



Report Date: March 25, 2019

File: 240

Report Number: 120169

REGISTERED MAIL

Skookumchuck Pulp Inc.

PO Box 4000  
Cranbrook, BC  
V1C 7J7

Dear Skookumchuck Pulp Inc.

**Re: An Investigation Referral, Permit 240, 4501 Farstad Way, Skookumchuck BC, Effluent**

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On March 06, 2019, Ministry of Environment and Climate Change Strategy, Environmental Protection Division staff conducted an inspection of your facility, Skookumchuck Pulp Inc. located at 4501 Farstad Way, Skookumchuck BC with authorization number 240 under the *Environmental Management Act*.

For your information, this inspection record is being referred to the Conservation Officer Service for investigation.

**Inspection Details:**

Requirement Description:	<p><b>1. AUTHORIZED DISCHARGES, 1.1, 1.1.1</b></p> <p>1.1.1: This section applies to the continuous discharge of effluent from a BLEACHED KRAFT PULP MILL. The site reference number for this discharge is E102388.</p> <p>1.1.1 The maximum rate of discharge is 44,000 m<sup>3</sup>/day.</p>
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Details/Findings:	<p><b>Compliance Overview:</b>  On March 6, 2018, Ministry of Environment and Climate Change Strategy (Ministry) Environmental Protection Officer Taylor White (Officer White) conducted an on-site inspection of Skookumchuck Pulp Inc. (Facility) located in Skookumchuck, BC to verify compliance with Permit 240 (Permit). The Permit authorizes the discharge of effluent to surface waters from a bleached kraft pulp mill operation. The Permit was first issued on August 12, 1968, and last amended on February 2, 2015. Present during the inspection was Roger Puar, (Technical Manager, Skookumchuck Pulp Inc.) and Brandy Craig (Environmental Coordinator, Skookumchuck Pulp Inc.).</p> <p>The time period covered by this inspection was from November 21, 2018 to March 20, 2019 and included a review of the following documentation:  - Dangerous Goods Incident Report (DGIR) 184496 submitted by Ms. Craig on March 11, 2019;  - Update to DGIR 184496 submitted by Ms. Craig on March 20, 2019;  - December 2018 and January 2019 monthly report submissions;  - Response to Inspection Report 096500 for PE240 Effluent submitted by Ms. Craig on January 11, 2019; and,  - Non-compliance reports submitted to the Ministry via email by Ms. Craig throughout the inspection period.</p> <p><b>Compliance Assessment:</b>  As confirmed in the December 2018 and January 2019 monthly reports, the rate of discharge was in compliance with the permit limit throughout the inspection period.</p> <p>During the site inspection, the in-line flow meter was reading 5830.0 gal/min.</p>
Compliance:	In
Requirement Description:	<p><b>1. AUTHORIZED DISCHARGES, 1.1, 1.1.1</b></p> <p>1.1.2: This section applies to the continuous discharge of effluent from a BLEACHED KRAFT PULP MILL. The site reference number for this discharge is E102388.</p> <p>1.1.2 The characteristics of the discharge must not exceed the following:  Non-Filterable Residue: 4,500 kg/day;  BOD5: 3,500 kg/day;  pH range: 6.5 – 8.5;  Toxicity 96 hr LC50: pass at 100 percent effluent [Note 1];  Colour: 15 colour units difference [Note 2];  Temperature: 40 degree Celsius;  AOX: 0.25 kg/ADt.</p> <p>Note 1: details specified in Sections 2.5 and 3.2.1;  Note 2: details specified in Section 3.3.1</p>

<p>Details/Findings:</p>	<p>As confirmed in the December 2018 and January 2019 monthly reports and non-compliance reports, the characteristics of the effluent exceeded parameter limits on the following occasions during the inspection period:</p> <p>Toxicity:  March 6, 2019: 30% survival during 96-hour LC50 test  March 18, 2019: 0% survival during 96-hour LC50 test</p> <p>Non-Filterable Residue (NFR):  December 25, 2018: 4,610 kg/day  January 29, 2019: 5,049 kg/day  January 30, 2019: 4,606 kg/day  February 23, 2019: 4,582 kg/day</p> <p>Biological Oxygen Demand (BOD5):  February 19, 2019: 4,601 kg/day</p> <p>Previous incidents of non-compliance with the permit limits for NFR and BOD were reported in inspection report 96500 issued on December 12, 2018. In a written response to inspection report 96500 submitted to the Ministry on January 11, 2019, Ms. Craig reported that "the mill has taken a number of steps to ensure compliance with both TSS and BOD5..." however, specific actions were not provided. During the site inspection, Mr. Puar reported that Skookumchuck Pulp Inc. contracted a representative from their flocculant and coagulant chemical supplier and an effluent treatment consultant to assist the mill with operation of their effluent treatment system. The effluent treatment consultant, Bryan Stevenson, was on site during the inspection and reviewed clarifier operations with Officer White.</p> <p>During the site inspection, In-line continuous monitors were observed with the following readings:  pH: 7.0  Temperature: 10.2 degrees Celsius</p>
<p>Compliance:</p>	<p>Out</p>
<p>Actions to be taken:</p>	<p>Ensure the characteristics of the discharge are maintained within the limits required by Section 1.1.2.</p>

Requirement Description:	<p><b>2. GENERAL REQUIREMENTS, 2.1 Maintenance of Works</b></p> <p>2.1: The authorized works must be complete and in operation while discharging. The colour removal clarifier included in Section 1.1.3 may operate intermittently to maintain compliance with Section 1.1.2.</p> <p>The Permittee must inspect the authorized works regularly and maintain them in good working order.</p> <p>The permittee must operate the authorized works in a manner as to maintain the lowest practical level of contaminants in the discharge, to the satisfaction of the Director. The colour removal clarifier included in Section 1.1.3 may be operated intermittently and/or partially bypassed to maintain compliance with Section 1.1.2.</p>
Details/Findings:	<p>During the site inspection, 23 out of 24 aerators were operational in the aeration stabilization basin (ASB).</p> <p>The colour clarifier was operating during the site inspection. Mr. Puar reported that 100% of the effluent stream was being treated through the clarifier at the time of inspection.</p> <p>On March 1, 2019, Ms. Craig submitted a non-compliance report for a BOD exceedance of 4,601 kg/day. The reported cause of the exceedance was failure of the make down system for flocculant.</p> <p>As identified in inspection report 96500 issued on December 12, 2018, the second cell of the settling basin is not used as part of the effluent treatment system. The settling basin continued to be out of use during the March 6, 2019 site inspection. Mr. Puar reported that in-house engineers observed the settling basin and determined a contractor was required to conduct a geotechnical assessment. A scheduled date for a contractor assessment was not provided.</p> <p>The Permittee is out of compliance with Section 2.1 for the failure of the flocculant delivery system, the failure to operate both cells of the settling basin while discharging and, the failure to inspect and maintain the settling basin in good working order.</p>
Compliance:	Out
Actions to be taken:	Inspect and maintain the authorized works in good working order.

Requirement Description:	<p><b>2. GENERAL REQUIREMENTS, 2.3 Emergency Procedures</b></p> <p>2.3: In the event of an emergency or condition which prevents effective operation of the authorized works or leads to an unauthorized discharge the permittee must:</p> <p>a) Comply with all applicable statutory requirements;  b) Immediately notify the Regional Director, Environmental Protection, in writing and/or via telephone;  c) Take appropriate remedial action for the prevention or mitigation of pollution.</p> <p>The Director may reduce or suspend operations to protect the environment until the authorized works have been restored and/or corrective steps have been taken to prevent unauthorized discharges.</p> <p>During and/or after the emergency event or condition, the permittee must:</p> <p>i. Conduct appropriate sampling and analysis of discharges which might be non-compliant with this permit and/or applicable statutory requirements;  ii. Provide the results of such sampling to the Regional Director, Environmental Protection as they become available.</p>
Details/Findings:	<p>As confirmed in DGIR 184496 submitted by Ms. Craig on March 11, 2019 at 17:15, an effluent discharge sample obtained on March 4, 2019 failed the 96-hour rainbow trout toxicity (LC50) test. The response listed in the DGIR stated that "operation has been flowed back and another sample sent for testing."</p> <p>In a follow up email on March 15, 2019, Ms. Craig confirmed that notification was provided to the Provincial Emergency Program (PEP) and a separate notification to the the Regional Director, Environmental Protection in writing or via telephone was not submitted. Ms. Craig stated that the PEP dispatcher informed her that the notification would be passed on to a Director. Notification submitted to PEP is not considered notification of the Regional Director, Environmental Protection; however, given the directions from the PEP dispatcher, compliance could not be determined.</p> <p>In an update to DGIR 184496 email sent to Officer White on March 20, 2019, Ms. Craig confirmed that a March 11, 2019 toxicity test resulted in a pass but a March 18, 2019 toxicity test resulted in a failure. Ms. Craig reported that the permittee has retained a wastewater treatment specialist and are continuing to troubleshoot the operation of the wastewater treatment system.</p>
Compliance:	Not Determined
Actions to be taken:	Provide notification to the Regional Director in writing and/or via telephone regardless if notification has been submitted to the PEP.
Requirement Description:	<p><b>2. GENERAL REQUIREMENTS, 2.5 Effluent Non-Toxicity</b></p> <p>2.5: The effluent discharged under Section 1 of this permit must not be toxic to fish as determined by a pass of a 96-hour rainbow trout toxicity (LC-50) test on a grab sample of 100% effluent.</p>

Details/Findings:	<p>As confirmed in DGIR 184496, an effluent discharge sample obtained on March 4, 2019 resulted in 30% survival of a 96-hour rainbow trout toxicity test (LC50) and therefore, was determined to be toxic to fish.</p> <p>As confirmed in an update to DGIR 184496, an effluent discharge sample obtained on March 18, 2019 resulted in 0% survival of a 96-hour rainbow trout toxicity test (LC50) and therefore, was determined to be toxic to fish.</p>
Compliance:	Out
Requirement Description:	<p><b>2. GENERAL REQUIREMENTS, 2.6 Emergency Response and Remedial Plans</b></p> <p>2.6: The Permittee must maintain an up to date Emergency Response Plan that describes the procedures to be taken to prevent or mitigate any unauthorized release or significant risk of an unauthorized release of contaminants to the environment. The Permittee must maintain an up to date Remedial Plan describing procedures to be taken by the Permittee to eliminate all unauthorized depositions of deleterious substances should a sample of effluent fail its 96-hour rainbow trout toxicity test on a grab sample of 100% effluent.</p>
Details/Findings:	<p>Skookumchuck Pulp Inc. does not have a Remedial Plan as required. This non-compliance was identified in inspection report 96500 issued on December 12, 2018. In a written response to inspection report 96500 submitted on January 11, 2019, Ms. Craig reported that a response plan would be submitted on February 15, 2019. During the site inspection, Officer White confirmed that a Remedial Plan has not been completed.</p>
Compliance:	Out
Actions to be taken:	<p>Prepare and maintain an up to date Remedial Plan, as required. Submit a copy of the Remedial Plan to EnvAuthorizationsReporting@gov.bc.ca.</p>

Requirement Description:	<p><b>3. MONITORING REQUIREMENTS, 3.1 Effluent Monitoring Program</b></p> <p>3.1: The following monitoring program must be conducted on the effluent immediately prior to discharge to the Kootenay River (E102388).</p> <p>Parameter: Flow, Frequency/Type: Continuous - 24-hour total;  Parameter: Total Suspended Solids, Frequency/Type: Daily/Composite [Note 3];  Parameter: BOD5, Frequency/Type: 4 times per week/Composite [Note 3];  Parameter: pH, Frequency/Type: 5 days per week/Grab;  Parameter: Colour, Frequency/Type: Weekly/Grab;  Parameter: Toxicity, Frequency/Type: Rainbow Trout–Monthly/Grab, Daphnia – Weekly/Grab;  Parameter: Dissolved Oxygen, Frequency/Type: 5 days per week/Grab;  Parameter: AOX, Frequency/Type: Weekly/Composite [Note 3].</p> <p>Note 3: Composite samples must be on a 24-hour basis as per the Environmental Management Act, Pulp Mill and Pulp and Paper Mill Liquid Effluent Control Regulation.</p>
Details/Findings:	<p>An confirmed in a non-compliance report submitted on February 19, 2019, a composite sample for total suspended solids was not obtained on February 19, 2019 due to a failure of the heat trace of the sample line from the outfall to the refrigerated sample.</p>
Compliance:	<p>Out</p>
Actions to be taken:	<p>Ensure monitoring is conducted in accordance with the monitoring program required by section 3.1.</p>
Requirement Description:	<p><b>3. MONITORING REQUIREMENTS, 3.2 Toxicity Testing, 3.2.1 Rainbow Trout</b></p> <p>3.2.1: 96-hour rainbow trout Toxicity (LC-50) tests on a grab sample of 100% effluent must be carried out in accordance with the most recent version of EPS 1/RM/13 second edition, December 2000 (amendments made in May 2007). If a failure occurs, testing must occur weekly until 3 consecutive tests pass.</p> <p>Should this test fail (more than 50% mortality in a sample of 100% effluent), a confirmatory Rainbow Trout toxicity sample must be taken immediately. If the confirmatory LC-50 sample exhibits toxicity as well, a Toxicity Identification Evaluation (TIE) must be conducted to determine the cause of the effluent toxicity.</p>

Details/Findings:	<p>As reported in DGIR 184496, a toxicity failure occurred on March 4, 2019. In an email to Officer White on March 15, 2019, Ms. Craig confirmed a follow up sample was obtained on March 11, 2019.</p> <p>In an email update to DGIR 184496 submitted to Officer White on March 20, 2019, a follow up sample was obtained on March 11, 2019 and resulted in 100% survival. The next sample was obtained on March 18, 2019 and resulted in 0% survival, constituting a test failure.</p> <p>Three consecutive weeks have not elapsed since the March 18, 2019 toxicity failure; therefore, compliance could not yet be determined.</p>
Compliance:	Not Determined
Actions to be taken:	Ensure toxicity testing occurs weekly until 3 consecutive tests pass. As required by section 2.3, provide the results of follow-up toxicity testing when results become available.
Requirement Description:	<p><b>3. MONITORING REQUIREMENTS, 3.3 Receiving Environment Monitoring Program, 3.3.1 Colour Monitoring</b></p> <p>3.3.1: The Director may require the Permittee to perform monitoring over and above that required by the Federal government under the Aquatic Environmental Effects Monitoring (EEM) as part of the Federal Pulp and Paper Regulations of the Federal Fisheries Act, for the protection of the environment.</p> <p>3.3.1 The single wave colour – light absorbance at the wavelength of 465 nm, must be monitored as follows:  Sampling Station: Background site - EMS ID: 0200290 - Frequency/Type: Weekly/Grab;  Sampling Station: Downstream site - EMS ID: 0200326 - Frequency/Type: Weekly/Grab.</p>
Details/Findings:	As confirmed in the December 2018 and January 2019 monthly reports, single wave colour light absorbance at the wavelength of 465 nm was monitored weekly at the upstream and downstream monitoring sites throughout the months of December 2018 and January 2019.
Compliance:	In
Requirement Description:	<p><b>4. SITE SPECIFIC REQUIREMENTS, 4.1 Foam</b></p> <p>4.1: Should foam, attributable to the effluent, become objectionable on the receiving waters, the permit may be amended by the Director to require additional treatment to eliminate the foam. Alternatively, measures may be implemented to eliminate the cause of the foam.</p>



Details/Findings:	During the site inspection, the receiving waters were observed to be primarily frozen, therefore the presence of objectionable foam could not be determined.
Compliance:	Not Determined
Requirement Description:	<b>4. SITE SPECIFIC REQUIREMENTS, 4.3 Nutrients</b> 4.3: Should nutrients be added to increase the efficacy of any biological treatment system, the quantity of nutrients must be such that excess nutrients are not discharged to the receiving waters. The ratio of BOD:N:P must be recorded and data kept available for inspection.
Details/Findings:	Ammonia phosphate is added to the biological treatment system to increase efficacy. A record of the ratio of BOD:N:P for the period of December 1, 2018 to February 28, 2019 was provided to Officer White for inspection on March 6, 2019.
Compliance:	In
Requirement Description:	<b>5. REPORTING REQUIREMENTS, 5.2 Monthly Data Reporting</b> 5.2: The Permittee must maintain flow measurement, monitoring data, record of non-compliances, and production data in a form suitable for inspection by the Director. Monitoring data required under Section 3.1 must be submitted to the Ministry's Electronic Monitoring System (EMS) within 30 days of receipt of monitoring results. 5.2 Within 30 days of the end of the month in which the data is collected, the Permittee must submit a monthly report, in an electronic format, to the Regional Director, Environmental Protection. The monthly report must include but is not limited to: a) All effluent monitoring data and production records specified in Section 3, including any that occurred during process upsets or spills; and b) A summary of all occurrences of non-compliance with the requirements of this permit and/or applicable statutory requirements, explanation of the most probable cause(s) of the occurrences, and corresponding corrective and preventive actions taken and/or planned.
Details/Findings:	Monthly report submissions for December 2018 and January 2019 have been submitted to the Ministry within 30 days of the end of the month in which the data was collected. The reports included a) effluent monitoring data; and, b) a brief summary of non-compliances, an explanation of the most probable causes and corresponding remedial action.

Compliance:	In
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The Ministry of Environment Compliance and Enforcement Policy and Procedure (C&E Policy) prescribes common requirements and procedures for all Ministry staff to ensure consistent and riskbased assessment and response to non compliance. Using the Non-Compliance Decision Matrix, the compliance determination for this inspection has been assessed as a Level 3, Category C.

More information about Environmental Compliance, the Non-Decision Matrix, and reporting and data submission requirements can be found at the links below:

General compliance information:

[www.gov.bc.ca/environmentalcompliance](http://www.gov.bc.ca/environmentalcompliance)

Non-Compliance Decision Matrix information:

[www.gov.bc.ca/environment/how-compliance-is-assessed](http://www.gov.bc.ca/environment/how-compliance-is-assessed)

Reporting and data submission requirements (to be sent to [EnvAuthorizations@gov.bc.ca](mailto:EnvAuthorizations@gov.bc.ca)):

[www.gov.bc.ca/submit-waste-authorization-reports](http://www.gov.bc.ca/submit-waste-authorization-reports)

Compliance History:

2018-11-20 IR96500 Warning: NFR, BOD5 exceedances, failure to maintain works, bypass of works, process modification, failure to submit remedial plan, failure to sign reports, monthly and annual reporting non-compliance.

2018-07-12 IR 92405 Referred to COS for Investigation: two toxicity failures;

2017-08-30 IR 63833 Advisory: unsigned reports, reporting of NCRs, notification failures due to email system;

2017-03-29 IR 50983 Warning: multiple NFR exceedances;

2017-01-03 IR 45903 Warning: unauthorized discharge of green liquor and failure to report spill;

2016-04-20 IR 20645 Advisory: failure to submit AEMP framework, annual report not signed by QP;

2015-07-07 IR 20646 Advisory: pH exceedance; and,

2015-06-16 IR 20725 Advisory: BOD5 exceedance.

Please be advised that this inspection report may be published on the provincial government website within 7 days.

If you have any questions about this letter, please contact the undersigned.

Yours truly,

Taylor White  
Environmental Protection Officer

cc:

**Attachments:**

**Deliver via:**

Email:  Fax:  Mail:   
Registered Mail:  Hand Delivery:

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**Ministry of Environment  
and Climate Change  
Strategy**

Compliance  
Environmental  
Protection Division

Mailing Address:  
205 Industrial Rd G  
Cranbrook BC V1C 7G5

Telephone: 250 489 8540  
Facsimile: 250 489 8506  
Website: [www.gov.bc.ca/env](http://www.gov.bc.ca/env)

**DISCLAIMER:**

Please note that sections of the permit, regulation or code of practice referenced in this inspection record are for guidance and are not the official version. Please refer to the original permit, regulation or code of practice.

To see the most up to date version of the regulations and codes of practices please visit  
<http://www.bclaws.ca>

If you require a copy of the original permit, please contact the inspector noted on this inspection record.

It is also important to note that this inspection record does not necessarily reflect each requirement or condition of the authorization therefore compliance is noted only for the requirements or conditions listed in the inspection record.