## Toxic Substance Reduction Plan 2018 Public Summary Update

### Substance Information

Plant has been prepared for the following substances: Hydrogen fluorides (7789-99-5), Phosgene (79-01-6), Nitrogen oxides (12151-43-6), Nitric acid (7697-37-2), Nitrous oxide in solution at pH=4.0 (NA-1), Ammonia (07-14-4), PM$_{10}$ and PM$_{2.5}$

### Objectives

**Hydrogen fluorides/phosgene**

- Reduce emissions of hydrogen fluorides by improving control systems at the facility and by minimizing the use of these substances.
- Reduce emissions of phosgene by implementing new control systems at the facility.

**Nitrogen oxides**

- Reduce emissions of nitrogen oxides by improving control systems at the facility.
- Reduce emissions of nitrogen oxides by implementing new control systems at the facility.

**Phosgene**

- Reduce emissions of phosgene by implementing new control systems at the facility.

**Ammonia**

- Reduce emissions of ammonia by improving control systems at the facility.
- Reduce emissions of ammonia by implementing new control systems at the facility.

**PM$_{10}$ and PM$_{2.5}$**

- Reduce emissions of particulate matter by improving control systems at the facility.
- Reduce emissions of particulate matter by implementing new control systems at the facility.

### 2016/2017 Quantification and Comparison

<table>
<thead>
<tr>
<th>Substance</th>
<th>2016 tonnes</th>
<th>2017 tonnes</th>
<th>Percent change</th>
<th>SWMM Reason for change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen fluoride</td>
<td>583</td>
<td>485</td>
<td>-16%</td>
<td>Normal production variation</td>
</tr>
<tr>
<td>Nitric acid</td>
<td>100</td>
<td>100</td>
<td>0%</td>
<td>Normal production variation</td>
</tr>
<tr>
<td>Nitrogen oxide</td>
<td>50</td>
<td>50</td>
<td>0%</td>
<td>Normal production variation</td>
</tr>
<tr>
<td>Phosgene</td>
<td>50</td>
<td>50</td>
<td>0%</td>
<td>Normal production variation</td>
</tr>
<tr>
<td>Ammonia</td>
<td>50</td>
<td>50</td>
<td>0%</td>
<td>Normal production variation</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>50</td>
<td>50</td>
<td>0%</td>
<td>Normal production variation</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>50</td>
<td>50</td>
<td>0%</td>
<td>Normal production variation</td>
</tr>
</tbody>
</table>

### Progress in Implementing the Plan

**Phase 1**

- **Hydrogen fluorides/phosgene**
  - No significant change
- **Nitrogen oxides**
  - No significant change
- **Phosgene**
  - No significant change
- **Ammonia**
  - No significant change
- **PM$_{10}$ and PM$_{2.5}$**
  - No significant change

**Phase 2**

- **Nitric acid**
  - No significant change
- **Nitrous oxide in solution at pH=4.0**
  - No significant change
- **Ammonia**
  - No significant change

### Certification Statements

Director, Environment & Energy Services (EES)

Signature: [Signatures]

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>General Manager</th>
<th>Company Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daya Baghoo</td>
<td></td>
<td></td>
<td>Cameco Corporation</td>
</tr>
</tbody>
</table>