

Brandon Generating Station
Environmental Impact Statement

Dangerous Goods

The Brandon G.S. uses a variety of products that are purchased, stored, handled and disposed of in accordance with current federal and provincial legislation, such as Manitoba Regulation 282/87 under the Manitoba Dangerous Goods Handling and Transportation Act. These activities are not covered under the Environmental Act Licence for the station. The inventory of products is maintained in compliance with Manitoba Workplace Hazardous Material Information System (WHMIS) Regulation 52/88. This inventory is listed following Table C-1 below.

Table C-1 lists the products currently received and stored in bulk quantities (over 20 kg or 20 litre containers). Storage of these products is restricted to specific areas of the plant: the water treatment plant; cold stores; laboratory storage; generating building basement; electrical shop; and yard. All products are stored indoors and in compliance with regulatory requirements to minimize the potential for release to the environment.

Table C-1 represents the quantities present on-site at the time of this assessment. Quantities change on a daily basis.

Table C-1 List of Dangerous Goods stored

| Product | TDG Classification | Container Size | Quantity |
|-----------------------------|---------------------------|-----------------------|-----------------|
| Acetylene | 2.1 | 10.51 m ³ | 6 cylinders |
| Acidex | 8 / 9.3 | 205 L | 205 L |
| Air, compressed | 2.2 | 32.15 m ³ | 10 units |
| Aluminex-3 | Not Regulated | 205 L | 820 L |
| Antifoam (foamtrol AF 1660) | Not Regulated | 200 L | 1 drum |
| Antifreeze | 3 | 205 L | 5 drums |
| Argon, compressed | 2.2 | 52 m ³ | 3 units |
| Breathing Air, compressed | 2.2 | 8.57 m ³ | 10 cylinders |
| Carbon Dioxide, compressed | 2.2 | 272 kg | 9 cylinders |
| | 2.2 | 45 kg | 132, cylinders |
| | 2.2 | 22.68 kg | 30 cylinders |
| Continuum AEC3157 | 8 / 9.2 | 205 L | 2,000 L |
| Diesel fuel | 3.3 | 4,500 L | 4,500 L |
| | 3.3 | 1,364 L | 1,364 L |
| | 3.3 | 950 L | 950 L |
| Flogard MS6206 | 8 | 205 L | 2000 L |
| Fuel Oil #2 | 3.3 | 2,800,000 L | 1 unit |

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| Product | TDG Classification | Container Size | Quantity |
|--|---------------------------|-----------------------|-----------------|
| Gasoline, Unleaded | 3.1 | 230 L | 230 L |
| Helium, compressed | 2.2 | 5.96 m ³ | 1 cylinders |
| Hydrazine | 8 / 6.1 | 200 kg | 400 kg |
| Hydrogen, compressed | 2.3 | 1,372 m ³ | 1 trailer |
| | 2.3 | 7.3 m ³ | 600 cylinders |
| Inert Gases, compressed | 2.2 | 10.18 m ³ | 3 cylinders |
| Kerosene | 3.3 | 205 L | 205 L |
| Lime | Not Regulated | Bulk | 100,000 kg |
| Lubricant Oil | 9 | 205 L | 56 units |
| | 9 | 20 L | 20 units |
| Nitrogen | 2.2 | 8.32 m ³ | 25 |
| Nitrogen - Oxygen 0.2-23.5% Gas Mixture, compressed | 2.2 | 29.1 m ³ | 4 units |
| Nitrogen, Liquid | 2.2 | 165 L | 2 cylinders |
| Nitrogen-Carbon dioxide 8%, CO 80 PPM, NO 80 PPM Gas Mixture, compressed | 2.2 | 24.48 | 8 units |
| Nitrogen-Carbon dioxide 2 5%, CO 50 PPM, NO 50 PPM Gas Mixture, compressed | 2.2 | 4.04 m ³ | 2 units |
| Oxygen, compressed | 2.2 / 5.1 | 4.16 m ³ | 6 cylinders |
| Propane | 2.1 | 70.5 kg | 2 cylinders |
| | 2.1 | 45 kg | 3 cylinders |
| | 2.1 | 32.3 kg | 4 cylinders |
| Sodium Aluminate | 8 | 205 L | 1600 L |
| Sodium Hydroxide Solution | 8 | 16,000 L | 28,780 kg |
| Sodium Hypochlorite | Not Regulated | 13,600 L | 6,800 L |
| Sulphur Hexafluoride, compressed | 2.2 | 52.16 m ³ | 1 unit |
| | 2.2 | 40 kg | 1 unit |
| Sulphuric Acid | 8 / 9.2 | 37,700 L | 37,700 L |
| | 8 / 9.2 | 33,173 L | 33,173 L |
| Tetrafluoromethane (CF4), compressed | 2.2 | 44 m ³ | 2 units |
| Trisodium Phosphate | 9 | 227 kg | 136.2kg |

The products consumed in the highest volumes are found in there main Transportation of Dangerous Goods (TDG) classes: Class 2- Compressed

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Gases; Class 3 – Flammable Liquids; and Class 8 – Corrosives. The Class 2 products are generally welding gases. The Class 3 products are comprised primarily of liquid fuels and petroleum-based solvents for parts degreasing. These products are generally stored in 20 litre pails or tanks in the boiler house and fanhouse. Lubricating oils and waste oils are stored in the oil storage building. The Class 8 products are used exclusively for water treatment purposes and are stored in the water treatment plant and boiler house. Sulphuric acid and caustic soda are stored in bulk and the remainders are stored in drum or pail lots. The hydrogen bulk storage system is described in Section 2.4.10 of the EIS report.