



GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR
Department of Municipal Affairs and Environment

CERTIFICATE OF APPROVAL

Pursuant to the Environmental Protection Act, SNL 2002 c E-14.2 Section 83

Issue Date: *November 27, 2019*

Approval No. AA19-115653

Expiration: *July 7, 2023*

File No. 722.217.2

Proponent: **Corner Brook Pulp and Paper Limited**
P.O. Box 2001
Corner Brook, Newfoundland
A2H 6J4

Attention: Darren Pelley - General Manager

Re: **Corner Brook Pulp and Paper Mill**

Approval is hereby given for the operation of a pulp and paper mill and other associated works located at Corner Brook, Newfoundland.

This Certificate of Approval does not release the proponent from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies. Nothing in this Certificate of Approval negates any regulatory requirement placed on the proponent. Where there is a conflict between conditions in this Certificate of Approval and a regulation, the requirement in the regulation shall take precedence. Approval from the Department of Municipal Affairs and Environment shall be obtained prior to any significant change in the design, construction, installation, or operation of the Corner Brook Pulp and Paper Mill, including any future expansion of the Corner Brook Pulp and Paper Mill. This Certificate of Approval shall not be sold, assigned, transferred, leased, mortgaged, sublet or otherwise alienated by the proponent without obtaining prior approval from the Minister.

This Certificate of Approval is subject to the terms and conditions as contained therein, as may be revised from time to time by the Department. 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*, 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 or modify conditions to correct errors in the Certificate of Approval or to address significant environmental or health concerns.

For 
MINISTER

TERMS AND CONDITIONS FOR APPROVAL No. AA19-115653

November 27, 2019

General

1. This Certificate of Approval is for the operation of a pulp and paper mill and other associated works, including; a steam plant, wood yard, an effluent treatment system, a nominal 15 MW cogeneration facility, and site infrastructure located at Corner Brook, Newfoundland. Extensive future expansion or change of activities will require a separate Certificate of Approval.
2. Any inquiries concerning this Approval shall be directed to the Western Regional Office of the Pollution Prevention Division (telephone: (709) 643-6114; or facsimile: (709) 643-8654).
3. In this Certificate of Approval:
 - **accredited** means the formal recognition of the competence of a laboratory to carry out specific functions;
 - **acutely lethal** means that the effluent at 100% concentration kills more than 50% of the rainbow trout subjected to it during a 96-hour period, when tested in accordance with the ALT;
 - **air contaminant** means any discharge, release, or other propagation into the air and includes, but is not limited to, dust, fumes, mist, smoke, particulate matter, vapours, gases, odours, odorous substances, acids, soot, grime or any combination of them;
 - **ALT (acute lethality test)** means a test conducted as per Environment and Climate Change Canada's Environmental Protection Service reference method EPS/1/RM-13 Section 5 or 6;
 - **batch** means oil from one tank with nothing added to the tank between withdrawals;
 - **BOD₅** means biochemical oxygen demand (5 day test);
 - **CBPPL** means Corner Brook Pulp and Paper Limited;
 - **composite sample** means a quantity of undiluted effluent collected continually at an equal rate or at a rate proportionate to flow over a designated sampling period;
 - **CSQG** means the Canadian Soil Quality Guidelines;
 - **daphnia magna test** means a test conducted as per Environment Canada's Environmental Protection Service reference method EPS 1/RM/14 Section 5 or 6;
 - **Department** means the Department of Municipal Affairs and Environment and its successors;

- **Director** means the Director of the Pollution Prevention Division of the Department;
- **discharge criteria** means the maximum allowable levels for the parameters listed in *Table 3*;
- **EDMS** means Environmental Data Management System;
- **GAP** means *Storage and Handling of Gasoline and Associated Products Regulations, 2003*;
- **grab sample** means a quantity of undiluted sample collected at any given time. In this Approval it refers to used oil and effluent;
- **hazardous waste** means a product, substance or organism that is intended for disposal or recycling, including storage prior to disposal or recycling, and that:
 - (a) is listed in Schedule III of the *Export and Import of Hazardous Waste Regulations under the Canadian Environmental Protection Act, 1999*;
 - (b) is included in any of Classes 2 to 6, and 8 and 9 of the *Transportation of Dangerous Goods Regulations* under the *Transportation of Dangerous Goods Act, 1992*; or
 - (c) exhibits a hazard classification of a gas, a flammable liquid, an oxidizer, or a substance that is dangerously reactive, toxic, infectious, corrosive or environmentally hazardous;
- **licensed** means has a Certificate of Approval issued by the Minister to conduct an activity;
- **liquid waste** is defined by the *Slump Test* (Canadian Standards Association test method A23.2-5C for determining the slump of concrete). The liquid waste slump test involves placing the waste in a 30 cm open inverted cone. The cone is removed and the immediate decrease (slump) in height of the waste material is measured. If the material slumps such that the original height is reduced by 15 cm or more, the waste is considered liquid;
- **malfunction** means any sudden, infrequent and not reasonably preventable failure of air pollution control equipment, wastewater treatment equipment, process equipment, or a process to operate in a normal or usual manner. Failures, caused in part by poor maintenance or careless operation, are not malfunctions;
- **Minister** means the Minister of the Department;
- **PM_{2.5}** means particulate matter with a diameter of 2.5 µm or less;
- **proficiency testing** means the use of inter-laboratory comparisons to determine the performance of individual laboratories for specific tests or measurements;
- **QA/QC** means Quality Assurance/Quality Control;

- **reference production rate** means the highest value of the 90th percentile of the daily production of finished product at the mill for any of the previous three years. The 90th percentile of the daily production of finished product at a mill for a year is a statistically derived value that is equal to the quantity of finished product, produced daily by the mill, that was exceeded on 10 percent of the days that the mill operated in the year;
- **register(ed)**, in the context of storage tanks, means that information regarding the storage tank system has been submitted to a Service NL office and a registration number has been assigned to the storage tank system. In the context of dispersion modelling, registered means submitted to and approved by the Department in accordance with departmental policy and guidelines;
- **regulated substance** means a substance subject to discharge limit(s) under the *Environmental Control Water and Sewage Regulations, 2003*;
- **SO₂** means sulfur dioxide;
- **spill or spillage** means a loss of gasoline or associated product in excess of 70 litres from a storage tank system, pipeline, tank vessel or vehicle, or an uncontrolled release of any volume of a regulated substance onto or into soil or a body of water;
- **stack** means a chimney, flue, conduit or duct arranged to conduct an air contaminant into the environment;
- **storage tank system** means a tank and all vent, fill and withdrawal piping associated with it installed in a fixed location and includes a temporary arrangement;
- **TDS** means total dissolved solids;
- **TOHs (as chlorine)** means total organic halogens (as chlorine);
- **TPH** means total petroleum hydrocarbons, as measured by the Atlantic PIRI method;
- **TPM** means total particulate matter with diameters less than 100µm;
- **TSS** means total suspended solids;
- **used glycol** means glycol that, through use, storage or handling, can no longer be used for its original purpose; and
- **used oil** means oil that, through use, storage or handling, can no longer be used for its original purpose.

4. All necessary measures shall be taken to ensure compliance with all applicable acts, regulations, policies, guidance documents and guidelines, including the following, or their successors:
- *Environmental Protection Act;*
 - *Water Resources Act;*
 - *Air Pollution Control Regulations, 2004;*
 - *Environmental Control Water and Sewage Regulations, 2003;*
 - *Halocarbon Regulations;*
 - *Storage and Handling of Gasoline and Associated Products Regulations, 2003;*
 - *Used Oil and Used Glycol Control Regulations;*
 - *Heating Oil Storage Tank System Regulations, 2003;*
 - *Ambient Air Monitoring Guidance Document;*
 - *Sampling of Water and Wastewater - Industrial Effluent Applications Guidance Document;*
 - *Accredited Laboratory Policy;*
 - *Compliance Determination Guidance Document;*
 - *Stack Emission Testing Guidance Document;*
 - *Plume Dispersion Modelling Guidance Document;*
 - *Precipitation Drainage of Dyke Areas Guidance Document;*
 - *Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Above Ground Storage Tank; and*
 - *Guidance Document for the Management of Impacted Sites.*

This Approval provides terms and conditions to satisfy various requirements of the above listed acts, regulations, policies, guidance documents and guidelines. If it appears that any of the pertinent requirements of these acts, regulations, policies and guidelines are not being met, then a further review of the works shall be conducted, and suitable pollution control measures may be required by the Minister.

5. All reasonable efforts shall be taken to minimize the impact of the operation on the environment. Such efforts include:
- minimizing the area disturbed by the operation,
 - minimizing air or water pollution,
 - finding alternative uses, acceptable to the Director, for waste or rejected materials,
 - removing equipment or structures when they no longer have further use, and
 - considering the requirement for the eventual rehabilitation of disturbed areas when planning the development of any area on the facility property.
6. **CBPPL** shall provide to the Department, within a reasonable time, any information, records, reports or access to data requested or specified by the Department.
7. **CBPPL** shall keep all records or other documents required by this Approval at the Corner Brook location for a period of not less than three (3) years, beginning the day they were made. These records shall be made available for review by officials of the Department or Service NL when requested.

8. Should **CBPPL** wish to deviate in any way from the terms and conditions of this Certificate of Approval, a written request detailing the proposed deviation shall be made to the Minister. **CBPPL** shall comply with the most current terms and conditions until the Minister has authorized otherwise. In the case of meeting a deadline requirement, the request shall be made at least 60 days ahead of the applicable date as specified in this Approval or elsewhere by the Department.

Waste Management

9. The management of waste generated at the facility is subject to compliance with the *Environmental Protection Act*. All non-industrial waste shall be stored in a manner acceptable to the Department and, on at least a weekly basis, be disposed of:
- at an authorized waste disposal site, with the permission of the owner/operator of the site; or
 - by some other means acceptable to the Department.
- If required, industrial waste shall be disposed of by a licensed operator.
10. **CBPPL** shall ensure that all volatile chemical and solvent wastes, if they cannot be reused, are placed in suitable covered containers for disposal in a manner acceptable to the Department. Disposal of liquid wastes at waste disposal sites in the province is not permitted.
11. Disposal of hazardous waste in a municipal or regional waste disposal site in this Province is prohibited. Transporters of hazardous waste shall have an Approval issued by the Minister. Those generating hazardous waste shall have a waste generator's number issued by the Director and shall also complete the required information outlined in the Waste Manifest Form.

Waste Management Plan

12. **CBPPL** shall submit a Waste Management Plan for their pulp and paper mill operation. With the goal of minimizing adverse effects on the environment, the Plan shall:
- be comprehensive, including all operations within the mill;
 - identify the types of waste materials (i.e. boiler ash, sewage, empty chemical packaging, etc.);
 - provide general direction in dealing with the handling, storage, transport, treatment and disposal of waste materials; and
 - incorporate the basic waste management principles of reduce, reuse, recycle, recover and residual disposal.

An outline of the Plan shall be submitted to the Director for review by **February 26, 2020**. The outline shall include a schedule of dates for preparation and implementation for each section of the Plan. The completed Plan shall then be submitted to the Director for review by **June 26, 2020**. Every year the Plan shall be reviewed and revised as necessary, accounting for expanding or alteration of activities. All proposed revisions shall be submitted to the Director for review. The Department will acknowledge receipt of the Plan and/or revisions, and shall provide any review comments within a reasonable time frame.

Noise

13. Efforts shall be made to minimize and control noise resulting from **CBPPL's** operations and maintenance activities. All vehicles operating within the facility shall have exhaust and muffling devices in good working order.

Chemical Operations

14. Empty chemical drums, totes or packaging shall be either sent:
- back to the original equipment manufacturer for re-use;
 - to a recognized disposal company, or;
 - to a recognized re-cycling facility.

When deemed necessary, waste material from drums, totes or packaging will be retained on-site for collection and disposal by a recognized waste treatment company according to provincial and federal regulations.

Spill Prevention and Containment

15. Areas in which chemicals are used or stored shall have spill containment systems constructed with impermeable floors, walls, dykes or curbs as applicable and be configured, maintained, inspected and repaired as follows:
- they shall not discharge to the environment;
 - they 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, they shall have an effective secondary containment capacity of at least 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;
 - they shall be kept clear of material that may compromise the containment capacity;
 - they may include a floor drain system provided that the floor drains, and the place or device to which they drain, are configured in such a manner that the required effective secondary containment capacity is maintained;
 - every year they shall be visually inspected for their liquid containing integrity, and repairs shall be made when required; and
 - once every ten years, spill containment systems shall be inspected, by a means other than visual inspection, for their liquid containing integrity, and repairs shall be made when required.

16. All on site storage of petroleum shall comply with the *Storage and Handling of Gasoline and Associated Products Regulations, 2003*, or its successor. Storage tank systems shall be registered with Service NL. All aboveground storage tanks shall be clearly and visibly labelled with their GAP registration numbers.
17. Where applicable, all tanks and fuel delivery systems shall be inspected to appropriate American Petroleum Institute or Underwriters' Laboratories of Canada standards, or any other standards acceptable to this Department. The required frequency of inspections may be changed at the discretion of the Director.
18. **CBPPL** shall maintain an inventory of all petroleum and chemical storage tanks. This inventory shall include the following:
 - site plan showing tank location,
 - registration number (where applicable),
 - identification number,
 - material stored,
 - capacity,
 - annual throughput,
 - tank material,
 - tank type,
 - tank diameter,
 - tank height,
 - tank colour,
 - roof type,
 - year of manufacture,
 - date of installation,
 - date of last inspection,
 - failure history,
 - maintenance history,
 - effective secondary containment capacity, and
 - date of next planned inspection.

An update of the complete storage tank inventory including any changes to it shall be submitted to the Director within three (3) months of the change having occurred.

Environmental and Emergency Contingency Plan

19. **CBPPL** shall continue to implement the Environmental and Emergency Contingency Plan for their Corner Brook Pulp and Paper Mill, including all revisions. This Plan describes the actions to be taken in the event of a spill of a toxic or hazardous material. Copies of the Plan shall be placed in convenient areas throughout the facility so that employees can easily refer to it when needed. **CBPPL** shall ensure that all employees are aware of the Plan and understand the procedures and the reporting protocol to be followed in the event of an emergency. An annual response exercise is recommended for response personnel. Every year, as a minimum, the Plan shall be reviewed and revised as necessary. Any proposed significant revisions shall be submitted to the Director for review. Changes which are not considered significant include minor variations in equipment or personnel characteristics which do not affect implementation of the Plan.

20. Every time **CBPPL** implements the Emergency and Environmental Contingency Plan, information shall be recorded for future reference. This will assist in reviewing and updating the Plan. The record is to consist of all incidents with environmental implications, and include such details as:
- date;
 - time of day;
 - type of incident (i.e. liquid spill, equipment malfunction, etc.);
 - actions taken;
 - problems encountered; and
 - any other relevant information that would aid in later review of the Plan performance.

Each incident report shall be submitted to the Department as per the **Reporting** section.

Site Decommissioning and Restoration

21. **CBPPL** shall submit a site Decommissioning and Restoration Plan to the Department by **January 22, 2021**. The Plan shall consider a future land use scenario where no further use of existing site infrastructure (such as process equipment, buildings, and storage tanks) is foreseen. The plan may also examine other potential future land use scenarios that include leaving some infrastructure on site (such as operation of a storage and/or shipping facility). Wherever possible, the Plan shall promote progressive pre-closure reclamation of disturbed areas.
22. The Plan shall include, at a minimum, descriptions of the following:
- Tasks to be completed for decommissioning each infrastructure component at the site and the schedule for completing each task;
 - Actions to be taken for managing the environmental impacts associated with each decommissioning task;
 - Activities for redeveloping the topography, drainage patterns and vegetation of the site in a manner compatible with anticipated future land use;
 - Actions to be taken to ensure that the site is left in an aesthetically acceptable and safe condition that provides long-term environmental protection;
 - Measures for the management and off-site disposal of various waste streams generated during the decommissioning phase; and
 - Provisions for the long-term operation and maintenance of a post-closure monitoring system.

For further guidance on the preparation of the Plan, refer to Appendix A.

23. As part of the site decommissioning and restoration process, **CBPPL** shall employ a registered Site Professional to complete a site-wide environmental site assessment, as defined in the Guidance Document for the Management of Impacted Sites. Should impacts be identified, **CBPPL** shall proceed through the process outlined in the Guidance Document to achieve regulatory site closure.

Fuel Combustion and Reporting

24. **CBPPL** is permitted to accept and combust the following fuel types in its main boiler (Boiler No.7); residual fuel oil, distillate fuel oil, combustible used oil as defined in **Table 1**, hog fuel (wood pellets, wood chips, bark, wood residue from sawmills, treatment plant sludge, municipal waste wood) and general mill waste (damaged cores and trimmed ends, paper waste, non-painted/non-treated waste wood, oily rags). **CBPPL** is permitted to accept and combust the following fuel types in its supplementary boilers (Boiler No. 3 and Boiler No. 6); residual fuel oil, distillate fuel oil and combustible used oil as defined in **Table 1**.

| Table 1 – Combustible Used Oil | |
|---------------------------------------|----------------------------------|
| CONTAMINANT | MAXIMUM CONCENTRATION (mg/kg) |
| Polychlorinated Biphenyls (PCBs) | 5 |
| Total Organic Halogens (as chlorine) | 1000 |
| Cadmium | 2 |
| Chromium | 10 |
| Lead | 100 |
| Ash | 9,000 |
| Sulphur | 5,000 |

25. **CBPPL** is permitted to accept and combust alternative fuel only with the written approval of the Department.
26. **CBPPL** shall obtain a certificate of analysis for a representative sample of each shipment of residual fuel oil and each batch of combustible used oil, as per **Table 2**. All results shall be submitted to the Director as per the **Reporting** section.
27. Combustible used oil shall only be added to Storage Tank No.1.

| Table 2 – Fuel Oil Analysis Program | | |
|---|---|--|
| Fuel Type | Frequency | Parameters |
| Residual Fuel | Each shipment prior to accepting delivery | A.P.I. Gravity @ 60 °F, Density (kg/m ³ @ 15°C), Flash Point, Pour Point, Sulfur % by Weight, BTU's per US Gallon, Ash % by Weight, Sediment % by Weight, Water % by Volume, Complete Metals Scan |
| Off-site Generated Combustible Used Oil | Each batch prior to accepting delivery | Sulfur % by Weight, BTU's by Weight, Ash % by Weight, Sediment % by Weight, Water % by Volume, Polychlorinated Biphenyls (PCBs), Total Organic Halogens (as Chlorine), Cadmium, Chromium, Lead |

28. **CBPPL** shall maintain, and submit to the Director on a monthly basis as per the **Reporting** section, the following:

- supplier, date and volume of each shipment of residual and distillate fuel oil received, and of each batch of combustible used oil received;
- the daily volume of residual fuel oil, distillate fuel oil and combustible used oil combusted;
- a certificate of analysis for each shipment of residual fuel oil received, and for each batch of combustible used oil to be combusted; and
- the name of the laboratory where the analysis was performed.

Used Oil and Used Glycol

29. Used oil and used glycol shall be retained in separate approved or registered tanks or closed containers, and disposed of by a company licensed for handling and disposal of used oil and/or used glycol products.

Pollution Control Equipment

30. All pollution control equipment (i.e. venturi wet scrubber, dust collectors, burners, etc.) shall be maintained and operated as per the manufacturer's specifications for best practice and/or established standard operating procedures.

Reference Production Rate

31. **CBPPL** shall submit its annual reference production rate by **January 31st of each year**. The reference production rate shall be calculated as per the method prescribed in the federal *Pulp and Paper Effluent Regulations*.

Boiler Operation and Reporting

32. Hog fuel and general mill waste shall not be combusted in Boiler No.7 when the scrubber is malfunctioning or is not operating.

33. **CBPPL** shall maintain and submit to the Director on a monthly basis, as per the **Reporting** Section, a daily record of boiler operation. The record shall include:
- period of operation for each boiler;
 - steam production from each boiler;
 - fuel combusted in each boiler;
 - amount of hog fuel combusted (tonnes);
 - downtime for any pollution control equipment; and
 - power generation from the cogeneration unit.

Boiler Ash

34. Boiler ash shall be collected and conveyed to ash bins for temporary storage. **CBPPL** shall maintain and submit to the Director, on a **monthly** basis as per the Reporting section, a daily record of the ash disposed at the landfill site. Alternate ash disposal options shall require prior review and authorization by the Director.
35. **CBPPL** shall, on a **quarterly** basis, have the boiler ash tested (complete metals scan, including mercury) to determine contaminant concentrations. Where one or more contaminant concentrations are in excess of the maximum allowable levels outlined in the *CSQG*, for industrial land use, the ash shall be further tested using the US Environmental Protection Agency Method 1311, the Toxicity Characteristic Leaching Procedure (TCLP), or other procedure as determined by the Director. Contaminants which shall be tested, using the TCLP, are those which were in excess of the maximum allowable levels outlined in the *CSQG*, for industrial land use. Results of analysis of the extractant shall be submitted to the Director as per the **Reporting** section.
36. Where all contaminant concentrations in the extractant are below the maximum allowable levels, as determined by the Director, the ash is not considered hazardous and may continue to be disposed of in the Corner Brook Waste Disposal Site.
37. Where one or more contaminants in the extractant are above the maximum allowable levels, as determined by the Director, the ash is considered a hazardous waste and will not be approved for disposal in a waste disposal site in this Province. Transporters of hazardous waste shall have an approval issued by the Minister. Those generating hazardous waste shall have a waste generators number issued by the Director and shall also complete the required information outlined in the Waste Manifest Form.

Effluent Treatment and Discharge

38. Prior to discharge, contaminated process effluent shall be treated through the wastewater treatment system comprised of pre-treatment for effluent neutralization and oil removal, primary treatment for solids removal, secondary biological treatment for BOD reduction, and sludge dewatering. Final treated effluent shall be discharged into Humber Arm (Bay of Islands) via the Combined West Sewer Outfall pipe. Should modifications to the effluent treatment system be deemed necessary, **CBPPL** shall provide written notification to the Director before initiating any major changes.

39. Non-contaminated cooling and plant water and collected storm drainage shall be discharged via the East Sewer Outfall pipe.
40. **CBPPL** shall make every reasonable effort to ensure that odour resulting from the operation of the effluent treatment system is not overly offensive to other property owners. Should complaints be received regarding odours or should odour become an issue, **CBPPL** shall immediately notify the Department as per the *Reporting* section.
41. Dewatered sludge shall be collected and used as a fuel source for Boiler No.7. **CBPPL** are permitted to dispose of sludge at the Corner Brook Waste Disposal Site during boiler shut periods or other instances where sludge combustion is not possible. **CBPPL** shall notify the Department of the start date and expected duration of the landfilling period and provide an estimate of the quantity of sludge taken to the landfill.
42. With the exception of chemicals and nutrients routinely used in the effluent treatment system, **CBPPL** shall provide written notification of the addition of any chemical, polymer or flocculants within **30 days** of such an occurrence.

Effluent Monitoring Program

43. **CBPPL** shall perform an Effluent Monitoring Program as per *Table 3*. All results shall be submitted to the Director as per the *Reporting* section.
44. If an effluent sample fails a Daphnia magna test, **CBPPL** shall immediately collect an effluent sample and perform a Rainbow Trout test. If this Rainbow Trout test fails, **CBPPL** shall follow the testing and frequency outlined in the following section. In the event that a sample was collected for a Rainbow Trout test in the same week as the Daphnia magna failure, an additional sample does not need to be collected.
45. If an effluent sample fails a Rainbow Trout test, **CBPPL** shall collect weekly effluent samples and continue to perform Rainbow Trout tests. If the effluent is deemed to be non-lethal for three consecutive tests, **CBPPL** may revert to monthly testing as prescribed in *Table 3*.
46. If effluent is determined to be acutely lethal for three consecutive ALTs, **CBPPL** shall implement a toxicity identification evaluation to identify the toxin, and from this develop measures to prevent or reduce the toxin. The report, written as a result of these identification activities, shall be submitted to the Director for review, *within 60 days* of the third consecutive failed acutely lethal test result. After review of the report, the Director may place additional requirements upon the proponent for treatment of effluent prior to discharge.

Table 3 - Effluent Monitoring Program

| Locations | EDMS Location Code | Parameters | Frequency | Discharge Criteria |
|---------------------------------|--------------------|---|--------------------------|--------------------|
| 1. Combined West System Outfall | 00001 | pH | continuous | 5.5-9 |
| | | electrical conductivity | continuous | - |
| 2. East Sewer System Outfall | 00002 | flow | continuous | - |
| | | TSS | 24-hour composite sample | * |
| | | BOD ₅ | 24-hour composite sample | * |
| | | TPH | monthly grab sample | 15 mg/L |
| | | Rainbow Trout (96-hour LT ₅₀ or LC ₅₀) | monthly grab sample | * |
| | | Daphnia magna (48-hour LT ₅₀ or LC ₅₀) | weekly grab sample | * |

* As per the federal *Pulp and Paper Effluent Regulations*

Water Chemistry Analysis Program

47. **CBPPL** shall perform a Water Chemistry Analysis Program, every three (3) months, as per *Table 4*. All results shall be submitted to the Director as per the *Reporting* Section.

Environmental Effects Monitoring

48. The *Pulp and Paper Effluent Regulations* require that **CBPPL** conduct Environmental Effects Monitoring (EEM) as part of the mill's authority to deposit effluent under the Fisheries Act. Copies of all EEM study designs and reports shall be submitted to the Department.

Table 4 - Water Quality Analysis Program

| Location | EDMS Location Code | Parameters |
|---------------------------------|--------------------|---|
| 1. Combined West System Outfall | 00001 | General Parameters: nitrate + nitrite, nitrate, nitrite, ammonia, pH, TSS, colour, sodium, potassium, calcium, magnesium, alkalinity, sulphate, chloride, turbidity, sulphide, reactive silica, orthophosphate, phosphorous, DOC, conductance, TDS (calculated), phenolics, carbonate (CaCO ₃), hardness (CaCO ₃), bicarbonate (CaCO ₃) Metals Scan: aluminium, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, mercury, nickel, selenium, silver, strontium, thallium, tin, titanium, uranium, vanadium, zinc |
| 2. East Sewer System Outfall | 00002 | |

Ambient Air

49. **CBPPL** shall operate an ambient air monitoring program as per the conditions in this Approval and its amendments. Parameters to be monitored are outlined in *Table 5*. Approval shall be obtained from the Director prior to purchase or installation of any monitoring equipment.

| Table 5 - Ambient Air Monitoring Program | | |
|---|---------------------------|---|
| Site | EDMS Location Code | Parameter(s) |
| Hotel Corner Brook | 00003 | TPM, PM _{2.5} , SO ₂ , Meteorological Conditions |

50. Ambient air monitoring shall be done in accordance with the *Ambient Air Monitoring Guidance Document (GD-PPD-065)*, or its successors.
51. **CBPPL** shall operate, calibrate and maintain a meteorological station at the Hotel Corner Brook Site in accordance with the guidelines specified in the United States EPA document “Quality Assurance Handbook for Air Pollution Measurement Systems - Volume IV: Meteorological Measurements Version 2.0 (Final),” EPA-454/B-08-002, or its successors. Parameters to be measured and recorded shall include as a minimum:
- wind speed,
 - wind direction,
 - ambient air temperature,
 - relative humidity,
 - barometric pressure, and
 - precipitation
52. Information regarding calibrations, site visits and maintenance for all continuous ambient air monitors shall be recorded into the DR DAS electronic logbook.
53. The ambient air quality standards specified in Schedule A of the *Air Pollution Control Regulations, 2004* shall apply to all points outside of **CBPPL**’s administrative boundary. The administrative boundary is defined as the area encompassed by the coordinates contained in Appendix B. All coordinates are referenced to NAD83 UTM Zone 21.

Continuous Opacity Monitoring System

54. Opacity of emissions from Boiler No. 3 and Boiler No. 6 shall be continuously measured and recorded using a Continuous Opacity Monitoring System (COMS) that meets all the requirements of *Performance Specification 1 (PS-1) - Specifications and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources*, of the United States *Code of Federal Regulations - 40 CFR Part 60, Appendix B*. Minimum QA/QC requirements are specified to assess the quality of COMS performance. Daily zero and span checks, quarterly performance audits, and annual zero alignment checks are required to assure the proper functioning of the COMS and the accuracy of the COMS data. These shall be recorded in a written log and a copy made available on request.

55. Where an emission source employs best available control technology, continuous opacity monitoring shall not be required for that source.
56. The United States EPA Federal Register Test Method 203 - Determination of the Opacity of Emissions from Stationary Sources by Continuous Opacity Monitoring Systems shall be used to determine compliance with the opacity standards in the *Air Pollution Control Regulations, 2004*.
57. Monthly opacity data reports, in digital format, shall be submitted in the form of six minute arithmetic averages of instantaneous readings, as per the **Reporting** section. Each six minute average data point shall be identified by date, time and average percent opacity.

Stack Emissions Testing and Dispersion Modelling

58. Stack emissions testing shall be done in accordance with the *Stack Emission Testing Guidance Document (GD-PPD-016.1)*. Dispersion Modelling shall be done in accordance with the *Plume Dispersion Modelling Guidance Document (GD-PPD-019.2)*. Determination of frequency of stack emissions testing and dispersion modelling shall be done in accordance with the *Compliance Determination Guidance Document (GD-PPD-009.4)*.
59. **CBPPL** shall be required to complete stack emissions testing once every four years if it has been shown, via a registered dispersion model, that the operation is in compliance with section 3(2) and Schedule A of the *Air Pollution Control Regulations, 2004*. If it has been shown, via a registered dispersion model, that the operation is not in compliance with section 3(2) and Schedule A of the *Air Pollution Control Regulations, 2004*, then the facility shall complete stack emissions testing every two years.
60. Stack emissions testing results shall be submitted to the Department within **75 days** of completion of the sampling.
61. Plume dispersion modelling results shall be submitted to the Department within **120 days** of acceptance of the stack emissions testing results by the Department.
62. If the results from the plume dispersion modelling indicate that **CBPPL** is not in compliance with section 3(2) and Schedule A of the *Air Pollution Control Regulations, 2004*, then **CBPPL** shall submit to the Director, **within 6 months** from the date of submission of plume dispersion modelling results, an Action Plan to bring emissions of the parameters of concern into compliance. In addition to this, the Plan shall include information detailing the improvements to be implemented to the pulp and paper mill equipment and instruments, and a time frame for the improvements. By **December 31** of each year, a report shall be submitted to the Director outlining the progress made to date towards accomplishing the goals of the Plan.

Analysis and QA/QC

63. Unless otherwise stated herein, all solids and liquids analysis performed pursuant to this Approval shall be done by either a contracted commercial laboratory or an in-house laboratory. Contracted commercial laboratories shall have a recognized form

of accreditation. In-house laboratories have the option of either obtaining accreditation or submitting to an annual inspection by a representative of the Department, for which **CBPPL** shall be billed for each laboratory inspection in accordance with Schedule 1 of the *Accredited Laboratory Policy (PD:PP2001-01.2)*. Recommendations of the Director stemming from the annual inspections shall be addressed within 6 months, otherwise further analytical results shall not be accepted by the Director.

64. If **CBPPL** wishes to perform in-house laboratory testing and submit to an annual inspection by the Department then a recognized form of proficiency testing recognition shall be obtained for compliance parameters for which this recognition exists. The compliance parameters are listed in the *Effluent Monitoring Program* section. If using a commercial laboratory, **CBPPL** shall contact that commercial laboratory to determine and to implement the sampling and transportation QA/QC requirements for those activities.
65. **CBPPL** shall bear all expenses incurred in carrying out the environmental monitoring and analysis required under conditions of this Approval.

Monitoring Alteration

66. The Director has the authority to alter 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.
67. **CBPPL** may, at any time, request that monitoring programs 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.

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

Reporting

68. 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 XML format and Adobe Portable Document Format (PDF). Digital report submissions shall be uploaded through the EDMS web portal. The Pollution Prevention Division shall provide details of the portal web address and submission requirements.
69. Each monthly report shall include a summary of all environmental monitoring components and shall include an explanation for the omission of any requisite data. The monthly summary reports shall be in Microsoft Word or Adobe PDF and shall be uploaded through the EDMS web portal with the data submissions.
70. All incidents of:
- *Contingency Plan* implementation; or
 - non-conformance of any condition within this Approval; or
 - spillage or leakage of a regulated substance; or
 - discharge criteria being, or suspected of being, exceeded; or
 - verbal or written complaints of an environmental nature received from the public by CBPPL and related to the pulp and paper mill, including complaints submitted anonymously;
- shall be immediately reported, within one working day, to the Department.
- A written 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 Department. 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.
71. Any spillage or leakage of gasoline or associated product shall be reported immediately through the Canadian Coast Guard at 1-(709)-772-2083.

Liaison Committee

72. The Department recognizes the benefits, and at times the necessity, of accurate, unbiased communication between the public and industrial operations which have an impact on the properties and residents in the area. The Department encourages the formation and regular meeting of a Liaison Committee comprised of representatives of **CBPPL**, the Department and independent members of the general population of Corner Brook and surrounding areas. Regular meetings of the Liaison Committee will provide a clear conduit of communication between concerned citizens and **CBPPL**. The Director reserves the right to require the formation of a Liaison Committee should it be deemed necessary.

Expiration

73. This Certificate of Approval expires *July 7, 2023*.
74. Should **CBPPL** wish to continue to operate the Corner Brook Pulp and Paper Mill beyond this expiry date, a written request shall be submitted to the Director for the renewal of this Approval. Such request shall be made prior to *January 7, 2023*.

APPENDIX A

Industrial Site Decommissioning and Restoration Plan Guidelines

As part of the Department of Municipal Affairs and Environment's ongoing commitment to minimize the residual impact of industrial activities on the environment of the province, the Department requires that **CBPPL** develop a Decommissioning and Restoration Plan for the Corner Brook Pulp and Paper Mill and its associated property. The guidelines listed below are intended to provide some general guidance as to the expectations of the Department with regard to the development of the Plan, and to identify areas that are of particular concern or interest. The points presented are for consideration, and are open to interpretation and discussion.

Decommissioning and Restoration Plans are intended to present the scope of activities that a company shall undertake at the time of final closure and/or decommissioning of the industrial properties. Where it is useful and practical to do so the company is encouraged to begin undertaking some of the activities outlined in the Plan prior to final closure and decommissioning. The objectives of the restoration work to be undertaken can be summarized as follows:

- to ensure that abandoned industrial facilities do not endanger public health or safety;
- to prevent progressive degradation and to enhance the natural recovery of areas affected by industrial activities;
- to ensure that industrial facilities and associated wastes are abandoned in a manner that will minimize the requirement for long term maintenance and monitoring;
- to mitigate, and if possible prevent, the continued loadings of contaminants and wastes to the environment. The primary objective shall be to prevent the release of contaminants into the environment. Where prevention is not practical due to technical or economic limitations then activities intended to mitigate the consequence of such a release of contaminants shall become the objective of restoration work;
- to return affected areas to a state compatible with the original undisturbed condition, giving due consideration to practical factors including economics, aesthetics, future productivity and future use; and
- to plan new facilities so as to facilitate eventual rehabilitation.

The Decommissioning and Restoration Plan should:

- identify areas of known historical or current contamination;
- identify past or existing operational procedures and waste management practices that have, or may have, resulted in site contamination;
- highlight the issues or components to be addressed;
- identify operational procedures and waste management practices that can prevent or reduce site contamination;
- consider future land use, regulatory concerns and public concerns;
- enable estimation of the resources and time frame required to decommission the facility and restore the site to a condition acceptable to the Department;
- enable financial planning to ensure the necessary funds for decommissioning and restoration are set aside during the operational life of the facility, and;
- include arrangements for appropriate project management to ensure successful completion of the decommissioning and restoration program.

APPENDIX B

Corner Brook Pulp and Paper Limited Administrative Boundary Coordinates

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cc: Mr. Neil Codner
Environment and Climate Change Canada
6 Bruce Street
Mount Pearl, NL
A1N 4T3

Ms. Susan Hoddinott – Regional Director
Service NL
P. O. Box 2006
Corner Brook, NL
A2H 6J8