

April 23, 2021



Director, Environmental Approvals  
Environmental Approvals Branch  
Manitoba Conservation and Climate  
123 Main Street, Suite 160  
Winnipeg, Manitoba R3C 1A5


**Re: Notice of Alteration – Addition of a Shake Line**

Pursuant to Section 14 of *The Environment Act*, please find attached a Notice of Alteration (NoA) and supporting documentation for the addition of a secondary processing line to the LP Swan Valley Siding plant. The addition of this new equipment will allow the facility to produce an architectural engineered wood siding product called "Shake" from the existing SmartSide Siding panels that are currently manufactured at the plant. At capacity, the new processing line will produce about 50 million square feet (3/8" basis) of Shakes annually. This is not new or increased production capacity but represents the amount of 4' x 8' panels currently produced at the plant that will be sent to the secondary Shake Line for further processing to create a value-added architectural Shake siding.

Key elements of the project include the addition of sawing and profiling stations, two edge seal stations, two natural gas-fired ovens, a pre-engineered building to house the equipment, and a dust collection baghouse. The potential effects of the project on the environment are addressed in the attached report "Environmental Effects of Proposed Addition of a Shake Line to the Swan Valley Siding Plant: Information to Support the Notice of Alteration".

Please do not hesitate to contact Lyle Sagert at (204)525-279 or by e-mail at [Lyle.Sagert@lpcorp.com](mailto:Lyle.Sagert@lpcorp.com) if you have any questions or require further information to support the NoA.

Sincerely,

  
Kevin Betcher  
Plant Manager, LP Swan Valley

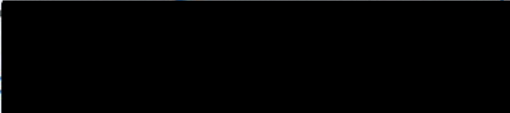
**Attachments:**

- Notice of Alteration Form
- Environmental Effects of Proposed Addition of a Shake Line to the Swan Valley Siding Plant: Information to Support the Notice of Alteration

Cc: Lyle Sagert, Plant EHS Manager, LP Swan Valley

Notice of Alteration Form



Client File No. : 3741.10		Environment Act Licence No. : 2954 RR	
Legal name of the Licencee: Louisiana-Pacific Canada Ltd.			
Name of the development: LP Swan Valley Plant			
Category and Type of development per Classes of Development Regulation: Forestry <input type="button" value="v"/> <SELECT>			
Licencee Contact Person: Lyle Sagert Mailing address of the Licencee: Box 189 City: Minitonas Province: MB Postal Code: R0A 1A0 Phone Number: (204) 525-2479 Fax: (204) 525-4327 Email: Lyle.Sagert@lpcorp.com			
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant): Kevin Warkentin			
Phone: (615) 970-0443		Mailing address: 9656 Brunswick Dr, Brentwood, TN, 37027	
Fax:			
Email address: kevin.warkentin@outlook.com			
Short Description of Alteration (max 90 characters): Adding a secondary processing line to the existing plant for the manufacture of Shakes.			
Alteration fee attached: Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
If No, please explain: Will be paid by credit card			
Date: 2021-04-23		Signature: 	
		Printed name: Kevin Betcher, Plant Manager	
<p>A complete Notice of Alteration (NoA) consists of the following components:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Cover letter</li> <li><input checked="" type="checkbox"/> Notice of Alteration Form</li> <li><input checked="" type="checkbox"/> 2 hard copies and 1 electronic copy of the NoA detailed report (see "Information Bulletin - Alteration to Developments with Environment Act Licences")</li> <li><input type="checkbox"/> \$500 Application fee, if applicable (Cheque, payable to the Minister of Finance)</li> </ul>		<p><b>Submit the complete NoA to:</b></p> <p>Director Environmental Approvals Branch Manitoba Sustainable Development 1007 Century Street Winnipeg, Manitoba R3H 0W4</p> <p><b>For more information:</b></p> <p>Phone: (204) 945-8321 Fax: (204) 945-5229 <a href="http://www.gov.mb.ca/sd/eal">http://www.gov.mb.ca/sd/eal</a></p>	
<p><b>Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an Environment Act Proposal Form (see "Information Bulletin – Environment Act Proposal Report Guidelines")</b></p>			

Environmental Effects of Proposed Addition of a Shake Line to the  
Louisiana-Pacific Swan Valley Siding Plant

Information to Support the Notice of Alteration

## Table of Contents

List of Tables .....	3
List of Figures .....	3
Introduction .....	4
Project Overview.....	4
Project Description.....	4
Detailed Process Description .....	4
Key Project Milestones .....	7
Air Issues .....	8
Stack emissions .....	8
Ambient air quality .....	9
Fugitive dust.....	11
Water Issues.....	11
Surface water quantity .....	11
Surface water quality .....	11
Groundwater quality.....	12
Water Usage .....	12
Waste Issues .....	12
Solid Wastes.....	12
Liquid wastes.....	13
Other Issues .....	13
Noise .....	13
Odour .....	14
Traffic .....	14
Environment Act Licence .....	14
Amendments.....	15
Appendix A – Process Flow Diagram.....	16
Appendix B – General Equipment Arrangement .....	17
Appendix C – Shake Line Baghouse Drawings and Performance Guarantee .....	18

## List of Tables

Table 1. Key Shake Line project activities .....	7
Table 2. Existing emission sources and TPM emission limits.....	8
Table 3. Measured TPM emission rates since 2015.....	8
Table 4. Summary of 2010 modeling results and applicable AAQC.....	10
Table 5. Management of solid wastes and process residuals from Shake Line.....	12
Table 6. Current Environment Act Licence 2954 RR conditions impacted by the Shake Line project.....	15

## List of Figures

Figure 1. Cutting and priming a SmartSide panel into a Shake.....	6
Figure 2. Brush machine outfeed with an individual finished Shake.....	6
Figure 3. Location of the new pre-engineered Shake Line building. ....	7

## Introduction

Louisiana-Pacific (LP) intends to add a Shake Line to its existing operations at the Swan Valley Siding plant located near Minitonas, Manitoba. The addition of this equipment in a secondary manufacturing process will allow the facility to produce an architectural engineered wood siding product called “Shake” from the existing panels that are currently manufactured at the plant.

Based on the detailed evaluation on the following pages, adding the secondary Shake Line to the existing operations at the Swan Valley plant is expected to have insignificant impacts on the environment and human health in the vicinity of the plant.

## Project Overview

The LP Swan Valley plant began operations in 1996 as an Oriented Strand Board (OSB) plant. In 2015, LP made the strategic decision to upgrade the Swan Valley facility from commodity OSB production to the manufacture of LP’s strand-based engineered exterior wood siding called LP SmartSide® to meet growing demand and to make the plant less vulnerable to OSB market-related shutdowns. Five years later, Swan Valley is LP’s largest capacity SmartSide facility and intends to add a secondary finishing line for the production of a value-added architectural Shake siding in order to grow its product portfolio to serve the growing exterior siding market.

The Shake Line project represents a \$20 million USD investment in the future of the Swan Valley plant. At full capacity, the new Shake Line will employ an additional 16 to 20 people, increasing total employment at the plant to approximately 235. The new Shake Line is expected to begin operations in Q2 2022.

## Project Description

The intent of the project is to install a Shake Line at the Swan Valley Siding plant. This is a new secondary line that will further process some of the siding panels that are currently manufactured at the Swan Valley plant into a profiled Shake siding. Conceptually, it is similar to the existing Tongue-and-Groove (T&G) Line at the plant, which is a secondary processing line that adds a tongue and groove to panels to produce a value-added flooring product.

When operating at full capacity, annual Shake production from the plant will be 50 million square feet on a 3/8” equivalent basis (MMSF 3/8”). This is not new production for the Swan Valley plant but represents the amount of current SmartSide panel production that will be sent to the secondary Shake Line for further processing to create the value-added architectural Shake siding.

Key elements of the project include the addition of sawing and profiling stations, two edge seal stations, two natural gas-fired ovens, a pre-engineered building to house the equipment, and a dust collection baghouse.

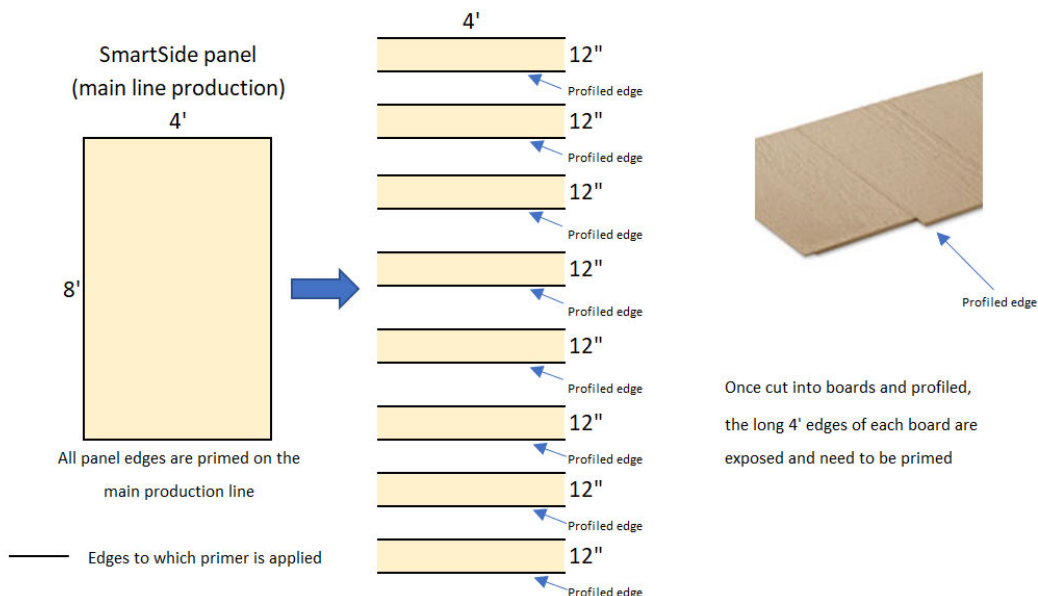
## Detailed Process Description

A detailed description of the Shake production process is provided below. A Process Flow Diagram (PFD) presenting a graphical overview of the Shake production process is shown in Appendix A and an equipment General Arrangement is provided in Appendix B.

Stacked and primed 4' x 8' SmartSide panels ("blanks") will be delivered by forklift from the existing plant warehouse to the new Shake Line building and unstacked. Individual blanks will be conveyed to the Rip Saw where they will be cut across the 4' dimension into eight boards each measuring 4' x 12". The boards will be restacked into units of eight and processed through the Profiler where one of the 4' edges will be cut, or "profiled", to create the appearance of a Shake. This sawing and profiling process is the primary source of emissions from the new Shake Line. According to a third-party evaluation of existing dust collection systems at the Swan Valley plant completed in January 2021, a new baghouse is required to handle the additional dust loading from the cutting and profiling stations. Dust generated from these processes will be collected by a new Shake Line Baghouse. Fines collected by the Shake Line Baghouse will be sent to the existing hammermill and integrated into the top layer of the board along with other dust sources per existing mill processes.

Profiled stacks of boards will be conveyed to a 0.36 MMBTU/hour natural gas-fired High Velocity Hot Air (HVHA) Pre-Heat Oven that will heat the stacks to facilitate the adhesion of primer to the cut edges. For safety reasons and to comply with building codes, the oven will have a small vent through the roof of the building (similar to the configuration of the main production line ovens) to discharge the products of combustion from the natural gas burner.

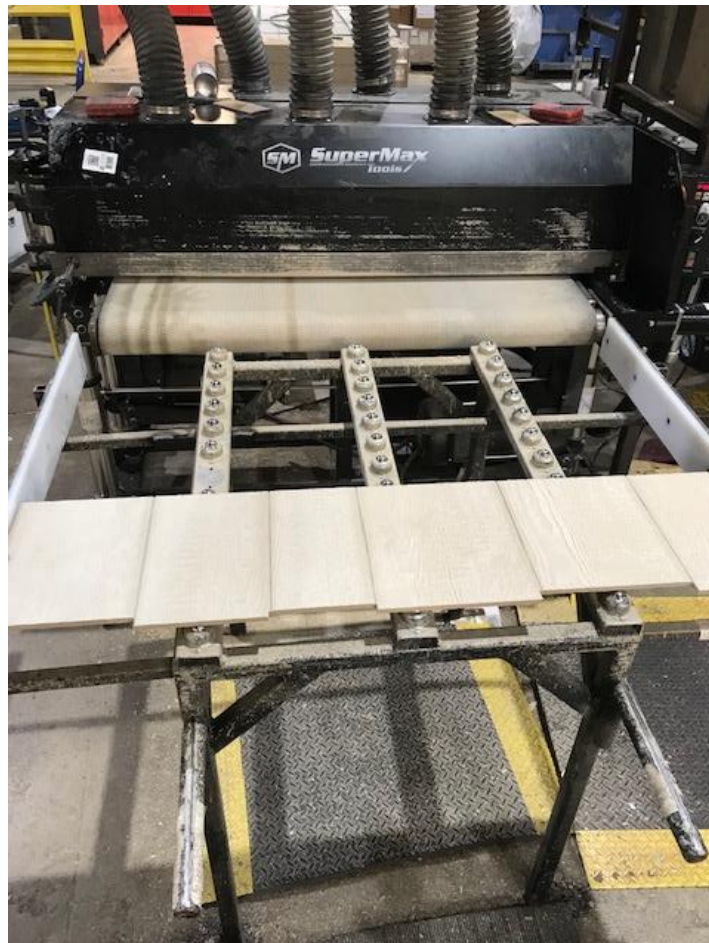
The pre-heated stacks of profiled boards will be conveyed to two edge seal coating stations located in series. A thin (0.002") coat of water-based primer will be applied to 4' cut edges of each board (the profiled edge and the back edge) at each station to prevent moisture infiltration and to allow for consistent finishing. The 12" edges of the blank are not cut and therefore do not need to be reprimed. Figure 1 provides a schematic of a blank panel cut into boards along with edges requiring primer. The primer used on the Shake Line will be the same as the one used on the main production line at the plant. Each edge seal station will have an exhaust system that will vent back into the building, similar to the design of the existing edge seal application stations on the main panel line. At design capacity, approximately 152,000 litres of primer will be applied annually at the Shake Line. 994,000 litres of primer were used on the main production line in 2020, resulting in an estimated increase of 15% in total facility primer usage as a result of the Shake Line project.



*Figure 1. Cutting and priming a SmartSide panel into a Shake.*

The stacks of primed boards will be conveyed to a 1.0 MMBTU/hour HVHA natural gas-fired Drying Oven to cure the primer. For safety reasons and to comply with building codes, the oven will have a small vent through the roof of the building (similar to the configuration of the main production line ovens) to discharge the products of combustion from the natural gas burner.

Following the primer curing process, the stacks of finished boards will be conveyed through a cooling station to speed up the cooling of the boards to accommodate handling. Once cooled, boards will be unstacked, passed through a dry brush system to remove any debris, and graded. A finished Shake is shown in Figure 2.



*Figure 2. Brush machine outfeed with an individual finished Shake.*

Product meeting performance and aesthetic standards (“A-grade product”) will be restacked into 10-piece mini-bundles. Mini-bundles will be further stacked into larger 400-piece units, strapped, and packaged for secure storage and shipping. Forklifts will move the packaged units from the new Shake Line building to the existing outdoor finished product storage pad located east of the main production building where they will be stored until being shipped to the customer.



Due to space constraints in the existing plant, a new 31,000 square foot pre-engineered building will be constructed to house the Shake Line equipment. The new building will be located west of the main production building on the south side of the existing Fire Pond. The general location of the new pre-engineered Shake Line building is shown in Figure 3. The new building will be detached from the existing main plant building but may include a covered breezeway in the future to better enable safe movement of materials between the buildings during inclement weather.



Figure 3. Location of the new pre-engineered Shake Line building.

### Key Project Milestones

Key project milestone dates to support the start-up of the new Shake Line in Q2 2022 are presented in Table 1 below. A key aspect for any construction project in Manitoba is seasonality, so the project schedule takes into account completing the required civil works and the building enclosure prior to the onset of winter in Q4 2021 to allow for the installation of the Shake Line equipment in early 2022.

Table 1. Key Shake Line project activities

Date	Activity
April 23, 2021	Submit Notice of Alteration to Manitoba Conservation
May 17, 2021	Initiate project civil works (general site preparation, clearing, building excavation, foundations)
July 9, 2021	Delivery of pre-engineered building
September 17, 2021	Building construction complete
February 24, 2022	Shake Line equipment delivery to site and commence installation
April 25, 2022	System start-up

## Air Issues

The primary pollutant discharged from the new Shake Line will be total particulate matter (TPM) from the new Shake Line Baghouse (Baghouse 7) with minor additional contributions from the natural gas-fired Pre-Heat and Drying Ovens<sup>1</sup>. Since no other pollutant emissions are expected to change, the evaluation of air emissions is focused on TPM.

### Stack emissions

Current sources of emissions at the plant and associated TPM emission limits under Environment Act Licence 2954 RR are presented in Table 2 below.

Table 2. Existing emission sources and TPM emission limits

Source (control)	Emission limit (g/s)
Dryers (WESP)	5.14
Thermal oil heater (DESP)	2.18
Press (None)	2.10
Trim Saws (Baghouse 1)	0.15
Formers (Baghouse 2)	0.09
Raw fuel storage bin (Baghouse 3)	0.09
Sander dust (Baghouse 4)	0.11
Flying cut off saw (Baghouse 5)	0.13
Sander dust (Baghouse 6)	0.11
<b>TOTAL</b>	<b>10.1</b>

Since the 2015 upgrade, emission compliance testing was conducted in 2016 and 2018. The results of TPM testing on licenced sources is presented in Table 3.

Table 3. Measured TPM emission rates since 2015

Source	2016 (g/s)	2018 (g/s)	Avg (g/s)
Dryers	0.190	0.190	0.190
Thermal oil heater	1.464	2.310	1.887
Press	0.382	0.418	0.400
Trim saws baghouse	0.021	<0.019	0.020*
Former-blender baghouse	0.062	0.045	0.0535
Raw fuel storage bin baghouse	0.026	0.021	0.0235
Sander dust baghouse	0.084	0.028	0.056
Flying cut off saw baghouse	0.019	0.020	0.0195
Sander dust baghouse	**	0.029	0.029
<b>TOTAL</b>			<b>2.6785</b>

\* Assumes 2018 value is equal to the detection limit.

\*\* Not required to be tested due to an oversight in the amended permit following the upgrade.

<sup>1</sup> TPM emissions from the mainline ovens were included in the 2015 amendment application for the SmartSide upgrade but were not added to the licence due to insignificant emissions. The Pre-Heat and Drying Ovens are smaller than the mainline ovens, with TPM emissions of 0.00034 g/s and 0.0009 g/s, respectively, based on the US EPA AP-42 TPM emission factor for natural gas combustion. Since the new ovens are very minor sources of TPM with emission rates three orders of magnitude lower than other emission sources at the plant, they have an immaterial impact on total facility emissions and have not been included in this analysis.

Based on the average measured emissions over the last two testing cycles, current total plant emissions of TPM are 2.6785 g/s or 26.5% of the total allowable site TPM emissions of 10.1 g/s for all licenced sources combined.

The addition of the Shake Line Baghouse will add a new source of TPM emissions to the plant. The new baghouse will be designed for an airflow of 18,000 ACFM with a filterable particulate performance guarantee of 10 mg/m<sup>3</sup>, which equates to 0.085 g/s. In order to account for condensable particulate emissions as required by the plant's license, the proposed TPM emission limit for the new Shake Line Baghouse is 0.15 g/s, which is equivalent to the existing Trim Saw baghouse TPM limit. Drawings showing the new Shake Line Baghouse and a copy of the Emissions Performance Guarantee letter are provided in Appendix C.

As a result of the installation of the new Shake Line Baghouse, the plant's total allowable TPM emissions will increase from 10.1 g/s to 10.25 g/s, or a 1.49% increase. Conservatively assuming that the new Shake Line Baghouse emits TPM at the proposed emission limit, total facility emissions will increase from 2.6785 g/s to 2.8285 g/s, or 28.0% of the total allowable TPM limit of existing sources. It should be noted that the new Shake Line Baghouse will be designed to exhaust back into the Shake Line building for approximately 6 months of the year. This configuration will provide a source of energy-efficient warm make-up air during colder months to maintain a positive air balance inside the new building. The Shake Line Baghouse will exhaust to atmosphere during warm months when make-up air is not required.

Overall, there will be an insignificant impact on facility TPM emissions compared to existing facility emission rates, licence limits or licence conditions as a result of the Shake Line project.

### Ambient air quality

Changes to the Swan Valley plant's operations potentially affecting air emissions and resulting local ambient air concentrations are additional TPM emissions from the new Shake Line Baghouse that will collect dust from the Shake Line saw and profiling stations.

A detailed dispersion modeling report<sup>2</sup> and associated Human Health Risk Assessment (HHRA)<sup>3</sup> were completed in 2010 and submitted to Manitoba Conservation in support of the plant's application to permanently remove the Regenerative Thermal Oxidizers (RTOs) and the construction of a new Dryer Stack. Dispersion modeling was based on maximum authorized emission rates (emission limits) from all licenced sources and presented the resulting estimated ambient air concentrations within a 22km-by-22km grid around the plant and at 43 discrete receptors (e.g., residences, school, senior's manor, Minitonas town offices and LP's ambient air monitoring stations) located within 5km of the plant. Table 4 presents the modeling results compared to the applicable ambient air quality criteria (AAQC).

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<sup>2</sup> Olsson Associates, April 2010

<sup>3</sup> Stantec, April 2010

Table 4. Summary of 2010 modeling results and applicable AAQC

Parameter	Averaging Period	Maximum ground-level concentration (GLC) ( $\mu\text{g}/\text{m}^3$ )	AAQC ( $\mu\text{g}/\text{m}^3$ )	Maximum GLC % of AAQC	Location
TPM	24-hr	39.769	120	33	LP East property boundary
TPM	Annual	6.638	70	9	LP East property boundary
PM <sub>10</sub>	24-hr	44.88	50	90	LP East property boundary
PM <sub>2.5</sub>	24-hr	3.039 <sup>4</sup>	27 <sup>5</sup>	11	LP East property boundary

As noted in Table 4, the maximum GLC for all parameters and averaging periods occurred at the eastern boundary of the LP property and was below the applicable AAQC. In reviewing these results, it is important to recognize that these represent the worst-case scenario, with all sources emitting at their maximum allowable emission rate under a specific set of meteorological conditions that generate the highest possible ambient concentrations. The modeled GLC at discrete receptors was generally well below the maximum GLC. The stack emissions section of this report suggests that actual facility emissions will only be about 28% of the total permitted emission rates from all sources combined. The 2010 modeling also didn't account for the fact that Baghouse 6 is configured to discharge back into the main plant to provide an energy-efficient source of make-up building air during the cold months, and similar plans are in place for Baghouses 1, 3 and 4. As a result, the modeling results are conservative compared to actual current and future emission sources and rates, and the resulting actual ambient concentrations are substantially lower than the model results at both the maximum GLC locations and at all 43 discrete receptors.

Manitoba Conservation has previously accepted that TPM emissions from the plant are not significantly impacting local ambient air quality as evidenced by their approval to eliminate sampling for TPM and PM<sub>10</sub> from the ambient air quality monitoring program.

To mitigate the potential impact of emissions from the new Shake Line Baghouse on ambient air quality, the new Shake Line building and Shake Line Baghouse will be located to the west of the main building, furthest away from the eastern property boundary that was the location of the maximum GLC for all relevant parameters. Additionally, as indicated in the Air Emissions section of this report, the new Shake Line Baghouse will be designed to exhaust back into the Shake Line building for approximately 6 months of the year to provide energy-efficient warm make-up air during colder months. The Shake Line Baghouse will only exhaust to atmosphere during warm months when make-up air is not required.

Overall, there will be an insignificant impact on ambient air quality as a result of the Shake Line project.

<sup>4</sup> 98th percentile of modeled 24-hr concentrations to compare to the Canada-Wide Standard (CWS). The maximum 24-hr PM<sub>2.5</sub> GLC was 22.26  $\mu\text{g}/\text{m}^3$ .

<sup>5</sup> Manitoba follows the CWS for PM<sub>2.5</sub>. The 2020 PM<sub>2.5</sub> Canada-Wide Standard (CWS) is 27  $\mu\text{g}/\text{m}^3$  based on the 3 year average of the 98th percentile of 24-hr average concentrations.

## Fugitive dust

There will be some additional movement of finished products on site as a result of the project. Currently, finished panels are transported by forklift from the warehouse to an outside storage pad. Some panels will now be transported by forklift from the warehouse to the new building for cutting and profiling into Shakes prior to being transported to the storage pad. All forklift traffic between the warehouse and the new Shake Line building will travel on paved surfaces.

There will be no new raw materials or byproducts stored outside as a result of the project. Blank 4' x 8' panels produced on the main line will be stored inside the plant before being transported by forklift to the new Shake Line building for processing. The new Shake Line building will have inside storage for approximately one week's production of finished Shakes, which will then be transported by forklift to the existing outdoor finished product storage pad for storage and eventual shipping.

Overall, there will be an insignificant impact on the creation of fugitive dust as a result of the Shake Line project.

## Water Issues

### Surface water quantity

There will be an increase in impermeable surface area on the plant site as a result of the installation of the new 31,000 ft<sup>2</sup> pre-engineered Shake Line building. The building will be constructed in a location that is currently covered in grass; however, it is in close proximity to the fire pond to the north, the main production building to the east, and existing drainage ditches to the south and west. As active areas of the 180-acre plant site are currently managed to prevent ponding to maintain site integrity including the area of the new building, most of the surface water currently falling in this location already flows into one of these existing water collection systems with only a small amount of direct infiltration.

While the addition of the building will eliminate any infiltration in this area, the overall impact on the quantity of surface water collected as a result of the Shake Line project will be insignificant.

### Surface water quality

All equipment associated with the Shake Line with the exception of the Shake Line Baghouse will be located inside the new Shake Line building. The Shake Line Baghouse will be located outside at the northeast corner of the Shake Line building. This location is adjacent to an existing paved area of the plant that is an active traffic area.

Surface water sampling location AP2 is in close proximity to the west of the new building, and surface water sampling location AP4 is downgradient. These locations will continue to be monitored in accordance with existing licence conditions to confirm the absence of any impacts of the project on surface water quality.

Best management practices for construction erosion controls will be applied during site construction activities to mitigate impacts on surface water quality during construction.

Overall, there will be an insignificant impact on site surface water quality as a result of the Shake Line project.

## Groundwater quality

With the exception of the new Shake Line Baghouse, all equipment and operations associated with the new Shake Line will be contained inside the new Shake Line building. There are no process water discharges from the operation of the new equipment that would impact groundwater.

Existing groundwater monitoring wells located upgradient (LP1) and downgradient (LP2, LP3, LP4, LP5, LP6 and LP7) will continue to be monitored in accordance with licence conditions to confirm the absence of any impacts on groundwater.

Overall, there will be an insignificant impact on groundwater quality as a result of the Shake Line project.

## Water Usage

The Swan Valley plant is authorized to withdraw groundwater under Water Licence 2019-110 issued by Manitoba Sustainable Development on November 27<sup>th</sup>, 2019. The Water Licence allows for a maximum withdrawal rate of 0.0049 m<sup>3</sup>/s and an annual maximum withdrawal of 108 cubic decameters. Based on 2020 data, the plant withdrew a total of 67.98 cubic decameters (63% of the licence limit) at an average withdrawal rate of 0.0022 m<sup>3</sup>/s (45% of the licence limit).

There will be a small increase in the amount of water usage at the facility as a result of the project. Water is used in routine cleaning and maintenance of the primer application stations, and the project will include the addition of two bathrooms in the new building. Based on historic usage rates, the incremental volume of water needed for the primer stations and bathrooms is not expected to impact compliance with the conditions of the existing Water Licence. This will be confirmed through the daily and annual monitoring requirements of the Water Licence.

Overall, there will be an insignificant impact on water usage as a result of the Shake Line project.

## Waste Issues

### Solid Wastes

Some solid wastes and process residuals will be generated as a result of the operation of the Shake Line. These are not new waste streams but are incremental increases to existing waste streams already generated and managed by the Swan Valley plant. Current management approaches for each of the Shake Line solid waste/residuals streams are addressed in Table 5 below.

*Table 5. Management of solid wastes and process residuals from Shake Line*

<b>Solid waste/process residual</b>	<b>Management approach</b>
Process residuals (dust from the saw and profiling stations)	Collected by the Shake Line Baghouse and pneumatically conveyed to the existing Hammermill where they are refined and reintegrated back into the manufacturing process as the top fines layer.
Regulated wastes (e.g., used oil and lubricants)	Recycled
Excess packaging materials (strapping, cardboard shrouds)	Recycled
Miscellaneous wastes	Landfilled

Overall, there will be an insignificant impact on the generation and management of solid wastes and residuals as a result of the Shake Line project.

### Liquid wastes

There will be an incremental increase in the generation of paint booth wash water with the addition of the two priming stations on the Shake Line. As previously noted, the primer will be the same one used in the mainline manufacturing process so the paint booth wash water from the Shake Line will have the same characterization and management. The plant currently generates approximately 1,250 litres of paint booth wash water per day from the two paint booths on the main production line. The amount of paint booth wash water is estimated to increase by 15% with the increased rate of primer consumption associated with the Shake Line, or to approximately 1,450 litres per day when the Shake Line is operated at maximum capacity. This is a conservative estimate as the Shake Line paint booths have fewer paint guns (three per booth compared to six per booth on the main line) and the primer will be applied to bundles of Shakes compared to single panels on the main production line, potentially reducing overspray and paint booth cleaning requirements.

The addition of the two bathrooms in the new Shake Line building will add a small amount of additional discharges to the on-site wastewater treatment lagoon. These additions will be minor and are not expected to have an impact on the capacity or operation of the wastewater lagoons. The wastewater lagoons will continue to be operated in accordance with Part 5 of the plant's Environment Act Licence.

Overall, there will be an insignificant impact on the generation and management of liquid wastes as a result of the Shake Line project.

### Other Issues

#### Noise

All Shake Line operations will take place inside the new Shake Line building. Soundproof enclosures will be installed around the sawing and profiling stations.

The only aspect of the Shake Line that will be located outside is the new Shake Line Baghouse. The design of the Shake Line Baghouse will be similar to the other six baghouses currently in operation at the plant. The new Shake Line Baghouse will be located at the northeast corner of the new Shake Line building and in close proximity to Baghouses 1, 4 and 6 that were installed and/or relocated during the facility upgrade in 2015. The existing main plant building and the new Shake Line building will provide local noise barriers.

The plant has only ever received one noise complaint, and that occurred nearly 10 years ago. At the time, the plant conducted noise monitoring and did not identify any significant differences in noise levels when the plant was operational compared to when it was shut down. While the addition of the Shake Line Baghouse may incrementally increase noise levels, it is not expected that these will be significant, and there are no immediate noise receptors in the vicinity of the plant.

Overall, there will be an insignificant impact on the potential for increased noise as a result of the Shake Line project.

## Odour

All operations and equipment associated with the new Shake Line with the exception of the new Shake Line Baghouse will be located inside the new Shake Line building. The new equipment includes the addition of two paint application stations and two ovens. The operation of this equipment is similar to existing operations on the main production line, utilizing the same materials and technology. LP has not received any odour complaints since it first started operations in 1995.

Overall, there will be an insignificant impact on the potential for increased odour as a result of the Shake Line project.

## Traffic

Since the Shake Line is a secondary finishing process and does not represent an increase in capacity, there will be no increase in the total amount of finished product produced or shipped from the Swan Valley plant as a result of the Shake Line project. Currently, SmartSide panels are shipped to customers primarily by rail (95%) with a small volume shipped by truck (5%). All Shakes are expected to be shipped by rail, so there will be a slight increase in rail transport and a slight decrease in truck transport as a result of the project (96% and 4% of total production, respectively).

Overall, there will be an insignificant impact on traffic as a result of the Shake Line project.

## Environment Act Licence

Existing plant operations are regulated under Manitoba Environment Act Licence 2954 RR dated July 14, 2015. This amended licence addressed environmental issues associated with the upgrade of the plant from OSB to SmartSide in 2015.

Section 14(1) of *The Environment Act* requires the submission of a Notice of Alteration (NoA) addressing any changes to the licenced development. The addition of the new Shake Line to the existing development prompts the submission of an NoA.

The information contained within this report addresses the potential environmental and human health impacts that could result from the alteration to the development and mitigation measures where applicable. As addressed in the individual sections above, the Shake Line is expected to have insignificant impacts on the environment and human health in the vicinity of the plant.



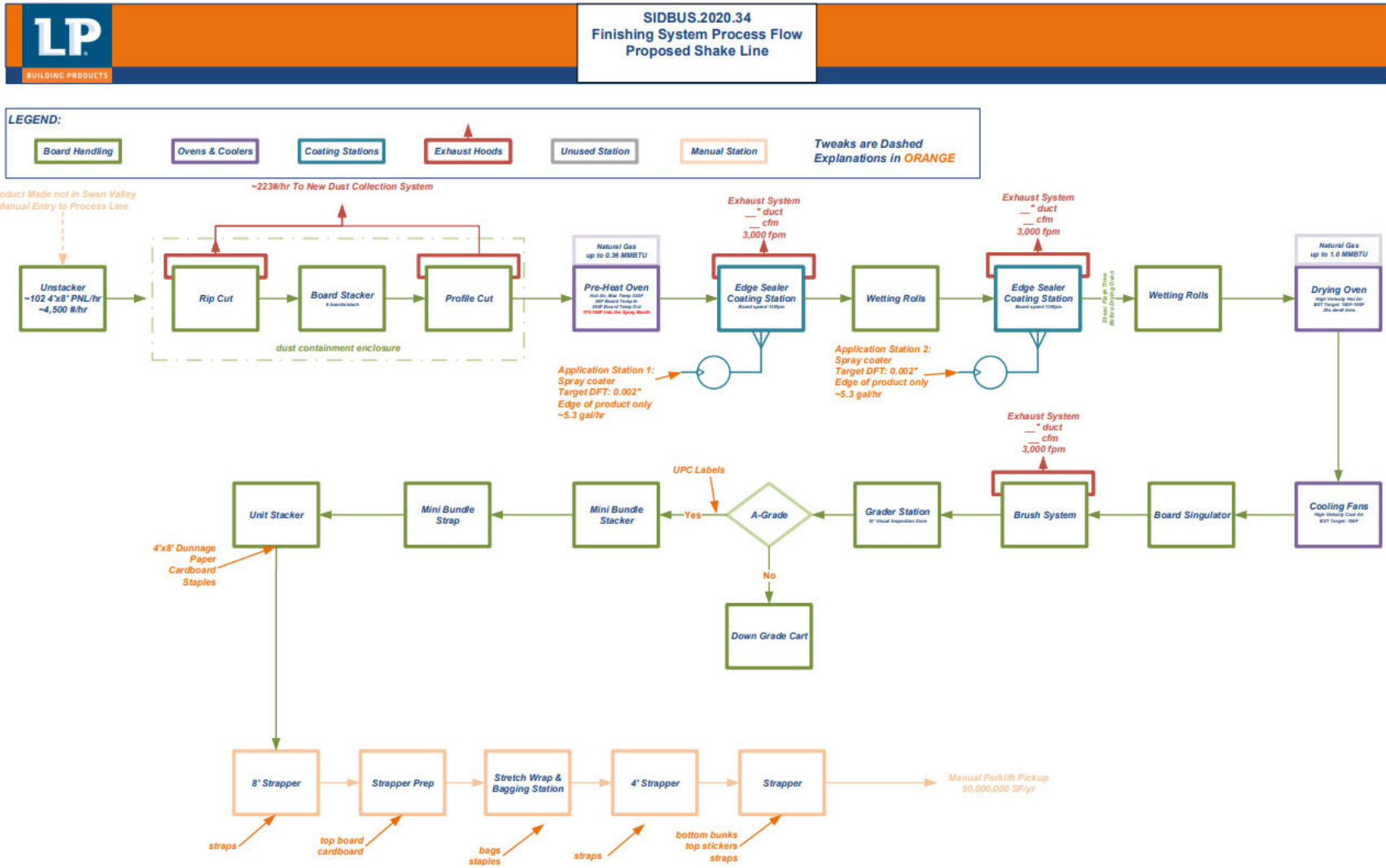
## Amendments

The installation and operation of the Shake Line has implications for various licence conditions. These are identified in Table 6 below.

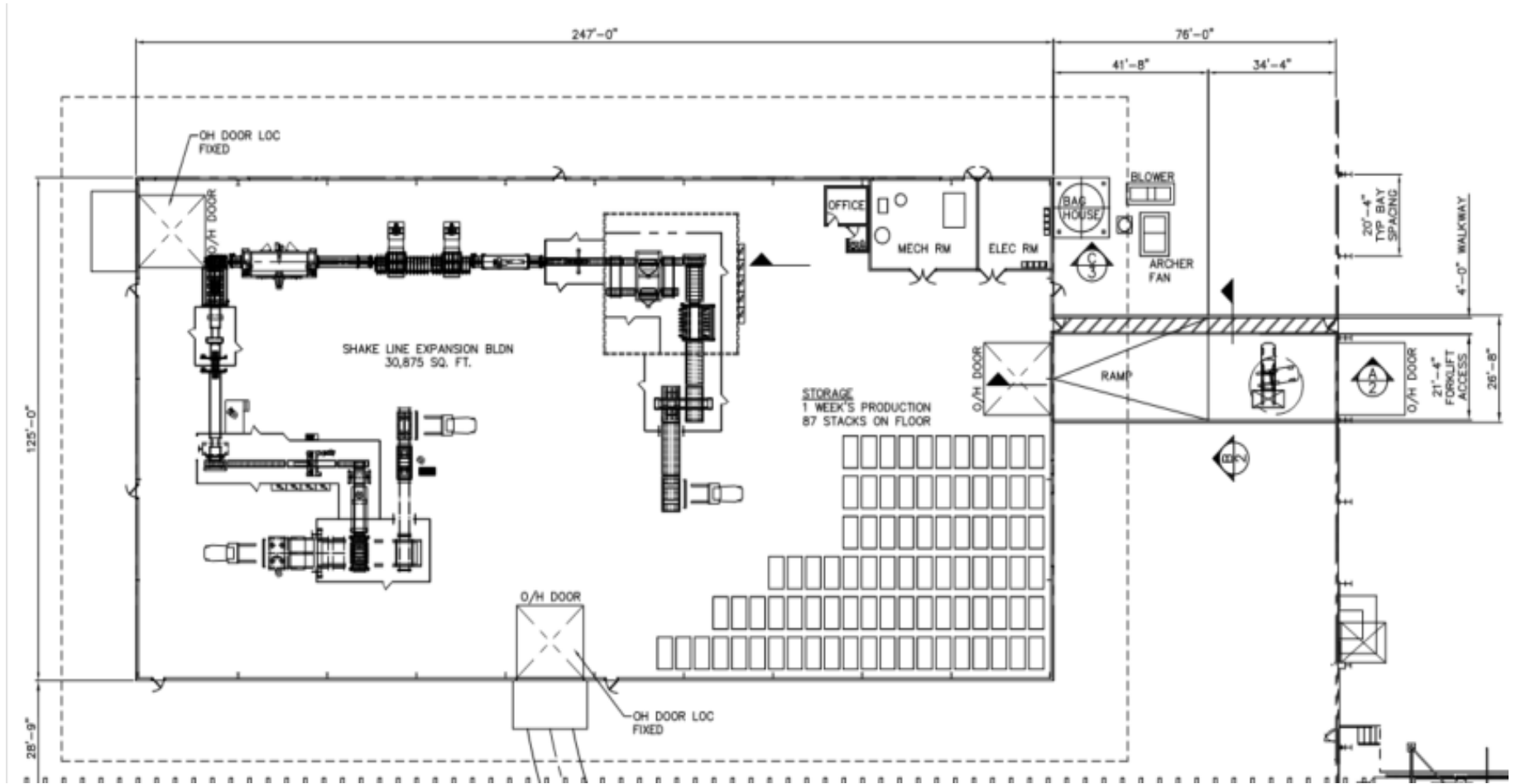
*Table 6. Current Environment Act Licence 2954 RR conditions impacted by the Shake Line project*

Licence Condition	Requirement	Implications	Licence Amendment required?
7	Community Liaison Committee	Discuss at next committee meeting	No
10	Emergency Response Contingency Plan	Minor update to address emergency conditions associated with the Shake Line and Shake Line Baghouse	No
26	Inspection and Maintenance for Emission Control and Monitoring Equipment Plan	Minor update to address inspection and maintenance requirements for Shake Line Baghouse	No
52	List of Baghouses and Emission Limits	Add "g) BH7 Shake Line" to the list of Pollutant Sources with a TPM emission limit of 0.15 g/s	Yes
Schedule 4	Emission Monitoring Plan	Add "Shake Line Baghouse" to the list of sources with a requirement to conduct sampling for TPM	Yes
Schedule 6	Air Pollution Control Equipment and Emission Stack Heights	Add "Shake Line Saws" and "Baghouse" to the Pollutant Sources and Control Equipment lists, respectively, with a stack height of 22.3 metres.	Yes

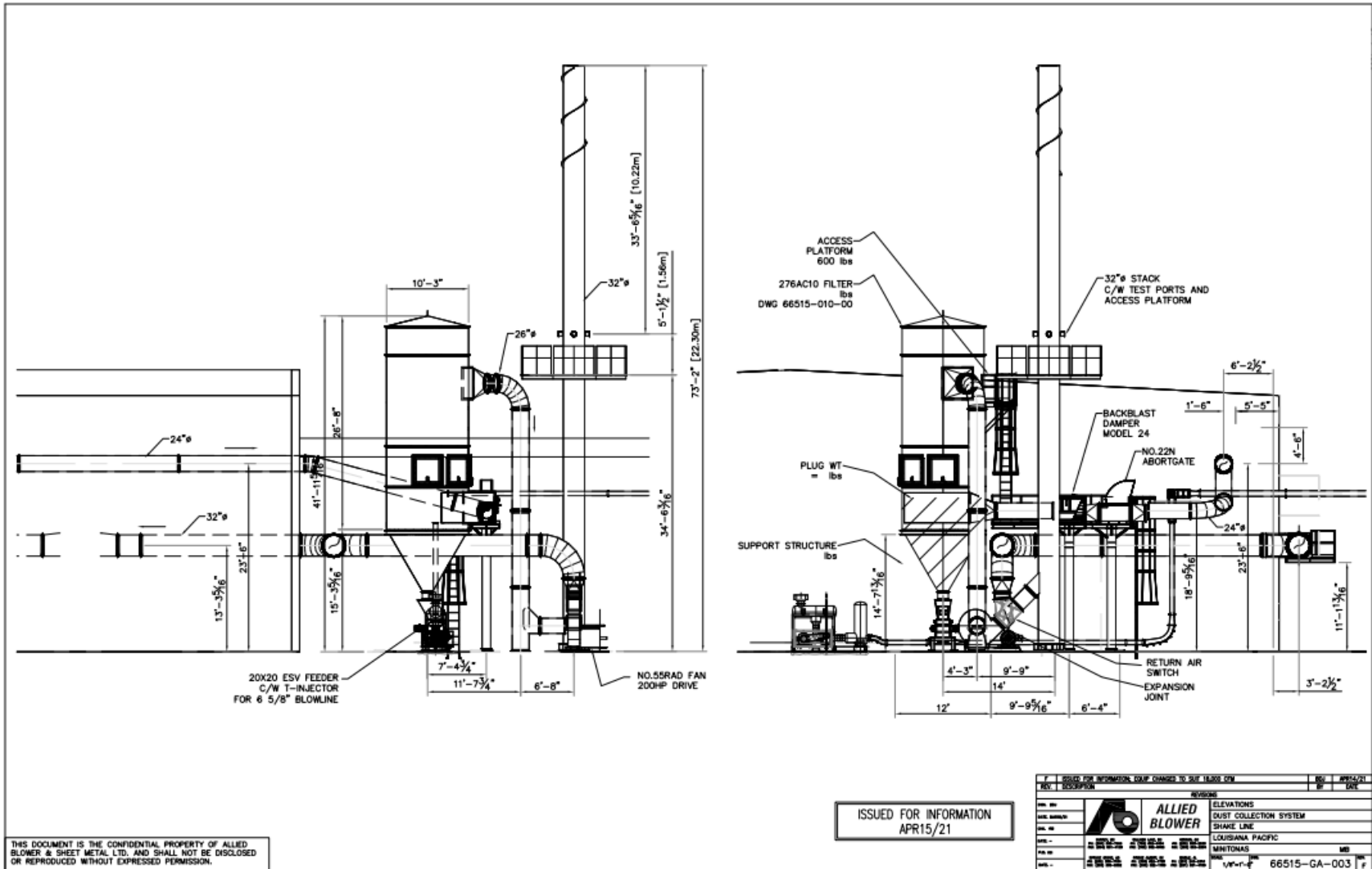
# Appendix A – Process Flow Diagram

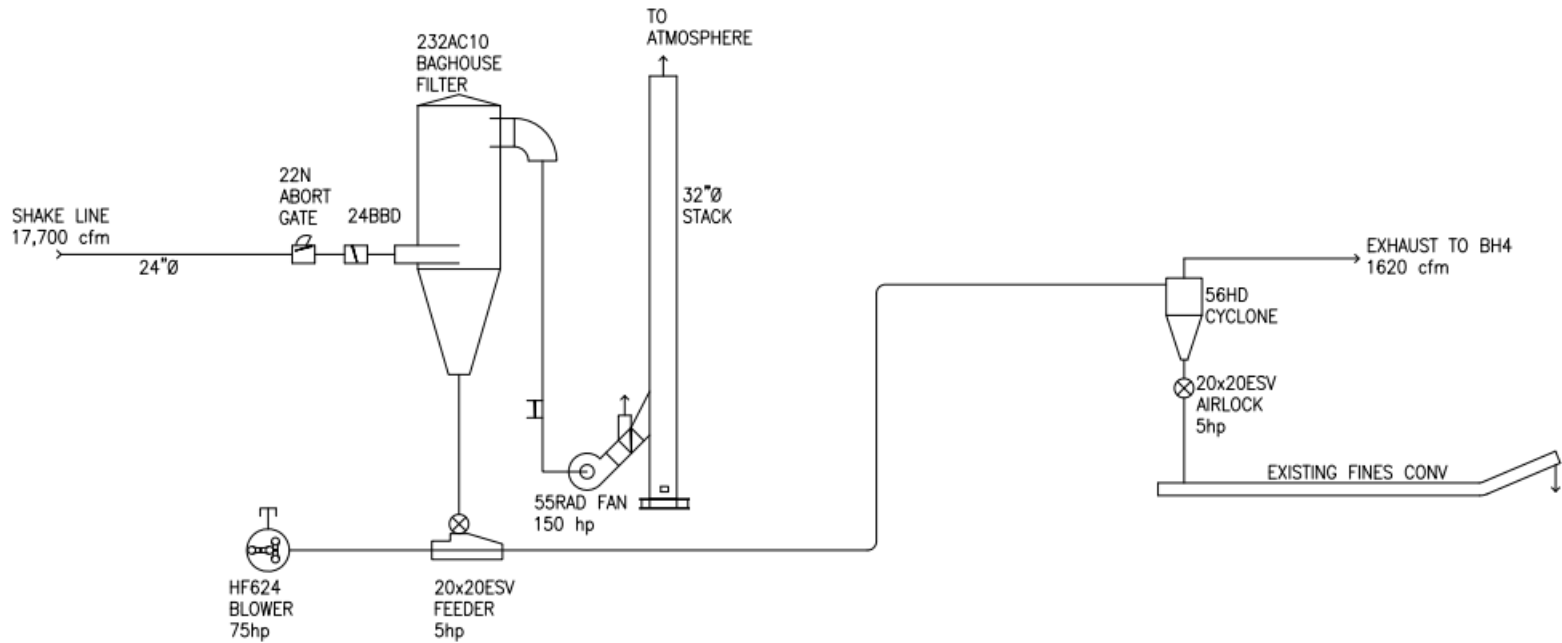


# Appendix B – General Equipment Arrangement



# Appendix C – Shake Line Baghouse Drawings and Performance Guarantee





ISSUED FOR INFORMATION  
MAR25/21

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REV.	DESCRIPTION	BY	DATE
C	REVISED CFM 17,700	RB	APRIL 12/21
B	REVISED CFM	RB	MAR30/21
A	ISSUED FOR INFORMATION	RB	MAR24/21
REVISIONS			
CON. NO.	PID		
DATE, MARKS/REV	DUST COLLECTION SYSTEM		
CON. NO.	SHAKE LINE		
DATE -	LOUISIANA PACIFIC		
CON. NO.	MINOTONAS		
DATE -	MB		
SCALE	66515-PID-01		
DATE -	C		

CONTRACT FILE DIRECTORY\Louisiana Pacific\2020-2021\66515 Shake Line Project\08-Shop Drawings\66515-01-001.DWG (66515-01-001) 08-29 10:27:14 AM



**ALLIED  
BLOWER**

April 16, 2021

Danaillie Woodfine - Project Engineer  
Louisiana-Pacific Corporation

Email: [danaillie.woodfine@lpcorp.com](mailto:danaillie.woodfine@lpcorp.com)

RE: Baghouse Emissions

ALLIED QUOTATION #2721-12042

Danaillie

As per your request, the following outlines the emissions guarantee that Allied Blower & Sheet Metal Ltd. ("Allied") will be providing in Quote #2721-12042, and email correspondence regarding duct velocities.

#### **Summary of Allied Scope of Supply**

Supply and installation of a new dust collection system on the *Shake Line*. The equipment included is:

- Baghouse with structure and access platforms
  - Baghouse design value is 18,000 cfm, which includes approx. 20% cfm allowance for balancing. See attached CFM Calculator.
- Fan and stack
- Hoods and ductwork
- Fire/deflagration equipment:
  - Abort gate
  - Back blast damper
  - Steel-tipped close tolerance feeder
- High pressure pneumatic conveying system for collected fines:
  - PD Blower package
  - 6" ID blowline
  - High pressure cyclone receiver with exhaust ducting to Baghouse 4 (existing)

#### **Guaranteed Baghouse Emissions**

Allied will guarantee the emission rate through the filter will not exceed 10mg/m<sup>3</sup> air. This guarantee is subject to the following:

- Test to be performed front half only for particulate of EPA method 5 test.
- The system is installed and operated per original design parameters.
- Original O.E.M. filter bags, or equivalent are used.
- Please note: on April 12, 2021 you issued new air and material flows. A revised quotation to follow to account for changes in air and material flows.