heptachlorodibenzofuran (CAS# 55673-89-7), 2,3,4,7,8-Pentachlorodibenzofuran (CAS# 57117-31-4), 1,2,3,7,8-Pentachlorodibenzofuran (CAS# 57117-41-6), 1,2,3,6,7,8-Hexachlorodibenzofuran (CAS# 57117-44-9), 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (CAS# 57653-85-7), 2,3,4,6,7,8-Hexachlorodibenzofuran (CAS# 60851-34-5), 1,2,3,4,6,7,8-Heptachlorodibenzofuran (CAS# 67562-39-4), 1,2,3,4,7,8-Hexachlorodibenzofuran (CAS# 70648-26-9), 1,2,3,7,8,9-Hexachlorodibenzofuran (CAS# 72918-21-9). | | | | | |
| Signature |  | Name | Chris Astles | Position | General Manager Blind River Operations |
| | | | | Company Name | CAMECO |