INTERIM SUMMARY
OF ISSUES AND RESPONSES

Relating to the Class 1 Air Quality Operating Approval

for

Atlantic Wallboard Limited Partnership
Saint John Gypsum Wallboard Plant
Saint John, NB

Prepared by the Authorizations Branch
Department of Environment and Local Government

September 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 Department's Internet Site or through any regional Environment 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 November 2, 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

Atlantic Wallboard Limited Partnership (the proponent) operates a gypsum wallboard manufacturing plant (the facility) at 30 Jervis Lane, in Saint John, NB. The facility manufactures commercial-grade wallboard products for the construction industry. The Gypsum Wallboard Manufacturing Plant uses synthetic gypsum (also referred to as desulphogypsum or DSG) produced by the flue gas desulphurization systems in NB Power Generating Stations, in the production of the wallboard products. Local as well as natural gypsum or synthetic gypsum from other sources as required.

As required under the *Air Quality Regulation – Clean Air Act*, the facility operated by Atlantic Wallboard Limited Partnership is considered a source and therefore, must apply for and obtain an Air Quality Approval to Operate from the Department. The facility is required to conduct its operations according to conditions outlined in the Air Quality Approval aimed at preventing unfavourable 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 Atlantic Wallboard Limited Partnership facility, please see the Facility Profile available on the Department's Public Information Access Internet Site or contact any office of the Department. Information is also available by contacting Atlantic Wallboard directly. (The contact information and Internet site address appear at the end of this Summary)

GENERAL INFORMATION ABOUT THE SUMMARY

This summary includes comments received up to August 10, 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 November 2, 2020.

It is important to note that while the Interim Summary reflects all relevant public comment received by the Department of Environment and Local Government, 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 August 10, 2020, the Department received one written submission from the public regarding the Atlantic Wallboard plant. Summarized below are the issues and concerns raised in the written submission that were related to air quality and the corresponding responses.

ISSUE 1: Gypsum Storage Building

A concern was raised regarding the demolition of an onsite structure that appeared to formerly store gypsum. Is the demolition of this structure related to the pilot project to store gypsum outdoors on a concrete pad, and was there a public review?

RESPONSE

The building that was torn down held scrap/waste board from the start of the operation in 2007. This material broke down over time and appeared to be gypsum but was in fact wet wallboard that accumulated during the commissioning of the facility. This scrap material was recycled into normal production over a 10-year period and the building has been empty since 2017. The tear down of this structure was not related to the trial storage of gypsum. The gypsum storage building that is referred to in the document, is the building that gypsum is trucked into or conveyed into from the rail unloading process. It is the larger attached structure on the north side of building unit that is still in use.

ISSUE 2: <u>DFO Notification</u>

The concern was raised regarding the potential environmental impact of runoff from the outdoor gypsum storage pad reaching Courtney Bay. The question was asked whether the Department of Fisheries and Oceans Canada (DFO) was notified to review the pilot project.

For approval of the trial, DFO directed the project team to request permission from the Saint John Port Authority as the adjacent body of water to the site is under their jurisdiction. The trial was given temporary approval and the Port Authority will decide on future approvals based on the trial results. During the trial which began in December 2019, there have been no rain fall events that have discharged any water from the collection system to the Courtenay Bay Channel despite that during this period there have been two 24hr periods where rainfall exceeded 50mm and four 24hr periods where rainfall exceeded 30mm.

ISSUE 3: <u>Natural Gypsum Source</u>

The question was asked to provide an update on the status of the Upham Gypsum Quarry project, currently under EIA review and to quantify truck traffic to the facility from this quarry.

RESPONSE

The approval of the Upham Gypsum Quarry is outside of the scope of this renewal for Approval to Operate and is covered under a separate application. All related approvals for the Upham Quarry can be found at www.hammondriverholdings.com.

The Upham gypsum will be used to supply Atlantic Wallboard. The current plan is to use trucks 3 times per week with an expected 30-40 trucks per day. This is far fewer trucks per day then when hauling material from the storage site at Willett pit. The Upham Gypsum Quarry source will be added to the draft Approval to Operate.

ISSUE 4: Air Monitoring Stations

The question was asked to comment on the air monitoring program since the referenced nearest residential receptors on River Avenue have been demolished.

RESPONSE

With the removal of the homes along North, there is a change required in this document to indicate that the nearest homes to the facility are now situated on 2 St E and are situated 525 m from the facility.

The current location of the monitoring stations is considered conservative as they are now closer than the nearest residential receptors. By retaining the existing monitoring station locations, continuity with historical data collected to date is maintained.

ISSUE 5: Water Quality Approval

The question was asked whether the facility has an Approval under the *Clean Water Act.*

RESPONSE

This Facility has been classified as a Class 4 Facility, pursuant to the *Fees for Industrial Approvals Regulation 93-201* filed under the *Clean Water Act.*

ISSUE6: Synthetic Gypsum Source

The question was asked to quantify the synthetic gypsum that originates from Coleson Cove and National Gypsum from Nova Scotia?

RESPONSE

In the past 5 years, Coleson Cove has supplied < 10% of the annual gypsum requirement of the facility. The remainder of the gypsum has been supplied by National Gypsum Though, due to service constraints and demand from their own wallboard facilities, this supply has become less of a surety and alternatives have been investigated. As a result of this, Spanish rock was also used by the facility for Wallboard production in the past 12 months (approximately 60,000 MT).

ISSUE 7: Approval Classification

The question was asked to explain in more detail why the facility has a Class 1B designation.

RESPONSE

This Facility has been classified as a Class 1B Facility, pursuant to the *Air Quality Regulation, New Brunswick Regulation 97-133* filed under the *Clean Air Act*.

Class 1B is designated if a facility meets any of the following criteria. Based on the process gas flow design capacity of the facility, Class 1B was designated. The actual process gas flow during operation is approximately 2000 m^3/min.

Class	Process Gas Flow *m^3/min*	SO_2 *tonnes/year*	Particulate Matter *tonnes/year*
1B	>3000	251-1000	251-1000

ISSUE 8: Natural Gas Fuel Source

The question was asked to clarify how natural gas is supplied to the facility.

RESPONSE

All natural gas is delivered to the site via compressed natural gas trailers.

ISSUE 9: Particular Matter Constituents

The question was asked if glass fibres and vermiculite are emitted from the facility and are a component of the particulate matter.

RESPONSE

The majority of the particulate matter that is emitted from this site is a result of the combustion of natural gas that does not include glass fibers or vermiculite. Annual air quality of the workplace environment evaluates the particulate matter and the levels that are recorded are below any levels where any actions (either ventilation or filtration) are required.

ISSUE 10: Dust Control Equipment

The question was asked whether the current dedicated baghouse represents the Best Achievable Control Technology (BACT) or are there more advanced technologies available to control emissions?

RESPONSE

Baghouses are commonly used in the wallboard industry and they are considered to be the best available commercial technology for that industry. Efficiencies for baghouses in this type of application are typically greater than 99.9%.

The process dust control equipment is located and vented within the building and does not exhaust to atmosphere with the exception of one process vent. This vent is analyzed in the annual air testing program on site. For particulate matter, the current site emissions are at 20% of the limit for the site

and of these emissions, only 18% of the total was captured from this vent. The majority of the particulate matter emitted is a result of the combustion of natural gas. As the particulate rate coming from this site is minimal, there is no need for an upgrade to the process.

ISSUE 11: Outdoor Storage Pilot Project

Concerns were raised regarding the outdoor storage of natural gypsum with respect to offsite impacts of particulate matter and the potential for runoff to impact off site receptors. In particular, concerns were raised regarding the increase in frequency of ambient air monitoring to every 3 days. A request was made to provide the results of the pilot project in the final summary.

RESPONSE

The original EIA conducted for this site included the storage of natural rock gypsum to be permitted with the existing air monitoring stations and testing frequencies. Additional frequencies were added for the trial to increase the data collection opportunities. To date, there have been no exceedances measured as a result of this new activity.

The setup for the trial included several runoff controls to mitigate the TSS from entering surrounding water from site. These controls induce a settling pond that was designed to handle a 100-year storm event. All runoff from this pile has been directed to the settling pond through ditching. Due to the oversizing of the runoff control, there have been no discharges to the Courtenay Bay Channel to date.

The draft Approval to Operate renewal includes conditions and limits to account for the ongoing pilot project. A final report on the results of the pilot project will be submitted when complete.

ISSUE 12: Chemicals Used in Process, and the Federal Government's Chemical Management Plan

The question was asked to confirm the formal name of the dispersing agent, foaming agent and retarder used in the process, and to clarify the status of the Federal Government's Chemicals Management Plan assessment with respect to vermiculite.

RESPONSE

Some of the raw materials used in the process are proprietary and covered under patents. However, the formal names of the raw materials used in the process are outside of scope of this renewal as these are not emitted through air or water.

For information on The Government of Canada's Chemicals Management Plan (CMP), please refer to the following: https://www.canada.ca/en/health-canada/services/chemical-substances/chemicals-management-plan.html

ISSUE 13: Vent Stacks

The question was asked to quantify the facility vents stacks and to confirm what factors were considered when setting emission limits for particulate matter.

RESPONSE

There are 3 stacks that exhaust to atmosphere from this facility. Two stacks are exhaust from the combustion of natural gas and one stack is to relieve pressure from a dust collection system.

The factors considered when setting the emission limits included the selected control technology and type of fuel being utilized.

ISSUE 14: Ventilation

The question was asked about ventilation in the gypsum storage building with respect to worker health.

RESPONSE

Occupational Health concerns are outside of the scope of this renewal, however, annual workplace air testing is conducted, and ventilation has been shown to be unnecessary.

ISSUE 15: Trace Metals

The question was asked to qualify the trace metals in the particulate matter.

RESPONSE

These trace metals are from general impurities while burning natural gas and not from the wallboard manufacturing process. Trace metal particulates from natural gas burning are well understood and documented.

Particulate matter forms in a combustion process from the incomplete combustion of fuel, as well as from various impurities that may be contained in the fuel such as trace metals. It is recognised that natural gas is one of the cleanest fuels available today with essentially no significant amount of particulate matter produced.

ISSUE 16: Annual Report

It was noted that the most recent Annual Report had not yet been submitted.

RESPONSE

Since that writing, the Annual Report has been submitted.

ISSUE 17: Greenhouse Gas Reports

The question was asked to provide the Greenhouse Gas reports noted in the facility profile.

RESPONSES

These reports can be found at:

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

CONTACTS

For further information on the operation of the Atlantic Wallboard facility please contact:

Atlantic Wallboard Limited

Ken Haddock
Director of Health, Safety and Environment
J.D. Irving Limited
P.O. Box 3400
Saint John, NB E2M 4X9
Telephone: (506) 635-5646
Fax: (506) 635-5608
Email : Haddock.Ken@IrvingEquipment.com

Principal Contact, Saint John Region:

Patrick Stull
Regional Director
Region 4 Office
Program Operations and Enforcement Branch
NB Department of Environment & Local Government
8 Castle Street, P.O. Box 5001
Saint John, New Brunswick E2L 4Y9
Telephone: (506) 658-2558
Fax: (506) 658-3046
E-mail: Patrick.Stull@gnb.ca

For further information on this document, or on environmental regulations relating to air quality, please contact:

Barry Leger
Approvals Engineer
Authorizations Branch
New Brunswick Department of Environment & Local Government
8 Castle Street, P.O. Box 5001
Saint John, New Brunswick E2L 4Y9
Telephone: (506) 658-2558
Fax: (506) 658-3046
E-mail: Barry.Leger@gnb.ca

For comments or enquiries on the public participation process, please contact

Chandra Clowater
Acting Manager
Public Education, Stakeholder and Fist Nation Engagement Branch
New Brunswick Department of Environment & Local Government
PO Box 6000, 20 McGloin St.
Fredericton, New Brunswick E3B 5H1
Telephone: (506) 457-7511
Fax: (506) 453-3843
E-mail: Chandra.Clowater@gnb.ca