

**INTERIM SUMMARY
OF ISSUES AND RESPONSES**

Relating to the Class 1 Air Quality Operating Approval for J. D. Irving, Limited

Lake Utopia Paper

**Prepared by:
Authorizations Branch
New Brunswick Department of Environment and Local Government
August 2020**

INTRODUCTION

As part of the Public Participation Process under the Clean Air Act, the Department of Environment and Local Government is required to prepare an “Interim Summary of Issues and Responses”. This document marks the mid-way point of the public comment period and is available on the Internet Site or through any Department of Environment and Local Government office.

The department's Project Management Team is responsible for summarizing the comments (including questions) made to the department by the public to date and for providing, where possible, responses to those comments. In addition to the Interim Summary Report of Issues and Responses, a draft approval is also prepared and made available at the mid-way point of the public comment period.

Where applicable, the responses in the Interim Summary refer to conditions in the draft approval. In this way, the public has the opportunity to view the department's recommended action by the approval holder to address various concerns through the approval itself. Other responses would outline how issues are, or can be addressed through other means, including administratively, by improving operating practices, or by using pollution prevention or pollution control techniques. There may also be responses that address issues which may not be significant in terms of environmental protection or public health, but that are considered in the overall review of a facility's operational activities.

The public continues to have the opportunity to identify new issues as well as to comment on the Interim Summary Report and the draft approval until the end of the public comment period on October 13, 2020.

Please note: The Department encourages anyone who wishes to make comments to provide them in writing so that there is a definite record of the inquiries and issues being submitted under the Public Participation process. While staff will endeavour to respond to telephone calls or other forms of inquiry, we encourage written comments so as to avoid the omission or misinterpretation of the information people wish to submit.

ABOUT THE FACILITY

Lake Utopia Paper is a pulp and paper mill located approximately 6.5 km east of the town of St. George, New Brunswick. The mill produces corrugating medium from a mixture of two fibre types. The primary component is virgin fibre produced by the neutral sulphite semi-chemical (NSSC) pulping process from hardwood chips. The remainder is made from recycled cardboard. The mill facility was initially commissioned in 1971 and was operating as Fundy Forest Products. J.D. Irving Limited purchased the mill in 1973 and has operated it since as Lake Utopia Paper. Using the NSSC pulping process, recycled cardboard, and the corrugating paper machine, the plant produces approximately 516 tonnes per day of finished corrugating medium.

As required under the *Air Quality Regulation – Clean Air Act*, Lake Utopia Paper is considered a source and therefore, must apply for and obtain an Air Quality Approval to Operate from the New Brunswick Department of Environment and Local Government. The facility is required to conduct its operations according to conditions outlined in the issued Air Quality Approval to Operate, which are aimed at preventing unfavorable air quality conditions. The conditions are generally wide-ranging and may include such requirements as:

- limitations on operational parameters;
- requirements for testing and monitoring emissions from specific unit operations;
- requirements for testing and monitoring the ambient air quality surrounding the facility;
- requirements to operate air pollution control equipment;
- limits on emissions that are approved to be released to the atmosphere;
- provisions for equipment upgrade and/or maintenance;
- requirements for environmental emergency and/or compliance reporting; and

- other conditions aimed at minimizing the facility's impact on the environment.

The Regulation provides for approvals to be issued by the Minister of Environment and Local Government for a specified period, not to exceed five years.

For more detailed information on the Lake Utopia Paper Mill facility, please see the Facility Profile, available on the department's Public Information Access Internet Site or through any Regional Office of the department. Information is also available by contacting Lake Utopia Paper directly. (The contact information and Internet site address appear at the end of this Summary)

GENERAL INFORMATION ABOUT THE SUMMARY

Originally, this Interim Summary was to be posted during February 2020. Just prior to the original posting date, it was learned by the Department that the Lake Utopia Paper Mill would be requesting a limit increase to the existing annual SO₂ emission limit of 500 tonnes per year. As such, it was agreed that additional time would be required in order for the Department to review and assess the request. A six-month extension was granted to the expiry of Approval I-8900 from June 12, 2020 to December 12, 2020.

The summary includes comments received up to July 15, 2020 to allow sufficient time for the department to consider the issues raised, formulate responses, as well as publish the information in both official languages. Comments received after this date will be included in the "Final Summary of Issues and Responses" which will be available following the public comment period which ends on October 13, 2020.

It is important to note that while the Interim Summary reflects all relevant public comment received by the department, the names of specific individuals or groups who commented are not identified.

Any comments received or issues raised which are not directly related to air quality issues regarding this facility will not be included in the summary of issues and responses.

SUMMARY OF COMMENTS RECEIVED AND RESPONSES PROVIDED

As of July 15, 2020 the Department received one written submission on March 3, 2020. The submission included comments, questions, and inquiries from the public regarding the Lake Utopia Paper Mill, its current Air Quality Approval to Operate and the Facility Profile Document which was posted to the website in December 2019.

1. Background

Question: What is the percentage breakdown mixture of the two fibre types (virgin fibre from hardwood chips vs. recycled cardboard)?

Answer: *30% of the supply for a finished product is recycled cardboard and the remainder is from hardwood chips.*

2. Pollution Control

Question: Please provide a summary of any pollution control equipment installed over the last five years?

Answer: *A low rate anaerobic digester (BVF) replaced the high rate sludge blanket digester (UASB) during this approval period. The BVF system is kept under a negative pressure and therefore there are no fugitive*

emissions from it, compared to the UASB. There is instrumentation on the BVF to control the negative pressure. The construction of the BVF and associated white water tank enabled the mill to be able to decommission two wastewater ponds.

The BVF produces a significant amount of biogas which displaced the use of fossil fuels. The mill also completed a project to improve the operation of the boiler that combusts most of the biogas to reduce the amount of natural gas required. This project is also expected to increase the amount of biogas used to produce energy and displacing even more natural gas in the future.

Question: How has this Approval Holder kept up on its emission control technologies and other processes over the last five years?

Answer: The mill maintains a preventive maintenance system to ensure all critical instruments are calibrated and in good working order.

Question: Are there any future plans to improve its pollution control equipment?

Answer: The mill continuously looks for opportunities to improve its process including its pollution control equipment. Over the past two Approval to Operate periods the mill has invested significant capital in the installation of the Biomass boiler and the BVF treatment system which has improved the air quality.

3. Fuel Breakdown

Question: What percentage of #6 fuel oil is used? What percentage of biomass and biogas is burned at this facility? How much natural gas is burned?

Answer: Percentages summary of the current Approval to Operate period:

<i>Fuel</i>	<i>%</i>
<i>Natural Gas</i>	<i>40-50</i>
<i>Bark</i>	<i>40-50</i>
<i>Biogas</i>	<i>15-20</i>
<i>Bunker C</i>	<i>0</i>
<i>Waste Oil</i>	<i>0</i>

Question/Comment: Writer is of the opinion #6 fuel oil should be phased out completely. States concerns about smoke density and particulate matter controls from the combustion of #6 fuel oil and biomass. Also, asks if the company has considered exploring new renewable energy initiatives to reduce emissions?

Answer: The usage of biogas and biomass (bark) are renewable energy sources that replace a significant amount of fossil fuels each year. The intent is to continue to maximize the use of renewable fuels as much as possible. The mill has increased the amount of renewable fuel sources used in the boilers from 20 to 70% over the course of this Approval to Operate.

4. Emergency Response

Question: How many cases of upset conditions have been reported to the Department from the AH? Please provide details on the most significant upset conditions including what was done and what steps taken to prevent reoccurrences.

Answer: *During the 5 year period of I-8900 there have been no environmental emergency situations at this Facility relating to Air Quality.*

There were no significant upset conditions during this approval. The few opacity events from the combustion of bark were primarily due to unplanned outages, such as power interruptions or equipment failures, and not during normal operation. These events were short in duration and were communicated to the Department. Steps taken to minimize reoccurrences for example, would be bringing in an equipment expert to repair or replace opacity monitoring equipment and/or to provide technical operating guidance to applicable staff. There were no such incidents reported that ended up being a violation of Air Quality Approval conditions during the past 5 years.

5. Emission Limits

Question: The writer notes SO₂ emissions for several years were well below 500 tonnes per year and then jumps to 406. Why? Please explain the increase.

Answer: *The SO₂ emissions in 2018 can be attributed to the increase in biogas production since upgrading the anaerobic reactor to the BVF. Using more biogas reduces GHG emissions because it is a renewable, carbon neutral fuel that replaces a significant amount of non-renewable natural gas.*

Question: The writer observes there is no table for NO_x emissions in the facility profile. Please provide NO_x for the last five years? Same request for PM?

Answer:

Year	SO ₂ (tonnes/year)	NO _x (tonnes/year)	PM (tonnes/year)
2014	178	169	12
2015	167	172	10
2016	105	164	9
2017	133	176	16
2018	406	183	15

6. Odour

Question: How effective have the measures (a thru f) listed on Page 7 of the Facility Profile been for odour reduction?

Answer: *Based on the number of odour complaints (see below), these measures along with other improvements the mill has made, has resulted in a reduction in odour complaints.*

Question: What is meant by the AH is continuing to work to reduce odour generated by the facility? Is an odour mitigation plan required?

Answer: *Over the past 5 years some major sources of odour have been eliminated from the mill and the mill continues to look for opportunities to improve. The facility is required to maintain an Odour Control Plan, which describes the main sources of odour at the mill and the process to manage them, as well as a protocol for odour complaint response.*

Question: What about covering of the sludge ponds for odour control?

Answer: *Historically the equalization basin was covered as much as possible until it was removed.*

7. Testing and Monitoring

Question: How long were any boilers operated by #6 fuel oil during this Approval? Was it anywhere near the 700hr limit for requiring PM stack testing? Writer believes this 700hr requirement should be reduced so that #6 fuel oil is permitted only for a shorter period.

Answer: *#6 fuel oil was not used during this approval. The ability to burn Bunker is retained as a contingency.*

Question: What is the amount of CO, PM, and NOx released from each of the stacks?

Answer: *CO, PM, NOx are calculated based on annual fuel usage rather than individual stacks. See previous request for annual totals.*

Question: Please list the VOCs that are monitored?

Answer: *As per Condition 44 of Approval to Operate I-8900, the Sulphite Digester stack was sampled and scanned for over 40 VOCs at a laboratory. Only 3 were measured above 1ppm in the stack.*

Question: Does the Minister consider Section 64 of the CEPA a factor to be considered during Approval renewals? If not, please provide an explanation.

Answer: *No. The Canadian Environmental Protection Act (CEPA) is Federal legislation administered by Environment and Climate Change Canada. It is not within the mandate of this Department to monitor compliance with legislation administered by other agencies.*

8. Terms and Conditions

Question: Please provide the writer copies of the annual air quality reports for the five years of the current Approval. If possible, link them electronically to the Interim Summary.

Answer: *Unfortunately, links for these reports cannot be made available electronically. The writer will be sent copies of the Annual Reports by other means.*

Question: Regarding GHG Emissions Reporting and GHG Management Plan please provide electronic access to the reports in the Interim Summary.

Answer:

Link to NPRI:

<https://www.canada.ca/en/services/environment/pollution-waste-management/national-pollutant-release-inventory.html>

Link to GHG data:

<https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/facility-reporting/data.html>

9. Enforcement

Question: Were there any investigations launched?

Answer: *There were no investigations launched by the Department during this Approval as it related to Air Quality.*

10. Public Outreach

Question: How many tours occurred?

Answer: *It is estimated by the facility that a minimum of 10 tours a year have occurred during this period of the Approval to Operate.*

Question: How many requests for information took place over the last 5 years?

Answer: *The facility did not receive any formal requests for air quality information during this period of the Approval to Operate.*

11. Inspections

Question: How many unannounced inspections took place at this facility the past 5 years? How many announced with notice inspections took place during the past 5 years? How many meetings with the Approval Holder with DELG officials took place over the past 5 years?

Answer: *There were no unannounced inspections that took place at this facility during the previous 5 years. 4 announced inspections and/or site visits took place at the facility during the previous 5 years. Also during this period, a 'desktop' audit was conducted on the Approval Holder. There were no non-compliance items discovered during audits. Several meetings occurred during this Approval period. Some of which were face to face and others via phone or video conferencing.*

Question: How many 'Occurrence Reports' were opened and closed on this Approval Holder during the past 5 years?

Answer: *There were 2 "Occurrence Reports" opened and closed that were related to non-emergency small spills occurring at the facility during the period of the Approval. Additionally, "Occurrence Reports" were opened and closed on 2 other occasions at the facility. These were for an inspection of the Petroleum*

Storage tank system by the Department and for the removal of a petroleum storage tank as per the Petroleum Product Storage and Handling Regulation.

The Saint John Regional office may also use the Occurrence database to keep record of received odour complaints related to the mill. As such, the Regional Office has generated "Occurrence Reports" upon receiving odour complaints and uses the database for tracking and follow up purposes.

12. Definition #7 "Mill Complex Emission Sources"

Question: Please provide the total number of vents, stacks, storage pipes, and liquid effluent treatment ponds at this Facility.

Answer: The mill has an aerobic treatment pond system and an emergency pond. The mill's process stacks include: three boiler stacks Boiler No. 1 and No. 2 Common Exhaust Stack (serving Boiler No. 1 and Boiler No. 2), Boiler No. 3 Exhaust Stack, Boiler #4 (Biomass) Stack, Sulphite Digester Exhaust Stack, Paper Machine Dryer Exhaust Stacks, and an Absorption Tower Exhaust Stack.

13. Waste Derived Fuel

Question: How much of this kind of fuel is burned at this Facility? What % overall of all the fuel types? The writer is not impressed with waste derived fuel being permitted to be burned citing concerns with the possibility of heavy metals combustion of arsenic, cadmium, chromium, lead, zinc and PCBs.

Answer: The facility has not burned waste derived fuel at this facility since 2005. The combustion of waste derived fuel to generate heat or process energy is regulated as per the Used Oil Regulation. To be eligible for combustion, waste derived fuel must meet certain specification criteria and the Approval Holder must have laboratory results verifying that the fuel product is not considered contaminated and meets limits for PCBs and heavy metals.

14. Limits #22 to #26

Comment: The writer feels limits for SO₂, PM and NO_x should be further reduced from the last Approval. Judging by the reductions in GHG emissions one would expect the other emissions would go down.

Response: SO₂, PM, NO_x emissions and GHG emissions are not directly correlated. Each fuel produces different amounts of SO₂, PM and NO_x when combusted.

15. Facility Management

Question: Were Conditions #28, 29 and 30 complied with? The writer believes Condition 30 should remain with the desired outcome of reduction of odours impacting off the site.

Answer: Yes, the Conditions were in compliance during this Approval period. Some main sources of odour were decommissioned and removed during this period. The Approval Holder is required to continue to maintain an Odour Control Plan.

Question: Did the air pollution control equipment on each boiler work 100% of the time? Were there periods of time when such air pollution equipment was not working? If so for what time period; hours, days, weeks, months?

Answer: *Each boiler stack is equipped with opacity monitoring to detect PM. If the opacity monitors are not working visual inspections are conducted to compare with the Smoke Density Chart as issued by the Province of New Brunswick. Since the main source of PM is the combustion of bark, the boiler does not operate on bark if the monitor is not functioning.*

16. Record Keeping

Question: Were the records cited in the Record Keeping section of the Approval (Opacity and Waste Derived fuel testing specifications) made available to an inspector when requested? Were such records requested?

Answer: *An inspector did not specifically request any such records during visits to the site. Opacity monitoring information is continuously reported to the Department in the Monthly Reports which were submitted on time during the Approval. There was no burning of waste derived fuel at the facility during this Approval therefore no such records testing records were available to be requested.*

17. Public Complaints

Question: How many complaints were received from the public to this Approval Holder? Report results for each year of this Approval.

Answer: *The Approval Holder forwarded a notice to the Department each time it received a public complaint. All complaints were related to detected odour. A listing by year of the number of complaint calls reported to the Department as received by the Approval Holder is as follows:*

Year	Number of Complaint Calls
2014	35
2015	41
2016	28
2017	17
2018	15

Question: For #53(e) and #54(b) please provide the results on these by year.

Answer: *Fuel #6 and Waste Derived Fuel were not combusted during this Approval period. Natural gas and biomass/bark do not contain significant amounts of sulfur. Biogas contains 1-1.5% sulfur. This information is included with the annual reports.*

CONTACT INFORMATION:

For further information on the operation of the Lake Utopia Paper please contact:

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