

Environmental Protection and Enhancement Act

BEING CHAPTER E-12 R.S.A. 2000 (the "Act")

ENVIRONMENTAL PROTECTION ORDER NO. EPO-EPEA-35819

Canadian Pacific Railway Company
7550 Ogden Dale Road SE
Calgary, Alberta
T2C4X9

WHEREAS Canadian Pacific Railway Company ["CP"] is the owner of a railway right-of-way, being 26.02 acres (more or less) of land within NW 9 – 8 – 5 W5M and NE 8 – 8 – 5 W5M [the "Lands"] located within the Municipality of Crowsnest Pass, in the Province of Alberta;

WHEREAS the Lands are immediately adjacent to the northern shore of Crowsnest Lake [the "Lake"];

WHEREAS the bed and shore of Crowsnest Lake is non patent Crown Land;

WHEREAS CP operates a railway operation on the Lands;

WHEREAS between 16:30 and 17:00 on February 12, 2021, a train owned by CP, and identified in the CP consist as train 669712 [the "Train"], derailed on the Lands;

WHEREAS the Train was carrying 185 railcars loaded with potash [the "Substance"] when the derailment occurred on the Lands;

WHEREAS 42 railcars were involved in the derailment on the Lands;

WHEREAS 3 railcars were re-railed and removed from the Lands by CP;

WHEREAS following the derailment, 6 of the derailed railcars came to rest on both the lake-ward slope on the Lands, and on the shore of Crowsnest Lake, both of which slope toward Crowsnest Lake, and some volume of the Substance was released from the railcars onto the Lands, and onto the shore and the frozen surface of Crowsnest Lake;

WHEREAS 39 of the derailed railcars remained in the vicinity of the CP rail line on the Lands;

WHEREAS on February 13, 2021, Alberta Environment and Parks ["AEP"] staff completed an inspection of the Lands and Crowsnest Lake and observed CP carrying out the following activities in order to clear the rail line and facilitate rail line reconstruction:

- wrecking cars in place, using excavators and;
- pushing cars off the rail line and onto the lake-ward slope on the Lands;

WHEREAS while CP was clearing and reconstructing the rail line, CP wrecked 38 derailed railcars in place, resulting in further releases of the Substance to the Lands, and onto the shore and frozen surface of Crowsnest Lake;

WHEREAS during the Train derailment and CP's rail line clearing and reconstruction activities, 3400 tonnes of the Substance was released to the Lands and shore of Crowsnest Lake, and an additional 400 tonnes of the Substance was released onto the frozen surface of Crowsnest Lake;

WHEREAS on February 13, 2021, during rail line clearing and reconstruction activities conducted by CP, a railcar [the "Railcar"] slid down the lake-ward slope of the Lands, onto the frozen surface of Crowsnest Lake, broke through the ice and became submerged in the water of Crowsnest Lake;

WHEREAS the Railcar is currently submerged in Crowsnest Lake at a depth of approximately 5 – 20 feet below the water's surface;

WHEREAS the Railcar is not water tight and observations indicate that a door of the Railcar is open, allowing water from Crowsnest Lake to flow in and out of the Railcar's interior;

WHEREAS CP indicated that at the time of submersion, the Railcar contained approximately 100 tons of the Substance;

WHEREAS the Substance is composed of 95 – 99.5% potassium chloride and 0.5 – 5% sodium chloride;

WHEREAS the Substance is 99.5 – 99.9% soluble in water;

WHEREAS the Environmental Quality Guidelines for Alberta Surface Waters (Government of Alberta, 2018) are guidelines for surface water quality (to protect aquatic life, agricultural, and recreational uses), sediment quality, and tissue residue (to protect wildlife consumers and fish from direct toxicity);

WHEREAS on February 24, 2021, CP indicated a total of 1660 tonnes of the Substance has been removed from the Lands, the shore, and the frozen surface of Crowsnest Lake;

WHEREAS on February 24, 2021, approximately 2140 tonnes of the Substance remain on the Lands, the shore, or the frozen surface of Crowsnest Lake;

WHEREAS on February 22, 2021, CP reported that approximately 100 tonnes of the Substance was in the Railcar submerged in Crowsnest Lake at the time of the submersion;

WHEREAS the continued presence of the Substance on the Lands, the shore, and the frozen surface of Crowsnest Lake will likely result in the Substance migrating into Crowsnest Lake during periods of precipitation or melting, likely resulting in increases in chloride, pH, and electrical conductivity levels within Crowsnest Lake;

WHEREAS the continued presence of the Railcar containing the Substance in the waters of Crowsnest Lake, will likely result in the Substance dissolving in the water, which will likely result in increases of chloride, pH, and electrical conductivity levels within Crowsnest Lake;

WHEREAS Crowsnest Lake is fish bearing;

WHEREAS an AEP Pesticide Specialist has advised that the Substance is in the process of being registered as a pesticide for molluscs and has the potential to cause adverse effects to molluscs, including and up to death, in Crowsnest Lake;

WHEREAS an AEP Senior Fisheries Biologist has advised that the Substance has the potential to cause adverse effects to fish and aquatic invertebrates, including and up to death, in Crowsnest Lake;

WHEREAS an AEP Senior Wildlife Biologist has advised that the continued presence of the Substance on the Lands and shore of Crowsnest Lake can act as an attractant for wildlife, which may increase the presence of wildlife on a rail line, leading to an elevated risk of wildlife mortality due to train strikes;

WHEREAS Coreen Bates, Acting Compliance Manager, Southern Region, has been appointed a Director for the purposes of issuing environmental protection orders under the Act [the "Director"];

WHEREAS the Substance is a "substance" as defined in section 1(mmm) of the Act;

WHEREAS the Director is of the opinion, that the release of a substance has occurred and that the substance has caused, is causing, or may cause an adverse effect on the environment;

WHEREAS CP is a "person responsible" for the substance, as defined in section 1 (tt) of the Act.

WHEREAS the Director is of the opinion that the actions of CP are not sufficient to confine the effects of the Substance or manage or remove the Substance in such a manner as to prevent an adverse effect;

THEREFORE I, Coreen Bates, Director, pursuant to section 113 of the Act, DO HEREBY ORDER;

1. CP shall

- a. immediately; and
- b. continuously

prevent any and all amounts of the Substance from entering each of the water, bed, and shore of Crowsnest Lake;

2. Until otherwise authorized by the Director in writing, CP shall continue to conduct all the monitoring as set out in CP's Surface Water Monitoring and Sampling Plan version – 02.19.2021.1500, received by AEP on February 19, 2021;
3. Until otherwise authorized by the Director in writing, CP shall submit daily to the Director a written report containing the results of all work carried out in accordance with the plan described in clause 2 of this order;

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4. CP shall, by not later than March 3, 2021, submit to the Director, for the Director's written approval a written wildlife management plan [the "Wildlife Plan"], stamped and signed by an independent third-party qualified professional currently registered in good standing with the Alberta Society of Professional Biologists (ASPB);
5. In the Wildlife Plan, CP shall include at least each of the following:
 - a. A detailed description of the step-by-step procedures and methods that will be used to prevent wildlife from entering the Lands, and the shore and frozen surface of Crowsnest Lake until such a time that the Monitoring and Sampling and Remediation Plans are fully implemented;
 - b. A detailed description of the monitoring methods that will be used to detect and monitor wildlife entering the Lands, and the shore and surface of Crowsnest Lake until such a time that the Monitoring and Sampling and Remediation Plans are fully implemented;
 - c. A schedule for implementing the Wildlife Plan with a completion date of no later than March 5, 2021.
6. CP shall only complete the work described in the Wildlife Plan in accordance with the Director's written authorization.
7. CP shall, by not later than March 3, 2021, submit to the Director, for the Director's written approval a written railcar removal plan [the "Railcar Removal Plan"];
8. In the Railcar Removal Plan, CP shall include at least each of the following:
 - a. A detailed description of the step-by-step procedures and methods that will be used to remove the Railcar from Crowsnest Lake and from crown land;
 - b. A detailed description of the methods that will be used to prevent the release of the Substance in the Railcar during the implementation of the Railcar Removal Plan;
 - c. A detailed description of the measures that will be taken to prevent damage to the bed and shore of Crowsnest Lake, and the sedimentation of the water of Crowsnest Lake during the implementation of the Railcar Removal Plan;
 - d. A schedule for implementing the Railcar Removal Plan with a completion date of no later than March 12, 2021.
9. The Parties shall only complete the work described in the Railcar Removal Plan in accordance with the Director's written authorization.
10. CP shall, by not later than March 3, 2021, submit to the Director, for the Directors written approval a potash recovery plan [the "Potash Recovery Plan"] stamped and signed by an independent third-party qualified professional currently registered in good standing with the Alberta Society of Professional Biologists (ASPB);

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11. In the Potash Recovery Plan, CP shall include at least each of the following:

- a. A detailed description of the step-by-step process and methods that will be used to recover the Substance from each of
 - i. the Lands;
 - ii. the shore of Crowsnest Lake;
 - iii. the frozen surface of Crowsnest Lake; and
 - iv. the bed of Crowsnest Lake;
- b. A detailed description of the areas that will be prioritized for the removal of the Substance, with priority given in the order below:
 - i. Removal of the Substance from the bed of Crowsnest Lake;
 - ii. Removal of the Substance from the frozen surface of Crowsnest Lake;
 - iii. Removal of the Substance from areas with high potential for mobilization of the Substance to Crowsnest Lake, including but not limited to:
 1. The shore of Crowsnest Lake;
 2. slope; and
 3. The Lands;
 - iv. Removal of the Substance from each area with potential to attract wildlife.
- c. A schedule for implementing the Potash Recovery Plan, with a completion date of no later than March 12, 2021.

12. The Parties shall only complete the work described in the Potash Recovery Plan in accordance with the Director's written authorization.

13. CP shall, by not later than March 5, 2021, submit to the Director, for the Director's written approval a long term monitoring and sampling plan [the "Monitoring and Sampling Plan"], stamped and signed by both;

- a. an independent third-party qualified professional currently registered in good standing with the Association of Professional Engineers, Geoscientists of Alberta (APEGA) and;
- b. an independent third-party qualified professional currently registered in good standing with the Alberta Society of Professional Biologists (ASPB);

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14. In the Monitoring and Sampling Plan, CP shall include at least each of the following:

- a. A detailed description of the design and methods that will be used to monitor and sample each of
 - i. the Lands;
 - ii. the shore of Crowsnest Lake;
 - iii. the lake bed of Crowsnest Lake; and
 - iv. the water of Crowsnest Lake,
- b. A schedule for implementing the Monitoring and Sampling Plan, with an implementation date of no later than March 12, 2021.
- c. The Parties shall only complete the work described in the Monitoring and Sampling Plan in accordance with the Director's written authorization.

15. CP shall, by not later than March 19, 2021, submit to the Director, for the Director's written approval a long term remediation plan [the "Remediation Plan"], stamped and signed by both;

- a. an independent third-party qualified professional currently registered in good standing with the Association of Professional Engineers, Geoscientists of Alberta (APEGA) and;
- b. an independent third-party qualified professional currently registered in good standing with the Alberta Society of Professional Biologists (ASPB);

16. In the Remediation Plan, CP shall include at least each of the following:

- a. A detailed description of the design and methods that will be used to remediate all areas in the water of Crowsnest Lake, identified to be in excess of the Environmental Quality Guidelines for Alberta Surface Water (Government of Alberta, 2018) as a result of the release of the Substance;
- b. A detailed description of the design and methods that will be used to remediate all areas on the Lands, the shore, and the lake bed identified to be in excess of the Alberta Soil and Groundwater Remediation Guidelines (Alberta Environment and Parks, 2019) as a result of the release of the Substance;
- c. A schedule for implementing the Remediation Plan, with an implementation date of no later than March 31, 2021.

17. The Parties shall only complete the work described in the Remediation Plan in accordance with the Director's written authorization.

18. Within 30 days of completion of the requirements of this order, CP shall submit to the Director, a final written report describing the work undertaken to comply with this order [the "Final Report"].

DATED at the City of Lethbridge in the Province of Alberta, this 26th day of February, 2021.



Coleen Bates
A/ Compliance Manager
Southern Region

Section 91 of the *Environmental Protection and Enhancement Act* may provide a right of appeal against this decision to the Alberta Environmental Appeals Board. There may be a strict time limit for filing such an appeal.

**For further information, contact the Board Secretary at:
Alberta Environmental Appeals Board
#306 Peace Hills Trust Tower, 10011 – 109 Street,
Edmonton, Alberta T5J 3S8
Telephone (780) 427- 6207; Fax (780) 427- 4693**

Notwithstanding the above requirements, the Parties shall obtain all necessary approvals in complying with this order.

Take notice that this order is a remedial tool only, and in no way precludes any enforcement proceedings being taken regarding this matter under this or any other legislation.