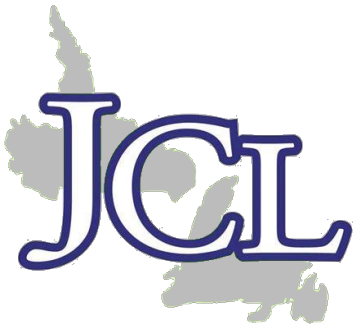
JCL Project No. 24-11

Water Management Plan

R1



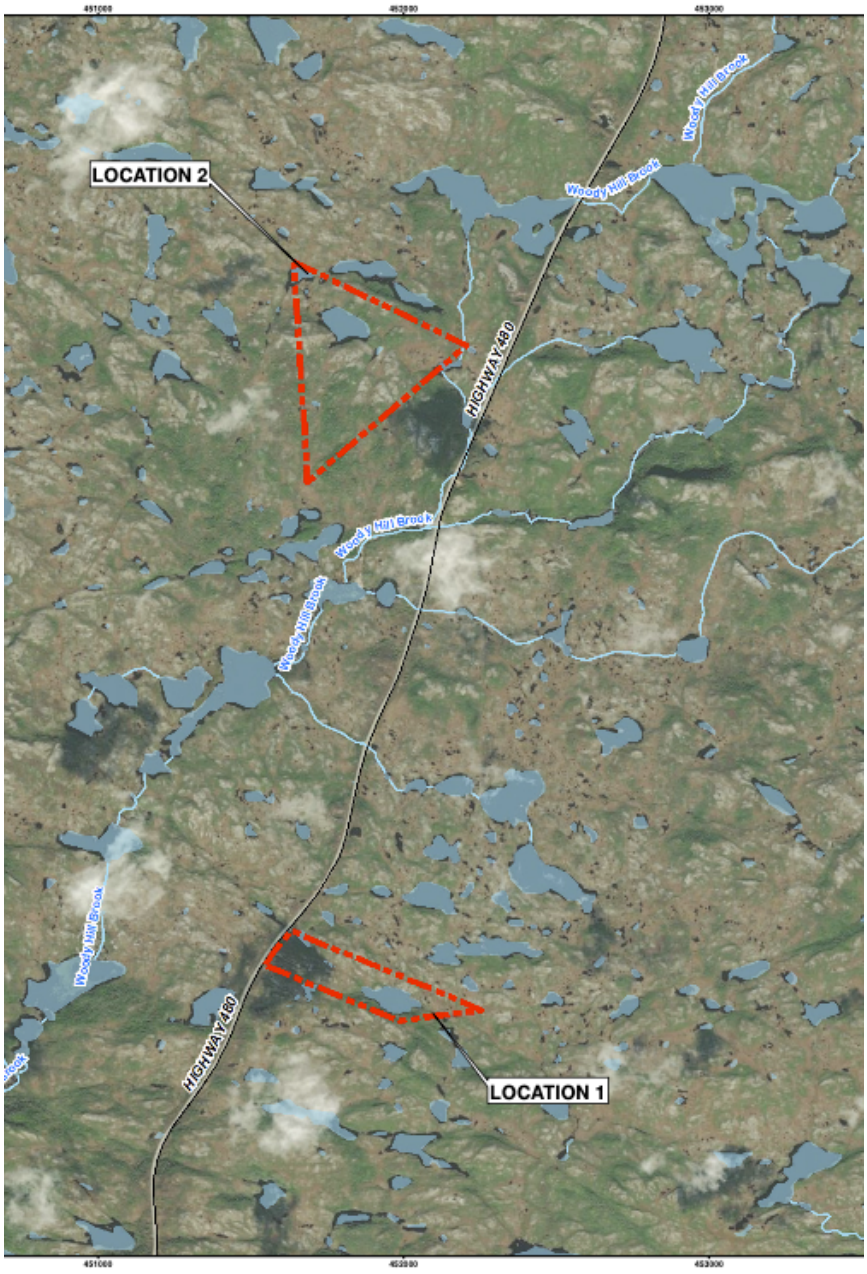
JCL Investments Inc.

Two Sites:

- Burgeo
- Channel -Benoit's Siding

1. Burgeo Remediation Site Background Details:

The Burgeo Remediation consist of 2 locations

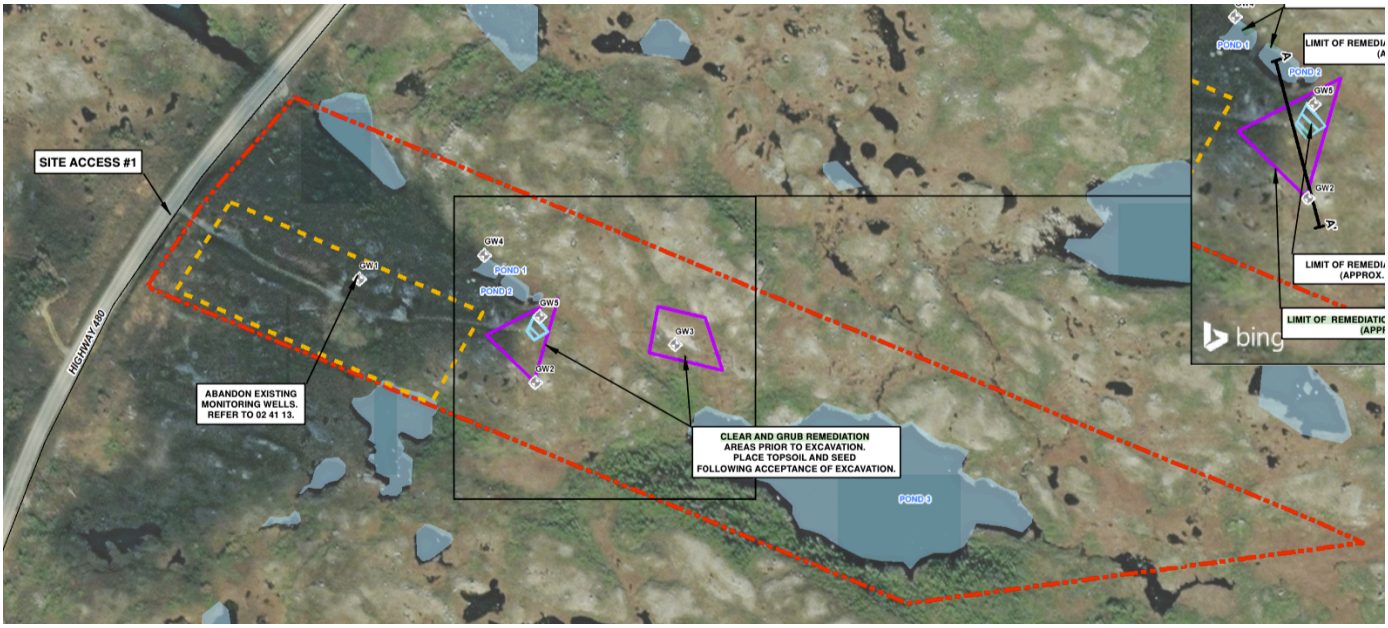


Location 1 Consist of soil removal and disposal of both hazardous and non-hazardous contaminated soils.

Location 2 consist of miscellaneous debris, wood, shingles, plastic, etc.

2. Burgeo Water Collection, Treatment and Disposal from Pond 1 and Pond 2

In Location 01, there are two ponds noted as “Pond 1” and “Pond 2”.



It is noted in the Burgeo Specifications that the impacted water contains copper and lead above applicable standards; thus, these two ponds require water to be removed. For this task, JCL will be subcontracting this work out to GFL – GREEN FOR LIFE.

After discussion with GFL, JCL is proposing the water will be pumped into GFL tanks, trucked away from site, and stored at their facilities until the testing and treatment procedures are completed prior to disposal. By having the water and equipment it is stored in not physically located on the job site, risk exposure is decreased, such as equipment failures (leaks of hydrocarbons).

Details of GFL’s process is attached in Appendix A.

3. Groundwater

There is no groundwater management to be expected throughout the duration of the project as the bases of excavation are above expected groundwater levels.

4. Surface Water

Surface water run off that may be encountered will be managed by ensuring that the water is diverted away from excavations / areas that are identified as remediation zones. If this is necessary, channels will be constructed to allow water to feed into natural drainage systems. At all times clean/run off water, will be kept away from any contaminated areas known as per provided data.

5. **Silt Fencing / Straw Bales**
   Silt Fencing can be installed as necessary.

6. **Erosion and Sedimentation Controls**
   During excavation and stock piling, soils will be stabilized to reduce risk of sedimentation. Any contaminated soils will be stockpiled on a heavy mill plastic lined "basin" which will be in an area away from surface water run-off, water courses etc.

   Excavations will be kept neat and stabilized to reduce risk of sedimentation and sloped/benched to always maintain a safe state.

7. **Waste Water from On Site Equipment Decontamination**
   Any water produced from equipment decontamination will be managed with GFL to ensure no contaminants are re-introduced into the environment.

8. **Sediment Ponds/Settling Ponds/Settling Tanks**
   These are not expected to be required for this scope of work.

9. **Water sampling and water quality monitoring plan**
   Water sampling, testing and quality will be completed by GFL during water removal and disposal.

10. **Decommissioning Monitoring Wells**
    JCL will follow NL Guidance Document for the Management of Impacted Sites in Newfoundland and Labrador. Details below have been extracted from this document.

2.5.1.1 Monitoring/Recovery Wells

1) Wells that have not been monitored for 1 year shall be considered abandoned unless written permission is obtained from PPD to continue usage of the well. This permission is contingent upon inspection and verification that the well is in good condition.

2) Monitoring wells shall be checked to ensure they are free from obstructions prior to sealing. In all cases, the casing must be cut below the natural ground level so as not to interfere with future land use. In no case should the casing be cut less that 1 m below ground level.

3) Decommissioned monitoring wells must be filled with material of equal or lower permeability than the original geologic formation.

4) Monitoring wells up to and including 50 millimetres (mm) in diameter shall be completely filled with a sealant such as bentonite pellets or chips sized no more than 1/4 of the minimum well diameter. The rate of pouring the pellets/chips into the well shall be at a rate to prevent bridging. Where pellets/chips are poured above the water level, the addition of water is required to properly hydrate the bentonite.

5) Monitoring wells and other vertical structures greater than 50 mm and less than or equal to 300 mm diameter are to be filled with alternating layers of 3.0 m sand and 0.3 m bentonite to the bottom of the well, starting with a minimum of 0.3 m of bentonite.

6) Vertical infrastructures with a diameter greater than 300 mm are to be removed and the void filled with material having permeability lower than the native, on site material.

7) Where the abandonment will be completed below grade, the area of the well boring shall be covered with a layer of bentonite, grout, or other sealant before back filling.

8) Acceptable sealants are bentonite grout, pellets, and chips.

9) A monitoring well abandonment record is required for each well that is decommissioned and forwarded to PPD. As a minimum, the log must contain the client name, site name, monitor well/borehole identification, list of materials used, abandonment method, name of site professional, total well depth and borehole log (schematic) showing zone(s) of grout placement.

11. Location Of On-Site Water Treatment Facility.

Contaminated water located in Pond 2, and water located in Pond 1, will be removed from site by GFL. There will be no on-site water treatment facilities required. All water will be removed from site, and not returned. GFL will dispose of water as per regulatory requirements.

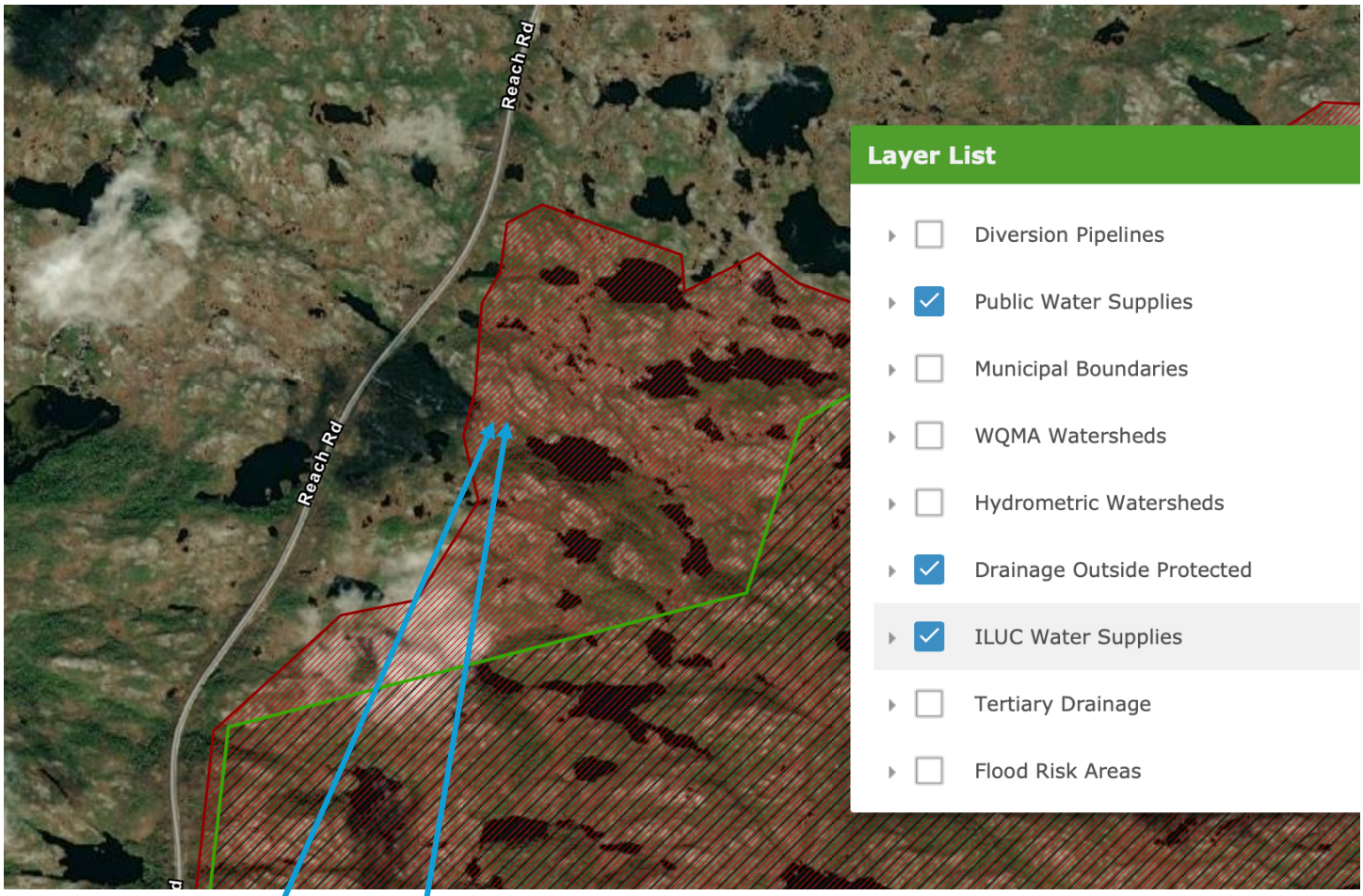
12. Water Use License

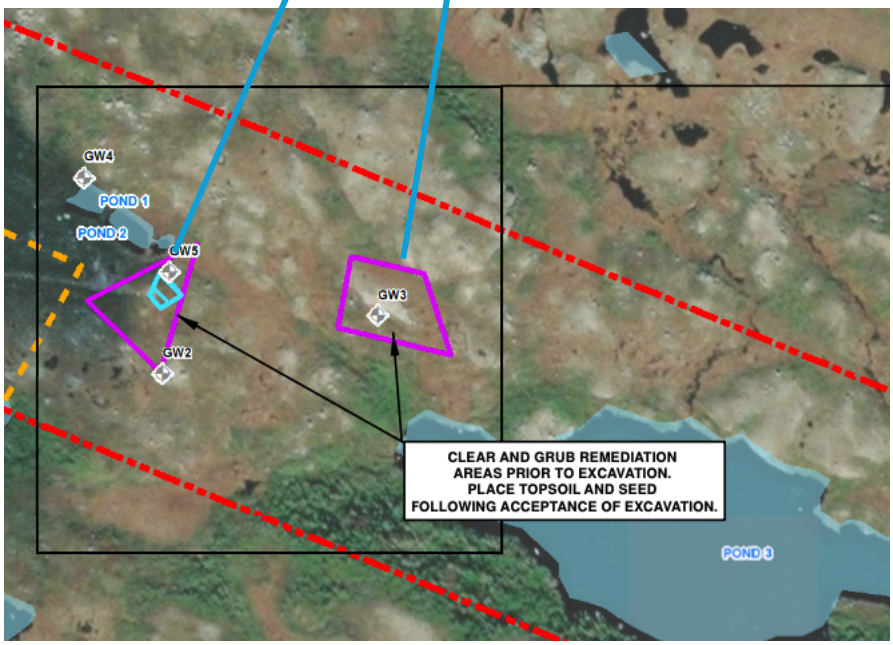
Application Submitted.

13. Other Permits Required for this Scope:

1. Main Application Section 38
    - Application for Permit to Alter a Body of Water
2. “Schedule H” for Section 38
    - Infilling, Dredging, Debris Removal
3. Section 39 Permit
    - Application For A Permit To Develop* In A Protected Public Water Supply Area/Wellhead Protected Water Supply Area

Burgeo Site PPWSA Boundaries **(green line)** / ILUC Water Supplies (red shade)





All excavation work will be performed in the areas highlighted in purple. These workings will not implicate Pond 3.

As Contingency, silt fence will be kept on site to mitigate any identified issues.

Section 39 Permit has been applied for.

APPENDIX A

St. John's Facility
418 Logy Bay Road, St. John's
NL, A1A 5C6
Office: 709-722-8212

August 26, 2024

Attn: Brittany Nickerson, JCL Investments

RE: GFL Environmental Services Water Treatment Process

Brittany,

The below outlines GFL's approved treatment process as noted in the Certificate of Approval (#WMS-07-07-017) previously provided.

Treatment Plant Electronic Coagulation (EC) Unit

- Receive wastewater, filter, blend to treatable batch.
- Water is then pumped from processing tanks, into the EC unit.
- pH is corrected to ~ 6.8 using caustic and/or sulphuric acid
- Water is then pumped through a batch of cells and electricity passes through the water which is then dosed with liquid polymer. This helps flocculate and coagulate contamination to the surface of the water, or heavier contaminates sink to the bottom into a separator vessel.
- From the separator vessel light sludge is skimmed off the water surface, and heavier sludge is pumped via sump pump into on site storage tank. From storage tank sludge is sent to filter press and liquid sludge is dewatered. Then can be landfilled once batch tested
- From the separator tank clean water flows by gravity to 2 settling tanks.
- From settling tanks clean water is then passed through 3 absorption vessels. Mcm 830, carbon, then aafs 50.
- Once water has reached parameters below discharge criteria, it is sent to the sanitary sewer for disposal.

Treatment Plant Chemical Precipitation

- Receive wastewater, filter, blend to treatable batch.
- Water is then sent from processing tanks to oily water separator. In the oily water separator light ends float to the top and heavier to the bottom. This keeps any free oily sludge product from entering the reaction tanks.
- From the oily water separator, water is then pumped into the first reaction tank. Where, depending on the batch plan. Water will be first doused with sulphuric acid or caustic soda. At this stage the water will be changed to either very basic or very acidic.
- Aluminum sulphate is also dosed in the first reaction tank which helps to coagulate the particles. Mixers keep the solutions suspended and then flows into the next tank by gravity.

- Here liquid polymer is added and kept mixed, then flows into a third tank by gravity where it is mixed again to give it more reaction time.
- By gravity water then flows into clarifier vessel. Here particles settle by gravity to the sloped bottom of the clarifier.
- Settled sludge is collected here and sent to on-site tank, before going to filter press to be dewatered.
- Water is directed upward across plates upon which fine solids can settle, accumulate and fall back to the bottom of the tank.
- Overflow from the clarifier has a low suspended solids content and flows by gravity into reaction tank 0301.
- In reaction tank 0301, depending on the batch plan. Water will be corrected to a more neutral pH, using caustic soda or sulphuric acid.
- As well sodium hypochlorite and ferric chloride are dosed into this tank.
- From tank 0301 water flows by gravity and liquid polymer is injected inline, flowing into the DAF vessel.
- In the DAF unit, pressurized recycled water is introduced through nozzles into the front section of the DAF.
- As the water passes through the nozzles water become depressurized. This causes dissolved air in the water to come out of solution as small bubbles. These bubbles collide with and adhere to suspended particles in the feed water forming bubble - floc aggregates. The aggregates rise to the surface because the aggregate has a density much lower than water.
- A skimmer is used to push the suspended solids that reach the surface over a wire and into a sludge collection chamber. That is then sent to filter press. Where it can be dewatered and sent to landfill.
- Clarified water at the end of the DAF will be directed by baffling into a filtered water tank. From this tank water will be pumped through the downstream media filters.
- Media filters consist of 10 and 5 micron filter bags before the water it's the absorption vessels. First stage vessels include multimedia consisting of coarse stone, anthracite and macrolite.
- These filters are set on a back wash to keep the media from fouling as quick.
- From the multimedia vessels water will then pass through 2 vessels of carbon.
- Once the water has been analyzed to be below criteria, the water then can be released to the sanitary sewer for disposal.

Newfoundland Labrador

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment and Climate Change

CERTIFICATE OF APPROVAL

Pursuant to the *Environmental Protection Act, SNL 2002, Sections 16, 78 and 83.*

Issued:	February 16, 2023	Approval No.:	WMS-07-07-017
Expiration:	March 31, 2028	New File No.:	839. GFL.001

Proponent: **GFL Environmental Services Inc.**
P.O. Box 8338
St. John's, NL
A1B 3N7

Attention: Mr. Dave Warren

Re: **Collection of liquid wastes (Province-Wide)**
Fixed Oily Water System (St. John's)
Treatment of non-hazardous waste drilling muds
On going transfer and interim storage of waste products and from offshore vessels at Pier 18 West, St. John's harbour

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Approval is hereby given for the continued province-wide operation of a waste management system consisting of : a) collection of liquid wastes, b.) collection and storage of oily water and permanent oily water treatment unit; c) treatment of non-hazardous waste drilling muds; and d) transfer and interim storage of waste products from offshore vessels at Pier 18 West in St. John's Harbour.

This approval does not release the holder from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies. Approval from the Department of Environment Climate Change (the Department) shall be obtained prior to any significant change in the design, construction, installation, or operation of the facility, including any future expansion of the works. This certificate shall not be sold, assigned, transferred, leased, mortgaged, sublet or otherwise alienated by the holder without obtaining written prior approval from the Minister.

This approval is subject to the terms and conditions as contained in Appendices 'A, B, and C' attached hereto, as may be revised from time to time by the Department and which form part of this certificate of approval. Failure to comply with any of the terms and conditions may render this certificate of approval null and void, may require the proponent to cease all activities associated with this certificate of approval, may place the proponent and its agent(s) in violation of the *Environmental Protection Act,* SNL., 2002, c. E-14-2, and will make the proponent responsible for taking such remedial measures as may be prescribed by the Department. The Department reserves the right to add, delete, modify or revoke this approval at any time.

Peter Haney

For **MINISTER**

General

1. This approval is for the continued province-wide collection and transportation of used oil, waste gasoline, waste jet fuel, waste diesel, waste furnace oil, oily water, oiled rags, industrial waste liquids, wastewater, sewage, septic and sewage sludge, digester sludge, tank bottom sludge, de-icing fluids and emulsions; and tank, sump and catch basin cleaning materials. Specific terms and conditions for these activities are located in Appendix A.

2. This approval is also for operating a wastewater treatment system that consists of the following: chemical injection system; water clarifier and dissolved air floatation units; electrocoagulation; and advanced filtration. Specific terms and conditions for this activity are located in Appendix B.

3. This approval is also for the continued treatment of non-hazardous waste drilling muds. Specific terms and conditions for this activity are located in Appendix C.

4. This approval is also for the associated activity of transfer and interim storage of waste products from offshore vessels at Pier 18 West in St. John's Harbour. Specific terms and conditions for this activity are located in Appendix C.

5. Prior to any expansion or modification of the facility, a letter of application shall be forwarded to Department requesting an amendment to this approval.

Definitions

6. In this Certificate of Approval:
   - **adverse effect** means an effect that impairs or damages the environment and includes an adverse effect to the health of humans;
   - **BTEX** means benzene, toluene, ethylbenzene, and/or xylene;
   - **contaminant** means, unless otherwise defined in the regulations, a substance that causes or may cause an adverse effect;
   - **CCME** means Canadian Council of Ministers of the Environment;
   - **CEQG** means CCME Canadian Environmental Quality Guidelines;
   - **Department** means Department of Environment and Climate Change;
   - **Director** means the Director of the Pollution Prevention Division of the Department;
   - **discharge location** means either a sanitary sewer, storm sewer, waterbody, groundwater re-injection, holding tank/pond, or settling pond;
   - **East Coast Sewage Disposal Ban** means that the Department does not approve the landfill disposal on the Avalon Peninsula defined as all areas east of and including Shoal Hr. and which is bounded in the south by Swift Current;
   - **EDMS** refers to the Pollution Prevention Division's Environmental Data Management System;
   - **FAL** means freshwater aquatic life;

- **oily water** means water contaminated with only TPH in excess of 15 ppm (or 100 ppm if discharging to sanitary sewer systems with a WWTP. It should be noted that WWTPs do not treat flows from storm sewers). Furthermore, oily water may contain TSS below or above acceptable levels, but not likely contain other contaminants of concern;
- **PCB** means polychlorinated biphenyl;
- **PCS** means petroleum contaminated soil
- **QA/QC** means Quality Assurance/Quality Control;
- **Regional Director** means the Director of the nearest Service NL office;
- **TPH** means total petroleum hydrocarbon including BTEX as measured by the Atlantic PIRI method;
- **USGPM** means US gallons per minute. It should be noted that 1 US gallon is approximately equal to 0.8326 imperial gallon or 3.785 litres;
- **used lubricating oil** means lubricating oil that as a result of its use, storage or handling, is altered so that it is no longer suitable for its intended purpose, but is suitable for refining or other permitted uses;
- **used oil** means a used lubricating oil or waste oil;
- **VDU** refers to vacuum distillation unit as a means to treat waste drill mud and cuttings;
- **waste oil** means an oil that as a result of contamination by any means or by its use, is altered so that it is no longer suitable for its intended purpose; (It should be noted that oil collected by GFL's unit will most likely be considered as waste oil and, therefore, considered used oil);
- **West Coast Sewage Disposal Ban** means that the Department does not approve the landfill disposal in the area bounded: to the north by the northern boundary of Gros Morne National Park; to the south by the southern boundary of Barachois Pond Provincial Park; to the west by Romaines River; and to the east by Halls Bay; and
- **WWTP** means wastewater treatment plant.

Application Submissions

7. A request for amendment of the Certificate of Approvals for continued operation of a waste management system including continued province wise collection of oily waste, oily water treatment and collection and treatment of non-hazardous drilling muds received by email on January 27, 2023

8. GFL provided updated financial assurance and insurance documents; and an annual report for 2022 on January 30, 2023.

Emergency & OHS Preparedness

9. The proponent shall provide annual updates of their contingency plan for environmental and OHS emergencies with Service NL and the Department. An updated copy of the contingency plan shall be kept on site at all times.

10. The proponent shall ensure that this approval, or a copy, shall be kept on site at all

times and that personnel directly involved in the operation of the remediation facility are made fully aware of the terms and conditions which pertain to this approval.

11. All responsible personnel who are directly involved with operation and maintenance of the processing system shall be provided copies of this approval.

12. For after-hours emergencies and spill report call: **1-800-563-9089 or (709) 772-2083.**

13. All appropriate health and safety procedures shall be followed at the site in accordance with applicable legislation.

14. The treatment and monitoring system(s) shall be operated and maintained in accordance with the respective manufacturers' operating and maintenance specifications.

15. The operator(s) shall have petroleum fire and spill response training.

Further Assessment

16. The Minister may at any time, with reasonable notice, require the proponent to conduct or have conducted environmental studies, site assessments, sampling, testing, or investigations where, based upon reasonable and probable grounds, the Minister is of the opinion that this waste management system and other activities covered by this approval may have had, or has the potential to have, an adverse effect on the environment.

Digital Government and Service NL

17. Through a Memorandum-of-Understanding this Department has authorized the Department of Digital Government and Service NL (DGSNL) to act on its behalf in inspecting and/or auditing this operation for compliance under this approval and all applicable provincial Acts and Regulations.

Legislation

18. The activities associated with this operation may involve, but not be limited to, the following provincial Acts and Regulations and any future amendments:

- *Dangerous Goods Transportation Act*
- *Fire Prevention Act,*
- *Environmental Protection Act*
- *Air Pollution Control Regulations*
- *Storage and Handling of Gasoline and Associated Products Regulations*
- *Used Oil and Used Glycol Control Regulations*
- *Water Resources Act*
- *Environmental Control Water and Sewage Regulations, 2003.*

19. The activities associated with this operation may involve, but not be limited to, the following federal Acts and Regulations:
    - *Canadian Environmental Protection Act, 1999 and Regulations*
    - *Cross-Border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations*
    - *Transportation of Dangerous Goods Act and Regulations*
    - *Fisheries Act*
    - *National Fire Code*

Financial Assurance

20. Valid environmental impairment liability insurance in the minimum amount of $1,000,000 shall be maintained otherwise this approval shall be considered null and void.

21. A current surety bond of $10,000 shall be on file with the Department, otherwise this approval shall be considered null and void.

22. Annual updates of the financial assurance documents shall be filed with the Department.

23. GFL shall provide the Department with three months advance notice if they intend to cancel coverage and/or change the insurer or bonding agent.

Spill Prevention

24. Areas in which chemicals are used or stored shall have impermeable floors and dikes or curbs and shall not have a floor drain system, nor shall it discharge to the environment. Areas inside the dikes or curbs shall have an effective secondary containment capacity of at least ***110%*** of the chemical storage tank capacity, in the case of a single storage container. If there is more than one storage container, the diked area shall be able to retain no less than ***110% of the capacity of the largest container or 100 %*** **of the capacity of the largest container plus 10% of the aggregate capacity of all additional containers, whichever is greater.** These diked areas shall be kept clear of material that may compromise the capacity of the dike system. Once a year, the dikes shall be visually inspected for their liquid containing integrity, and repairs shall be made when required. Once every ten years, the dikes shall be inspected, by a means other than visual inspection, for their liquid containing integrity, and repairs shall be made when required.

Oily Water & Used Oil Holding Tanks

25. Oily water and waste oil holding tanks shall be approved by Service NL as per the ***Used Oil and Used Glycol Control Regulations.***

Laboratory Analysis & QA/QC

26. Unless otherwise stated herein, all liquid and solids analysis performed pursuant to this Approval shall be done by a contracted commercial or in-house laboratory as per the ***Accredited and Certified Laboratory Policy (PD:PP2001-01.2)***.

Monitoring Alteration

27. The Director has the authority to alter the monitoring programs or require additional testing at any time when:

- pollutants might be released to the surrounding environment without being detected;
- an adverse environmental effect may occur; or
- it is no longer necessary to maintain the current frequency of sampling and/or the monitoring of parameters.

28. GFL may, at any time, request that the monitoring program or requirements of this Approval be altered by:
- requesting the change in writing to the Director; and
- providing sufficient justification, as determined by the Director.

29. The requirements of this Approval shall remain in effect until altered, in writing, by the Director.

Reporting

30. Monthly reports containing the environmental compliance monitoring and sampling information required in this Approval shall be received by the Director in digital format within 30 calendar days of the reporting month. All related laboratory reports shall be submitted with the monthly report in Extensible Markup Language (XML) format and Adobe Portable Document Format (PDF). Digital report submissions shall be uploaded through the Department's Environmental Data Management System web portal. Any questions may be addressed to the Pollution Prevention Division.

31. The annual report shall be submitted to the Department and Service NL by the 31st of January, of the following year, and shall include:
    a. A summary of pre- and post treatment analytical results for all waste streams received and processed at the facility over the course of the reported year; and
    b. A summary of complete volumes of waste streams received and the applicable recycling or final disposal destination. The report shall also include the current insurance and bonding documents as specified in the ***Financial Assurance*** section and any updates to the *Contingency Plan* as discussed in the ***Emergency & OHS Preparedness*** section.

32. All incidents of:
- *Contingency Plan* implementation;

- non-conformance of any condition within this approval;
- spillage or leakage of a regulated substance;
- whenever discharge criteria is, or is suspected to be, exceeded; or
- verbal/written complaints of an environmental nature from the public received by GFL related to the temporary site

shall be immediately reported, within one working day, to a person or message manager or facsimile machine to Digital Government and Service NL by phoning or faxing.

DGSNL (Mount Pearl)
P.O. Box 8700
A1B 4J6
Telephone (709) 729-3699
Facsimile: (709) 729-7400

DGSNL (Clarenville)
P.O. Box 1148
Clarenville, NL
A0E 1J0
Telephone (709) 466-4060
Facsimile (709) 466-5674

DGSNL (Gander)
P.O. Box 2222
A1V 2N9
Telephone (709) 256-1420
Facsimile: (709) 256-1438

DGSNL (Corner Brook)
P.O. Box 2006
Corner Brook, NL
A2H 6J8
Telephone: (709) 637-2204
Facsimile: (709) 637-2681

DGSNL (Happy Valley-Goose Bay)
P.O. Box 3014 - Stn "B"
Goose Bay, NL
A0P 1E0
Telephone: (709) 896-5428
Facsimile: (709) 896-4340

33. A written incident report including a detailed description of the incident, summary of contributing factors and an action plan to prevent future incidents of a similar nature, shall be submitted to the respective Regional Director of Service NL. The action plan shall include a description of actions already taken and future actions to be implemented, and shall be submitted within thirty days of the date of the initial incident.

Expiration

34. This approval expires on March 31, 2028.

35. Should the proponent wish to continue to operate beyond this expiry date, a written request shall be submitted to the Department for the renewal of this approval. Such request shall be made at least ***2 months prior to expiration.***

c.c. Rob Locke, Director
Pollution Prevention Division
Department of Environment,

Heather Jesso
Compliance Promotion & Support
Environment Canada

Climate Change and Municipalities
rlocke@gov.nl.ca

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Wayne Lynch, Director
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(Gander)
WayneLynch@gov.nl.ca

Appendix A - Collection of Liquid & Associated Waste

General

1. This approval is for the continued province-wide collection and transportation of used oil, waste gasoline, waste jet fuel, waste diesel, waste furnace oil, oily water, oiled rags, industrial waste liquids, wastewater, sewage, septic and sewage sludge, digester sludge, tank bottom sludge, de-icing fluids and emulsions; drilling fluids and tank, sump and catch basin cleaning materials.

Landfilling of Liquid & Associated Wastes

2. Landfill disposal of water containing petroleum hydrocarbons is prohibited. Disposal of used oil, petroleum contaminated water or virgin/unused waste petroleum products, including petroleum contaminated snow and ice, at private, industrial or municipal landfills is prohibited unless otherwise approved by the Department.

3. All new and/or amended bans of liquid & associated wastes, as approved and described by the Minister of the Department, will apply to the operation of the waste management system described in this approval.

4. The liquid & associated wastes not subjected to any bans, the disposal at an approved landfill site is permitted with the approval of the owner/operator provided the following conditions are met:

   - the waste shall be placed in a trench of sufficient size to handle the volume to be disposed;
   - the waste shall be limed before backfilling with sufficient lime to suppress odour and other vectors; and
   - the waste is covered with at least 60cm of fill material.

Transportation of Dangerous Goods and Training

5. The characteristics of the waste product being collected will determine whether or not provisions of provincial and/or federal dangerous goods regulations apply. Safety standards, placards, labels, tanker truck inspections, etc. under the provisions of the ***Transportation of Dangerous Goods Act*** and Regulations are applied to all transport of waste and hazardous waste dangerous goods.

6. The ***Canadian Environmental Protection Act*** and ***Cross-Border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations*** have waste manifesting requirements and these forms may be obtained from the Department. Completed copies of the manifest shall be returned as indicated to the Waste Management Section of the Department.

7. The company name and phone number shall be printed on both doors and rear of all vehicles used in the collection and transportation of liquid and associated wastes. All lettering shall be at least 5 centimetres in height.

8. The ***Dangerous Goods Transportation Act*** and Regulations require that all personnel involved in the handling, offering for transport, and transport of dangerous goods participate in a training program which includes the essential training components as outlined in the ***Transportation of Dangerous Goods Act*** and Regulations. In addition to these essential components, the training program shall also include relevant waste management legislation, regulations, and guidelines and the major environmental and health and safety concerns for the wastes to be handled, offered for transport, or transported.

Used Oil

9. Within the province, used oil may be delivered to an approved used oil storage facility.

10. Hazardous, contaminated or any class of used oil shall be delivered to a facility in the province which is approved to store, transport, re-refine, re-use, treat, and/or dispose of hazardous, contaminated or the applicable class of used oil.

11. Where possible, the operator of a used oil collection vehicle shall visually inspect each container of used oil for visible contamination before the contents are transferred to the collection tank/truck to avoid contaminating the used oil that has been collected.

12. Used oil collectors and transporters are prohibited from blending used oils with virgin oil in an effort to meet the specification levels for used oil combustion.

13. Records of the volume of used oil **received or collected**, the date of the transaction, and the person/company from whom the used oil was obtained, shall be maintained and the records held for a period of not less than three years from the date of the transaction, and made available for review to officials of Service NL.

14. Records of the volume of used oil **transferred** for combustion or treatment and for shipment out of province, the date of the transaction, and the person/company that received the used oil shall be maintained and the records held for a period of not less than three years from the date of the transaction, and made available for review by officials of Service NL.

15. An annual summary of the records of used oil **received, collected** and **transferred** shall be provided to Service NL in electronic or hard copy form by January 31 of the following year.

Sewage & Septic wastes

16. All sewage & septic waste collected within the east and west coast sewage disposal ban areas shall be delivered to an approved treatment facility.

17. For sewage and septic wastes collected outside these areas the disposal at an

approved landfill site is permitted with the approval of the owner/operator provided the following conditions are met:

- waste shall be placed in a trench of sufficient size to handle the volume to be disposed;
- waste shall be limed before backfilling with sufficient lime to suppress odour and other vectors; and
- waste shall be covered with at least 60cm of fill material.

18. Discharge of untreated sewage and septic wastes into a municipal sewer system is not permitted.

19. Records of the volume of sewage and septic wastes received, the date of the transaction and the person from whom the waste was obtained shall be maintained, and the records held for a period of not less than three years from the date of the transaction, and the records must be made available for review by officials of the Department and Service NL.

20. A summary of the above information shall be provided to the Department and Service NL in electronic or hard copy form by January 31 of each year for the preceding calendar year.

Sludge and/or Solid Hazardous Waste

21. Until confirmed to be non-hazardous, all potentially hazardous waste shall be placed in corrosion resistant and leak proof containers and placed in storage on an impermeable surface. These containers shall be covered to prevent the infiltration of precipitation. Containers shall be inspected on a weekly basis and those leaking or showing signs of deterioration shall be replaced or repaired immediately.

22. Prior to landfill disposal, all solid wastes generated by the treatment system shall have an adequate chemical analysis performed to verify they do not contain hazardous constituents. Where concentrations of contaminants are within acceptable limits as per the latest edition of the CCME recommended ***Canadian Soil Quality Guidelines,*** as outlined in the latest edition of the CEQG for commercial and/or industrial land use, the waste is not considered hazardous and may be disposed of to a landfill with the approval of Service NL and landfill owner/operator.

23. For parameters not included in this document refer to the CCME September 1991 *Interim Canadian Environmental Quality Criteria for Contaminated Sites*. Where one or more contaminants are in excess of the CSQG, the wastes must be further tested using the US EPA Method 1311, TCLP or other procedure as determined by the Department.

24. Wastes failing the TCLP are considered hazardous and will not be approved for landfill disposal in this province and will require hazardous waste manifesting before shipment. For wastes meeting the TCLP criteria, a copy of the laboratory

results shall be forwarded to Service NL with a request for landfill disposal.

25. Hazardous wastes are those which are corrosive, reactive, flammable, ignitable, carcinogenic, teratogenic, mutagenic, infectious, oxidizing, radioactive, explosive, poisonous/toxic (acute and chronic), bio-accumulative, persistent, TCLP defined leachable, or any waste which does not meet any of the above criteria but has other properties of concern which are significant enough to consider the material to be hazardous.

26. Municipal and industrial landfills in this province are not permitted to accept hazardous waste materials. Where there exists any doubt regarding the properties of a given waste, consultation with Service NL is required prior to disposal.

27. Non-hazardous wastes are approved for landfill disposal with the permission of the local Service NL office and the landfill site owner/operator.

Appendix B - Permanent Oily Water Treatment

General

1. This appendix applies to the operation of a wastewater treatment system that consists of the following: chemical injection system; water clarifier and dissolved air floatation units; electrocoagulation; and advanced filtration. This wastewater treatment system is located permanently at the proponent's facility on Logy Bay Road, St. John's, Newfoundland.

Batch Discharge Monitoring

2. Treated wastewater shall be sampled and analyzed as per the **Laboratory Analysis & QA/QC** (Section 26). Each batch is monitored as per Table 1 and subject to discharge criteria in Table 2.

Non-TPH & TSS Contaminated Water

3. Treatment technologies for contaminants other than TPH and TSS shall require separate approval from the Department.

4. For those parameters regulated in a Schedule of the ***Environmental Control Water and Sewage Regulations NLR 65/03***, the limits established in the regulations shall apply.

Treated Oily Water, TSS Mitigation & Disposal

5. Discharge to the City of St. John's municipal sewer requires permission from the City of St. John's.

Table 1

Location	EDMS Code	Parameters	Frequency
Waste Water Discharge	00510	TSS, pH, TPH (+BTEX), B, Cd, Cr, Cu, Fe, Pb, Hg, Ni, Zn, cyanide, phenols, phosphates (as P_2O_5)	Per batch

Table 2

Effluent Discharge Criteria (EDC) (all units are mg/l unless otherwise noted)	
Parameter	Maximum Allowable or Range
Total Petroleum Hydrocarbons (TPH)	100
Total Suspended Solids (TSS)	350
Boron	5.0
Cadmium	0.05
Chromium (trivalent)	1.0
Copper	0.3
Iron	15
Lead	0.2
Mercury	0.005
Nickel	0.5
Zinc	0.5
pH	5.5-9.0 pH units
Cyanide	2.0
Phenols	0.5
Phosphates (as P2O5)	10.0

Appendix C Collection and Treatment of Non-Hazardous Drilling Muds

1. The transfer of waste products from offshore service vessels at Pier 18 West shall be completed through the existing dolphin piping system.

2. Interim storage of non-hazardous waste products (waste drilling muds, used oil and oily water shall be in four (4) newly installed above-ground storage tanks for transfer to the approved facility located on Logy Bay Road.

3. Collected drill muds may be processed at the Logy Bay Rd. Facility. Separated oily water is discharged through the permanent oily water treatment system and subject to Appendix B. Used oil is treated and handled as per Appendix A. Non hazardous drilling muds are treated in a Vacuum Distillation Unit (VDU). Solids generated from the treatment unit are analysed as per Appendix C, Clause 4 prior to disposal to landfill. Disposal to landfill is permitted on a batch basis provided they meet CCME guidelines for industrial soil quality and/or pass the Toxicity Characteristic Leaching Procedure USEPA Method 1311. Solids generated from the VDU are sent to an approved soil remediation facility. Permission to direct the solids from the VDU elsewhere requires prior permission from the Department.

4. The compliance monitoring program for treated non-hazardous drilling muds will continue as follows:
    1) Sampling and analyses of treated solids for TPH shall be done on a monthly basis using a commercial accredited laboratory.
    2) Batch analyses of treated soils must be conducted using either the in- house TPH analyzer or an accredited facility. TPH results and date must be provided in a word or pdf document with the monthly report. Calibration and maintenance records of the in-house analyzer must be maintained on site and available to officials of the Department during site visits upon request.
    3) Laboratory analyses for leachable metals must continue on a quarterly basis to ensure criteria parameters remain satisfactory for landfill disposal.
    4) Results of the compliance monitoring program for treated non-hazardous drilling muds are subject to Reporting (Section 30). The EDMS Code for the TDU while in operation remains 00675.