

MATERIAL SAFETY DATA SHEET

Boundary Dam Fly Ash (CAS# 68131-74-8) – External Use Document

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Boundary Dam Fly Ash (CAS# 68131-74-8) – External Use Document (Note that the only differences between this document and the internal document are the contact information, the addition of “product use” information, and the reference (in Section 2) regarding contacting SaskPower Coal Combustion Products to obtain additional information.)
Product Description:	Natural fly ash from Boundary Dam Power Station (BDPS), located near Estevan, Saskatchewan, Canada.
Product Use:	This product is used primarily as a partial cement replacement in the production of ready-mixed concrete and the manufacture of products such as concrete blocks, pipe, and paving stones.
Manufacturer/Supplier:	SaskPower (Saskatchewan Power Corporation) 2025 Victoria Avenue Regina, Saskatchewan, Canada S4P 0S1
Phone Number:	1-800-667-8022 toll free (in Canada) or 306-566-3033 – SaskPower Coal Combustion Products
Emergency Phone: (24-hour)	IN CASE OF A DANGEROUS GOODS EMERGENCY call CANUTEC at 613-996-6666 (collect calls accepted). (This includes workplace emergencies.)
Date of Preparation:	April 20, 2014

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

CORROSIVE MATERIAL – may cause burns, particularly in contact with moist tissues.

TOXIC – harmful by inhalation (contains crystalline silica, quartz).

IRRITANT – may cause eye, skin and inhalation irritation.

Note that, to some extent, burns may be thermal as well as caustic due to the heat released by the reaction of ash components (e.g., available alkalinity, such as calcium oxide or calcium hydroxide) with moisture (e.g., eyes, mucus membranes, sweat).

Although it is a transient rather than inherent characteristic of the fly ash, note that fly ash withdrawn directly from an electrostatic precipitator (ESP) hopper, fly ash storage (sales) silo, or encountered elsewhere in – or recently exited from – other power plant process equipment may be very hot due to retained heat originating from the coal combustion process. **Consequent to the loading of hot fly ash from a silo, fly ash transport trailers may contain, transport, and subsequently deliver hot ash. Temperatures may be high enough to cause serious burns and to damage materials or equipment that come into contact with the ash. Additionally, the chemical reactivity of the hot fly ash – for example, the reaction of alkaline ash constituents with water – may be greatly enhanced** relative to that of the ash at ambient temperatures, potentially generating additional heat, even higher temperatures, and – in the case of contact with water – flashing some of the water to steam.

On request, SaskPower Coal Combustion Products will provide additional information by calling 1-800-667-8022 toll free (in Canada) or 306-566-3033.

Potential Health Effects: See Section 11 for more information.

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Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

- Eye:** May cause serious chemical burns. Causes irritation (possibly severe); irritation may be chemical and/or mechanical (abrasion).
- Skin:** May cause skin irritation. May cause burns in the presence of moisture (however, this would typically not be expected to be an issue with respect to short-term exposure to wet ash).
- Ingestion:** May cause burns. May be harmful if swallowed. May cause stomach distress, nausea or vomiting. May cause burning of mouth, throat and esophagus.
- Inhalation:** Harmful by inhalation. May cause respiratory tract irritation. Prolonged or repeated exposure may lead to lung or other diseases.

Chronic Effects: Fly ash, itself, is not listed as a carcinogen by the American Conference of Governmental Industrial Hygienists (ACGIH), the International Agency for Research on Cancer (IARC), or National Toxicology Program (NTP). However, respirable crystalline silica may be a component of the fly ash. Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by ACGIH, IARC, and NTP as a lung carcinogen or suspected carcinogen.

Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.

Signs and Symptoms: Severe irritation, redness and pain. May cause burns in the presence of moisture. Redness. Pain. Blisters. Serious skin burns (not likely with respect to short-term exposure to wet ash). Abdominal pain. Burning sensation. Shock or collapse.

Medical Conditions Aggravated By Exposure: Asthma. Allergies. Pre-existing lung disease.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Fly Ash	68131-74-8	≤ 100
Containing:		
Calcium oxide	1305-78-8	10 - 30*
Silica, crystalline, quartz (also see note below re Silica, crystalline, cristobalite, CAS # 14464-46-1)***	14808-60-7	5 - 10 or 10 - 30**

* The estimated level of **free or available calcium oxide** (CaO) in Boundary Dam fly ash, based on ASTM C-25 (modified) analysis, may be on the order of 0.3 – 0.8 wt.% (four composite samples, each comprised of two-to-three samples from 2013 November through 2014 January: 0.3 – 0.5 wt. %, expressed as calcium hydroxide (Ca(OH)₂); 2010 November samples: 0.5 – 0.8 wt. %, expressed as calcium hydroxide (Ca(OH)₂)). (**Note** that the 10 – 30 wt. % weight range indicated in the table is a reflection of the total calcium (Ca) content of the fly ash, expressed conventionally as the oxide; most of this calcium is believed to exist as a component in a complex chemical mixture of silicates and aluminosilicates – i.e., most of the calcium is NOT actually present in the fly ash as the discrete, uncombined oxide.)

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** Data indicates from < 5 wt. % up to > 16 wt. % crystalline silica as quartz present in the fly ash; it is believed that some or much of the crystalline silica content of the source coal is fluxed by the high alkaline constituent content of the ash and thereby converted to amorphous silicates (the amount converted to amorphous *silica*, if any, is unknown); however, due to variability in the mined coal and the combustion process and limitations in measurement, it is possible that the crystalline silica content of the fly ash may vary considerably. Crystalline silica as quartz (CAS# 14808-60-7) is therefore listed in the ingredient table, above, as 5 – 10 or 10 – 30 wt. %.

Crystalline silica as quartz was reported as:

- i) 2.1 – 3.6 wt. % (lab 1, one 2013/12/17, ~ 2014/01/06 composite sample, one 2013/11/27, 2014/01/06 composite sample, and two 2013/12/11, 2013/12/18, ~ 2014/01 composite samples)
- ii) 16.3 wt. % (lab 3, one 2013/12/17, ~ 2014/01/06 composite sample)
- iii) 1.0 – 2.3 wt. % (lab 1, five 2010/11/09, 2010/11/16, 2010/11/23 composite samples and one 2010/11/16, 2010/11/23 composite sample)
- iv) 4.2 – 6.2 wt. % (lab 2, three 2010/11/09, 2010/11/16, 2010/11/23 composite samples and one 2010/11/16, 2010/11/23 composite sample)

*** It is also possible that the fly ash may contain trace amounts of crystalline silica in the form of cristobalite (CAS# 14464-46-1) (lab 3, one 2013/12/17, ~ 2014/01/06 composite sample: α + β cristobalite: 0.5 wt. %; lab 2, three 2010/11/09, 2010/11/16, 2010/11/23 composite samples and one 2010/11/16, 2010/11/23 composite sample: cristobalite: not detected). Note that the concentration cut-off listed in the Canadian *Ingredient Disclosure List*, SQR/88-64 for cristobalite is 1 wt. %; as the one sample to date for which the presence of cristobalite has been reported identified no α -cristobalite and only 0.5 wt. % β -cristobalite – i.e., < 1 wt. % cristobalite – this form of crystalline silica has not been specifically included in the product composition table above as a component of the material fly ash (CAS # 68131-74-8); an indication of its possible presence has been provided for information only. The possible presence in the fly ash of crystalline silica in the form of tridymite (CAS# 15468-32-3) is not known; tridymite was not detected in a (lab 3) 2013/12/17, ~ 2014/01/06 composite sample or (lab 2) three 2010/11/09, 2010/11/16, 2010/11/23 composite samples and one 2010/11/16, 2010/11/23 composite sample.

The coal ash originates as a result of the combustion of coal; that is, as a result of the high-temperature conversion (in the presence of air) of the mineral matter originally present in the coal – plus those elements which may be incorporated into, or associated with, the organic (carbon) structure of the coal – during the combustion process in the boiler furnace. Coal ash compositions (except for trace elements) are conventionally expressed as the oxides of the main chemical elements present (e.g., for silicon, aluminum, iron, calcium, magnesium, barium, strontium, sodium, potassium, phosphorus, titanium, manganese, and sulphur, where the silicon (Si) content is expressed as SiO₂, the aluminum (Al) content is expressed as Al₂O₃, etc.); however, for the most part – the major exception normally being a portion of the silicon dioxide (SiO₂) – the actual concentrations of the various ash elements as discrete or uncombined oxides is normally believed to be low (or in some cases, perhaps essentially “zero”); most⁽¹⁾ of the ash constituents are believed to exist as a complex mixture of silicates and aluminosilicates.

⁽¹⁾ However, for example, some free or available CaO – or Ca(OH)₂ – and iron oxides (e.g., Fe₂O₃, Fe₃O₄) may also be present; four composite samples, each comprised of two-to-three samples from 2013 November through 2014 January, indicated an apparent available lime concentration, expressed as calcium hydroxide (Ca(OH)₂), of 0.3 – 0.5 wt. %; 2010 November samples indicated an available lime concentration, expressed as calcium hydroxide (Ca(OH)₂), of 0.5 – 0.8 wt. %. Sulphur, at a level of perhaps 0.3 to < 1 wt. % conventionally expressed as SO₃, is typically also present in the fly ash. Some of the sulphur may be incorporated into the complex silicate / aluminosilicate ash matrix while some may be present in discrete compounds (e.g., such as calcium sulphate).

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The composition of the fly ash is subject to variation, depending especially on the characteristics of the coal being delivered / burned at any given time and, to a lesser extent, boiler furnace operating conditions / performance. There may also be hopper-to-hopper variation in fly ash composition within an ESP.

In addition to the primary ash elemental constituents, trace amounts of various elements including arsenic, antimony, carbon, lead, nickel, manganese, chromium, boron, mercury⁽²⁾, selenium, beryllium, cadmium, vanadium, and uranium may be detected in the fly ash as a result of their presence in the source coal.

⁽²⁾ Typical mercury levels in the fly ash are on the order of 20 – 70 ppb (0.02 – 0.07 ppm) by weight.

Appearance: Gray to tan-gray to tan solid in the form of a fine, potentially somewhat gritty, powder.

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, including under lids. If easy to do, remove contact lenses, if worn. **Get medical attention immediately.**

Skin Contact: If irritation occurs, flush skin with plenty of water. In some cases - e.g., large amounts of fly ash still present on skin - before wetting the product / skin, it may be advisable or appropriate to gently brush - **AVOID** the generation of dust - the bulk of the fly ash from the skin. Get medical attention if irritation persists.

Inhalation: Remove to fresh air. If symptoms or discomfort persist, obtain medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If conscious (and not in immediate risk of losing consciousness) and capable of swallowing, rinse mouth thoroughly with water and then drink plenty of water to dilute the material in the stomach. **Get medical attention immediately.**

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS criteria.

Means of Extinction:

Suitable Extinguishing Media: Treat for surrounding material.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: None.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

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Section 6: ACCIDENTAL RELEASE MEASURES

Precautions: Restrict access to the area. Ensure clean-up is conducted by trained personnel only. Wear adequate protective clothing and equipment. Clean-up personnel need protection against contact with skin and eyes, as well as **AGAINST INHALATION OF DUST** (see Section 8). Prevent accidental contact between the spilled product and water, and **AVOID generating dust**.

Methods for Clean-Up: Contain the spill or leak. Do not touch the spilled material. This material is a water pollutant: prevent the material from entering drains, sewers, ditches, or waterways.

Small spills: Carefully shovel into clean, dry, labelled containers and cover. **AVOID or minimize the production of dust**. Sweeping, the use of compressed air, or the use of a non-HEPA vacuum are therefore to be AVOIDED. The use of a HEPA vacuum may be acceptable. Under certain conditions, and under the advisement and supervision of a knowledgeable authority, it may be appropriate to carefully wet down the spilled material to avoid the production of dust; in this circumstance, prevent the wetting water and fly ash from entering drains, sewers, ditches, or waterways; note that contact of the fly ash with water may generate heat; note that contact with the fly ash will strongly elevate the pH of the wetting water (see Section 9); don't let the wetting water come into contact with skin or eyes; don't let the wetting water (either prior or subsequent to contact with the spilled fly ash) come into contact with stored fly ash (i.e., fly ash that is not part of the accidental release).

Large spills: Contact the appropriate emergency services and product supplier (see Section 1) for advice.

Other Information: Not available.

Waste Disposal Method: Dispose of fly ash in accordance with all applicable Federal, provincial, and local regulations. Do NOT wash fly ash into drains, sewers, ditches, or waterways.

Notify environmental authorities in the event of any reportable release of this product to the environment.

Section 7: HANDLING AND STORAGE

Handling:

Avoid contact with skin and eyes. Do not swallow. **Do not breathe dust**. Wear appropriate PPE (see Section 8). When using do not eat or drink. Wash hands before eating, drinking, or smoking.

Use dust-tight containers and keep containers closed when not in use. Prevent accumulation of dust.

Avoid generating dust. Protect containers from physical damage. Prevent water from contacting stored product. Empty containers may contain residues which are hazardous.

Good housekeeping is important to prevent accumulation of dust. **Avoid generating dust**. The use of compressed air for cleaning clothing, equipment, etc, is not recommended.

Storage:

Store in dust-tight, dry, labelled containers. Keep containers closed when not in use. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Do not store in an area equipped with emergency water sprinklers. Use corrosion-resistant structural materials and lighting and ventilation systems in the storage area.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

See Section 3 regarding fly ash composition.

Exposure to this material can be controlled in many ways. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure.

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Exposure Guidelines

Ingredient	Exposure Limits ACGIH-TLV
Fly ash	Not available.
Containing:	
Calcium oxide	2 mg/m ³
Silica, crystalline, quartz	0.025 mg/m ³

Engineering Controls: When using product, provide local and general exhaust ventilation to keep airborne dust concentrations below exposure limits. Use wet methods, if appropriate, to reduce the generation of dust.

Personal Protective Equipment:

Eye/Face Protection: Wear approved eye protection (properly fitted dust- or splash-proof chemical safety goggles) and face protection (face shield). Wearing contact lenses is not recommended.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing, including appropriate boots, boot covers, overshoes, etc., as may be appropriate.

Respiratory Protection: In case of insufficient ventilation to maintain airborne fly ash levels below the exposure limits, wear suitable NIOSH-approved, properly fitted respiratory equipment. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance, and inspection.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque fine powder.
Colour:	Gray to tan-gray to tan.
Odour:	No odour.
Odour Threshold:	Not available.
Physical State:	Solid (fine powder; potentially somewhat gritty).
pH (water slurry):	≥ 11.5 (for a 20 g + 80 mL water slurry)
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not applicable.
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not applicable.
Upper Flammability Limit:	Not applicable.
Vapor Pressure:	Not available.
Vapor Density:	Not available.

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Specific Gravity:	Four composite samples, each comprised of two-to-three samples from 2013 November through 2014 January, had values of 2.3 – 2.4. Two 2010 Sept. / Oct. composite samples had values of 2.7. Range not available; historically, stated as 2.8 - 3.4 @ 20 °C.
Solubility in Water:	Mostly insoluble; however, reacts to form highly alkaline solution with pH ≥ 11.5 for a 20 g + 80 mL water slurry.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not applicable.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Keep dry in storage.

Incompatible Materials: Moisture (reaction may generate heat). Strong acids. Boric oxide. Boron trifluoride. Phosphorus pentoxide. Chlorates. Chlorine trifluoride. Chlorine. Ammonium salts. Fluorine.

Hazardous Decomposition Products: None.

Hazardous Polymerization: Does not occur.

Corrosivity to Metals: The fly ash, itself - particularly if moist or wet - or solutions that are or have been in contact with the fly ash may be corrosive to metals, especially including aluminum metal.

Reactivity: See Section 2 with respect to the possibility of enhanced chemical reactivity of the fly ash when it is hot.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD ₅₀ (oral)	LC ₅₀
Fly ash	> 2000 mg/kg, rat	Not available.
Containing:		
Calcium oxide	> 2000 mg/kg, rat	Not available.
Silica, crystalline, quartz	500 mg/kg, rat	Not available.

Note that, to some extent, burns may be thermal as well as caustic due to the heat released by the reaction of ash components (e.g., available calcium oxide or calcium hydroxide) with moisture (e.g., eyes, mucus membranes, sweat) or due to contact with hot ash (see Section 2).

Eye: May cause serious chemical burns. Causes irritation (possibly severe); irritation may be chemical and/or mechanical (abrasion). Severe irritation, redness and pain. May cause burns in the presence of moisture.

Skin: May cause skin irritation. May cause burns in the presence of moisture (however this would typically not be expected to be an issue with respect to short-term exposure to wet ash). Redness. Pain. Blisters. Serious skin burns.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting. May cause burning of mouth, throat and esophagus. Abdominal pain. Burning sensation. Shock or collapse.

Inhalation: Harmful by inhalation. May cause respiratory tract irritation.

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EFFECTS OF CHRONIC EXPOSURE

Target Organs: Eyes, skin, respiratory system, gastrointestinal tract.

Chronic Effects: Repeated exposure to calcium oxide has been shown to cause ulceration of the nasal septum, bronchitis and pneumonia. Chronic inhalation of silica quartz may cause autoimmune disease. Chronic exposure to an ingredient in this mixture has been reported to cause renal injury and adverse effects on visual acuity.

This product contains crystalline silica, quartz possibly up to 30% by weight. (Currently, the highest measurement obtained has been 16.3 wt. %.) Due to variability in the mined coal and the combustion process and limitations with respect to measurement, it is possible that the crystalline silica, quartz content may vary considerably.

Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by ACGIH, IARC and NTP as a lung carcinogen or suspected carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.

Carcinogenicity: Hazardous by WHMIS criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Fly ash	Not listed.
Containing:	
Calcium oxide	Not listed.
Silica, crystalline, quartz	G-A2, I-1, N-1

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS criteria.

Reproductive Effects: Not hazardous by WHMIS criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS criteria.

Embryotoxicity: Not hazardous by WHMIS criteria.

Respiratory Sensitization: Not hazardous by WHMIS criteria.

Skin Sensitization: Not hazardous by WHMIS criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

Dispose according to all relevant Federal, provincial, and local regulations. Notify environmental authorities in the event of any reportable release of this product to the environment.

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Section 14: TRANSPORTATION INFORMATION

Ground shipment of this material is not regulated as a hazardous material / dangerous good under Canadian TDG regulations. This material IS REGULATED as a hazardous material / dangerous good, however, for the purpose of transport by aircraft.

IATA Classification:

Corrosive Solid, Basic, Inorganic, n.o.s. (Calcium oxide); UN3262; Class 8; PG III

Section 15: REGULATORY INFORMATION

Federal Regulations

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Global Inventories

Ingredient	Canada DSL/NDSL
Fly ash	DSL
Containing:	
Calcium oxide	DSL
Silica, crystalline, quartz	DSL

HMIS - Hazardous Materials Identification System

Health - 2* Flammability - 0 Physical Hazard - 1 PPE – B

NFPA - National Fire Protection Association:

Health - 2 Fire - 0 Reactivity - 1

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

- Class D2A - Carcinogenicity
- Class D2A - Chronic Toxic Effects
- Class D2B - Skin/Eye Irritant
- Class E - Corrosive Material

WHMIS Hazard Symbols:



SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

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NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use. To the best of Saskatchewan Power Corporation's knowledge, it is believed that the information contained herein is accurate; however, Saskatchewan Power Corporation makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein. In addition, this information may be used in a manner beyond Saskatchewan Power Corporation's knowledge and control. The information is therefore provided without any representation or warranty expressed or implied.

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