

ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT

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

ENVIRONMENTAL PROTECTION ORDER NO. EPO-2016/06-RDNSR

Federated Co-operatives Limited
Box 1050,
Saskatoon, SK
S7K 3M9

WHEREAS Federated Co-operatives Limited ["FCL"] is a Registered Extra-Provincial Cooperative at the Alberta Corporate Registry, with its head office located in Saskatoon, Saskatchewan, Canada.

WHEREAS at approximately 15:00 hours on June 9, 2016 a tractor unit and two trailers had a single motor vehicle accident and lost control negotiating a curve on Highway 21, left the roadway, rolled and entered Tail Creek, Alberta;

WHEREAS on June 9, 2016 at 16:08 hours, FCL reported to Alberta Environment and Parks ["AEP"] a release of a substance, namely a diesel fuel, within Tail Creek [the "Creek"] located at SW 34-38-22-W4 in the County of Stettler No. 6, in the Province of Alberta the ("Release Site");

WHEREAS the substance that was released is identified on its Material Safety Data Sheet as being 95% - 100% diesel, and 0-5% of a combination of Canola Oil Fatty Acid Methyl, Rapeseed Oil Fatty Acid Methyl and Soy Methyl Esters from Vegetable Oil, and placarded as UN 1202, and referred to by FCL as a "biofuel", [the "Substances"];

WHEREAS FCL is the owner of the two trailers, and the 50,000 litres of the diesel fuel it was carrying at the time of the accident;

WHEREAS the lead trailer and saddle tanks of the truck were damaged as a result of the accident, and FCL estimated that approximately 16,100 litres of diesel fuel had been released into Tail Creek;

WHEREAS FCL contracted with Nichols Environmental Ltd. ("Nichols") and SWAT Consulting Inc. ("SWAT") to prepare and implement an Environment Plan, Aquatic Monitoring Plan and Shoreline Clean-Up Assessment Technique (SCAT) document;

WHEREAS FCL and its consultants conducted containment, mitigation and remediation measures in response to the spill of the Substances;

WHEREAS on July 19, 2016, during a scheduled site assessment inspection with representatives from AEP, Nichols and SWAT, a visible sheen and hydrocarbon odour were noted in the waters of Tail Creek;

WHEREAS on September 29, 2016, AEP and Nichols collected surface water and creek sediment samples from the Release Site, and the analytical results revealed the presence of Substances in excess of the Environmental Quality Guidelines for Alberta Surface Waters (July 2014, Alberta Government) [the "Surface Water Quality Criteria"], and the Alberta Tier 1 Soil and Groundwater Remediation Guidelines (February 2016, Alberta Government) [the "Alberta Tier 1 Guidelines"];

WHEREAS analysis of the background water and sediment sample(s) from upstream of the Release Site collected on September 29, 2016 by AEP showed an absence of hydrocarbon contamination;

WHEREAS AEP deems it necessary for FCL to assess the sediments in Tail Creek for the presence of the Substances in the vicinity of the Release Site, and to carry out remedial actions where necessary, which may include removing those portions of the bed and shore of Tail Creek that are contaminated with the Substances above Surface Water Quality Criteria and/or Alberta Tier 1 Guidelines;

WHEREAS pursuant to section 1(tt) of the *Environmental Protection and Enhancement Act* ("EPEA"), FCL is a 'person responsible' for the Substances;

WHEREAS pursuant to section 112 of *EPEA*, FCL, as the person responsible for the Substances, has a duty to take all reasonable measures to:

- Repair, remedy and confine the effects of the substance;
- Remediate, manage, remove or otherwise dispose of the substance in such a manner as to prevent an adverse effect or further adverse effect; and
- Restore the environment to a condition satisfactory to the Director;

WHEREAS the Director is of the opinion that the Substances that were released in the waters and/or sediment of Tail Creek and may exceed the limits specified in the Surface Water Quality Criteria and/or Alberta Tier 1 Guidelines;

WHEREAS the release of the Substances into Tail Creek have caused, and may continue to cause, an adverse effect on the environment, including the death of and damage to aquatic and terrestrial vegetation, aquatic and terrestrial life, fish, amphibians, mammals and birds, and the degradation of water quality;

WHEREAS the Director is of the opinion that further remedial work is required in order to delineate the extent of the release of the Substances and their impacts, and to restore the aquatic environment of Tail Creek;

WHEREAS section 113 of *EPEA* states that the Director may issue an environmental protection order to a person responsible for the Substances, and sections 113 and 241 specify the measures the Director may require in an environmental protection order;

WHEREAS Andrea Stenvig, Compliance Manager, [the "Director"], has been designated a Director for the purposes of issuing environmental protection orders under the Act;

THEREFORE, I, Andrea Stenvig, Compliance Manager, pursuant to sections 113 and 241 of EPEA, DO HEREBY ORDER that FCL:

The Comprehensive Remedial Plan

1. Shall, by **January 27, 2017**, submit, in writing for the Director's approval, a "Comprehensive Remedial Plan" to restore the Release Site and/or any adjacent areas that have been affected by the Substances.
2. The Comprehensive Remedial Plan shall be prepared and implemented by a qualified environmental professional.
3. The Comprehensive Remedial Plan shall include, at a minimum, each of the following sub-plans, which are all due on **January 27, 2017** as part of the Comprehensive Remedial Plan (with the exception of item a., the "Delineation and Remediation Plan" which is due **January 6, 2017** and item g., the "Water Body Restoration Plan" which is due on **April 7, 2017**):
 - a. Delineation and Remediation Plan;
 - b. Water Management Plan for Dewatering;
 - c. Erosion and Sedimentation Prevention Plan;
 - d. Water Body Monitoring Plan;
 - e. Fish Salvage and Release Plan;
 - f. Wildlife Management Plan;
 - g. Water Body Restoration Plan.

a. Delineation and Remediation Plan

4. The Delineation and Remediation Plan shall include the following requirements:
 - a. A plan to sample and delineate the full extent (vertical and lateral) of the Substances in Tail Creek in the soils, subsoil's, sediments, surface water, and of any areas affected by the Substances.
 - b. The remedial actions that will be taken to remediate the Substances in the affected areas, but which also requires that for any areas of the bed of Tail Creek in which the Substances are identified and confirmed as being in the sediment above the Alberta Tier 1 Guidelines limits, the affected sediments will be removed by dewatering the Creek and mechanically removing such affected areas.
 - c. All the remedial steps that will be taken at all locations where the Substances are present above the Alberta Tier 1 Guidelines limits, including the methods and remedial techniques that will be employed.
 - d. Where any removed contaminated sediments, soils, subsoils, vegetation and/or contaminated water will be disposed of and identification of all

waste generated that is directly associated with the release, records of the volumes of waste and details of how all the waste will be characterized, temporarily stored, if required, and disposed of in accordance with all applicable regulatory requirements;

- e. A schedule of implementation for the Delineation and Remediation Plan for approval by the Director, which shall have as its completion date of no later than, **March 15, 2017**.
5. The remedial work described in the Detailed Delineation and Remediation Plan shall remediate the site at a minimum to the criteria identified in the following guidelines:
- a. Alberta Tier 1 Guidelines;
 - b. Surface Water Quality Criteria.
6. Implement the work required by the Delineation and Remediation Plan in accordance with the schedule of implementation that has been approved by the Director.

b. **Water Management Plan for Dewatering Tail Creek**

7. The Water Management Plan for Dewatering Tail Creek shall include a proposal to dewater Tail Creek in the vicinity of the Release Site, to access and assess the sediment for the presence of Substances and include, at a minimum, each of the following:
- a. A detailed description of the techniques that will be used for de-watering the Water Body;
 - b. A detailed description of all of the following:
 - i. Pump locations;
 - ii. Pumping rates;
 - iii. Discharge locations;
 - c. A map depicting all of the following:
 - i. Discharge locations; and
 - ii. Pump locations;
 - d. A detailed description of the water quality monitoring parameters that will be monitored throughout all dewatering activities, including but not limited to:
 - i. The frequency, quantity and location of all samples that will be taken and analysed;
 - ii. a comparison of the analytical results, for all parameters monitored to the Surface Water Quality Criteria.
 - e. No water shall be diverted to any other waterbody that exceeds the Surface Water Quality Criteria, unless otherwise authorized by the Director;

- f. A detailed description of the water treatment techniques and equipment that will be used to treat all water in the Water Body that exceeds any of the Surface Water Quality Criteria so that it meets the Surface Water Quality Criteria;
 - g. Discharged from the dewatering activities and must be released back into flowing waters;
 - h. A detailed description of how and to what location any water not meeting the Surface Water Quality Criteria will be disposed of;
 - i. A schedule of implementation for the Water Management Plan for Dewatering Tail Creek, with a dewatering completion date of no later than **February 1, 2017**, unless otherwise authorized in writing by the Director.
8. FCL shall implement the Water Management Plan for Dewatering Tail Creek in accordance with the Director's written authorization.

c. **Erosion and Sedimentation Prevention Plan**

9. The Erosion and Sedimentation Prevention Plan shall include, all of the following:
- a. A detailed description of how, throughout the implementation of all work required by this Order, erosion of all lands, and bed and shore of the Tail Creek that may be impacted during the carrying out of such work will be prevented, including but not limited to:
 - i. The bed and shore of the Water Body and all other water covered areas of the Release Site; and
 - ii. The discharge locations described in the Water Management Plan for Dewatering Tail Creek.
 - b. A detailed description of how, throughout the implementation of all works required by this Order, the siltation of:
 - i. The Water Body and all other water covered areas of the Release Site;
 - ii. All water bodies downstream of the Water Body will be prevented.
 - c. A description of the discharge rates to each downstream water body from each discharge location, including an assessment of the potential for erosion down gradient from the release point due to the additional flow;
 - d. A map and any associated hydrology information detailing:
 - i. The pre-disturbance drainage patterns of the Water Body; and
 - ii. The planned changes to the pre-disturbance drainage patterns as a result of implementing the Comprehensive Remedial Plan; and
 - e. A schedule of implementation for the Erosion and Sedimentation Prevention Plan.

10. FCL shall implement the Erosion and Sedimentation Prevention Plan in accordance with the Director's written authorization.

d. Water Body Monitoring Plan

11. The Water Body Monitoring Plan shall include, at a minimum, each of the following:

- a. A detailed description of how the entirety of the Release Site will be monitored throughout the implementation of the Comprehensive Remedial Plan, including, at minimum:
 - i. The water quality parameters that will be monitored;
 - ii. The locations within the Water Body and Release Site from which samples will be collected;
 - iii. The locations downstream of the Release Site from which samples will be collected;
 - iv. The points of discharge from the Water Body from which samples will be collected;
 - v. The frequency of the collection and analyses of all samples; and
 - vi. Comparison of results to Alberta Tier 1 Guidelines and/or the Surface Water Quality Criteria.

b. A schedule of implementation for the Water Body Monitoring Plan.

12. FCL shall implement the Water Body Monitoring Plan in accordance with the Director's written authorization.

13. Beginning on **February 1, 2017**, and continuing on the first Monday of every month thereafter, FCL shall submit in writing to the Director a Water Body Monitoring Report.

14. In each Water Body Monitoring Report, FCL shall include a written summary describing the results, including an appendix with all laboratory reports, of all of the information described in clauses 11(a) of this Order.

e. Fish Salvage and Release Plan

15. The Fish Salvage and Release Plan shall include at minimum all of the following:

- a. A detailed description of a sampling and salvage program to determine the
 - i. Presence;
 - ii. Species; and
 - iii. Quantities of all fish in the Water Body while dewatering occurs;
 - iv. Release location of salvaged fish.
 - v. Health of released fish.

- b. A schedule of implementation for the Fish Salvage and Release Plan, with a completion date of no later than **February 1, 2017**, unless otherwise authorized in writing by the Director.
16. FCL shall implement the Fish Salvage and Release Plan in accordance with the Director's written authorization.
- f. **Wildlife Management Plan**
17. FCL shall continue to implement the Wildlife Management Plan, dated **June 11, 2016** addressing wildlife deterrents, capture and treatment of impacted wildlife and rehabilitation/release options, until otherwise authorized in writing by the Director.
- g. **Water Body Restoration Plan**
18. Shall submit to the Director, by no later than **April 7, 2017** for the Director's approval a Water Body Restoration Plan.
19. The Water Body Restoration Plan shall include, at a minimum, all of the following:
- a. A detailed description of how the Water Body will be restored to its pre-disturbance condition;
 - b. A long term monitoring plan for assessing the area of the Release Site and downstream to the confluence of the Red Deer River for progressive:
 - i. habitat restoration;
 - ii. re-establishment of fauna;
 - iii. re-establishment of flora.
 - c. A schedule of implementation for the Water Body Restoration Plan.
20. FCL shall implement the Water Body Restoration Plan in accordance with the Director's written authorization.

Reporting

FCL shall, until advised otherwise in writing by the Director, provide to the Director weekly written site status reports by noon of every Friday, of all steps taken to comply with this Order, unless a different frequency of reporting is authorized in writing by the Director.

FCL shall provide to the Director a Final Summary Report, detailing the results and outcomes of all plans submitted as part of the Comprehensive Plan before **June 1, 2017** and a Final Summary Report on Water Body Restoration, one month prior to any request for closure of this Order, for the Director's review.

DATED at the City of Red Deer in the Province of Alberta this 22nd day of December, 2016.

Original Signed by: Andrea Stenvig
Compliance Manager
Red Deer - North Saskatchewan 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. A copy of section 91 is enclosed. For further information, please contact the Board Secretary at #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 Party(ies) shall obtain all necessary approvals in complying with this order.

Take notice that this environmental protection order is a remedial tool only, and in no way precludes any enforcement proceedings being taken regarding this matter under the *Environmental Protection and Enhancement Act* or any other legislation.