MILLER JOHNSON Attorneys

45 Ottawa Avenue SW
Suite 1100
P.O. Box 306
Grand Rapids, MI 49501-0306

MERITAS LAW FIRMS WORLDWIDE

GRANT E. SCHERTZING
Attorney at Law

616.831.1714
616.988.1714 fax
schertzingg@millerjohnson.com

June 5, 2023

VIA EMAIL AND CERTIFIED MAIL — RETURN RECEIPT REQUESTED

Department of Environment,
Great Lakes, and Energy
Air Quality Division
Kalamazoo District
7953 Adobe Road
Kalamazoo, Michigan 49009
Attention: Monica Brothers
Email: BrothersM@michigan.gov

Jenine Camilleri
Enforcement Unit Supervisor
Department of Environment,
Great Lakes, and Energy
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909-7760
Email: CamilleriJ@michigan.gov

Re: **Supplemental Response to Violation Notice dated April 6, 2023**
SRN: U391700037, Kalamazoo County

Dear Ms. Brothers:

In accordance with our May 8, 2023 response to the Violation Notice dated April 6, 2023 (VN), please find enclosed:

- a malfunction abatement plan (MAP) for JRS's Schoolcraft fiber plant; and
- a facility-wide potential to emit (PTE) demonstration for JRS's Schoolcraft fiber plant.

Please contact my office if you have any questions regarding this correspondence or our May 8, 2023 correspondence.

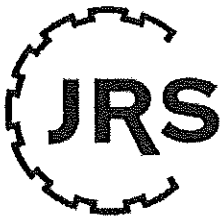
Sincerely,

MILLER JOHNSON

By
Grant E. Schertzing

GES
Attachments

cc: Annette Switzer, EGLE, *via email at* SwitzerA2@michigan.gov
Christopher Ethridge, EGLE, *via email at* EthridgeC@michigan.gov
Brad Myott, EGLE, *via email at* MyottB@michigan.gov
Rex Lane, EGLE, *via email at* LaneR@michigan.gov
Karen Garcia, EGLE, *via email at* GarciaK1@michigan.gov
Travis Boeskool, EGLE, *via email at* BoeskoolT@michigan.gov
Jeffrey Przekora, JRS USA, *via email at* JPrzekora@jrsusa.com
Jeff Hampton, JRS USA, *via email at* JHampton@jrsusa.com



Fibers for Life.

Malfunction Abatement Plan (MAP) for:

J. Rettenmaier
16369 US 131 Highway
Schoolcraft, MI 49087

Revision: 06/05/2023

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1.0 Purpose and Use

This Malfunction Abatement Plan (MAP) was developed to address the use and maintenance of fabric filter baghouses associated with the operation of the cellulose manufacturing at J Rettenmaier USA LP (JRS) Schoolcraft, Michigan.

Operation of these devices has been determined to be exempt from the requirement to obtain an air Permit to Install (PTI) without the use of controls pursuant to State of Michigan Rule 336.1291. However, as JRS desires to minimize emissions to the atmosphere and to prevent release of its valuable products, the purpose of this malfunction and abatement plan is to prevent, detect and correct malfunctions or equipment failures that may result in particulate matter (PM) emissions not being controlled by the fabric filter systems.

This plan includes a description of the following elements, consistent with the requirements established in the Michigan Air Pollution Control Rules, R336.1911, for malfunction abatement plans:

- The preventive maintenance program for the pollution control equipment, including the supervisory personnel responsible for overseeing the program, a description of item that shall be inspected; and the frequency of inspection or repairs;

- The operating variables that are monitored to detect a malfunction; and

- A description of corrective maintenance procedures and/or operational changes to be made in the event of a malfunction.

This MAP will ensure that preparations have been made to correct malfunctions as soon as practicable after an occurrence of PM release in order to minimize the emissions of particulates.

2.0 Control Device List

This plan applies to the fabric filter baghouses indicated in Table 1 below.

Table 1: Fabric Filter Air Emission Control Equipment

No.	Filter ID.	PM Capture Device
1	F10060	Baghouse Filter
2	F09060	Baghouse Filter
3	F08060	Baghouse Filter
4	F0101	Baghouse Filter
5	F00505	Baghouse Filter
6	F11075	Baghouse Filter
7	F11125	Baghouse Filter
8	F12075	Baghouse Filter
9	F12125	Baghouse Filter
10	F13075	Baghouse Filter
11	F13077	Baghouse Filter
12	F13280	Baghouse Filter
13	F13575	Baghouse Filter
14	F13577	Baghouse Filter
15	F13625	Baghouse Filter
16	F13780	Baghouse Filter
17	F25101	Baghouse Filter
18	F25124	Baghouse Filter
19	F25115	Baghouse Filter
20	F25116	Baghouse Filter
21	F26075	Baghouse Filter
22	F26150	Baghouse Filter
23	F27101	Baghouse Filter
24	F27124	Baghouse Filter
25	F27115	Baghouse Filter
26	F27116	Baghouse Filter
27	F09120	Bin Vent Filter
28	F09121	Bin Vent Filter
29	F15020	Bin Vent Filter
30	F15021	Bin Vent Filter
31	F15022	Bin Vent Filter
32	F15023	Bin Vent Filter
33	F15024	Bin Vent Filter
34	F15025	Bin Vent Filter
36	F15026	Bin Vent Filter
37	F15027	Bin Vent Filter
38	F15028	Bin Vent Filter

No.	Filter ID.	PM Capture Device
39	F15040	Bin Vent Filter
40	F21240	Bin Vent Filter
41	F15205	Bin Vent Filter
42	F21241	Bin Vent Filter
43	F10120	Bin Vent Filter
44	F10121	Bin Vent Filter
45	F10122	Bin Vent Filter
46	F10123	Bin Vent Filter
47	F10124	Bin Vent Filter
48	F21090	Baghouse Filter
49	F21025	Hopper Filter
50	F20115	Hopper Filter
51	F20162	Hopper Filter
52	F20145	Hopper Filter
53	F20195	Hopper Filter
54	F20450	Baghouse Filter

3.0 Preventive Maintenance Program

This section describes the procedures for maintaining on site fabric filters, including the frequency of inspection, the activities undertaken, and the personnel responsible for overseeing inspection, maintenance and repair of the equipment.

3.1 Preventive Maintenance Activities

The preventive maintenance activities and frequency for the fabric filters have been developed based on OEM recommendations, sound engineering practices and operational experience with the control systems.

Table 2 details the preventative maintenance frequency and activity to be conducted for the baghouses listed in Table 1. In addition to the OEM specifications for onsite baghouse filters, JRS preventative maintenance controls are included in Table 2. Any defect or deficiency in the capture system of a baghouse filter will be repaired as soon as practicable.

Table 2: Summary of Preventive Maintenance Frequency and Activity

Frequency	Preventive Maintenance Activity
Weekly	• Visual inspection of pressure relief panels to ensure no leaks are present. • Visual inspection of PM emissions from the clean air exhaust ducting of filters.
Monthly	• Visual inspection of piping and ductwork for leaks or holes. • Visual inspection of fans for signs of erosion or fatigue. • Inspection of filter differential pressure monitoring system.
Semi-Annual	• Disconnect pressure lines to differential pressure gauges, clean free of debris and calibrate. • Confirm and document pulse jet interval and duration timing. Watch system through at least one (1) complete cycle to confirm that all valves are functioning normally. • If Necessary: replace air pressure gauge on manifolds. • Check pulsejet system fittings and tubes for leaks, wear or degradation.

3.2 Preventive Maintenance Responsible Personnel

The following personnel share responsibility for ensuring that the inspection, testing and maintenance activities for the baghouse systems are completed:

- Director of Production
- Assistant Production Manager
- Maintenance Superintendent
- Senior Maintenance Supervisor

3.3 Spare Parts Inventory

Replacement parts for many of the baghouse filter components are stocked and kept on the facility campus. It is not a requirement that the facility maintain replacement parts for all components of the baghouses at any given time. In the event of a baghouse failure that results in excessive release of product, the facility will shut down the process line affiliated with the affected baghouse filter to minimize undesired PM emissions. The process will not restart until corrective measures and/or repairs are made.

3.4 Major Replacement Parts

JRS maintains a spare parts inventory for the replacement of components routinely replaced, critical equipment and process instrumentation. Spare parts are kept in designated Maintenance storage areas for access to authorized personnel.

4.0 Operating Parameters and Malfunction Detection

For baghouse fabric filters, normal operating conditions are defined in the following terms:

- No visible PM emissions observed from the clean air exhaust side.
- Differential pressure drop of 3 – 5 inches of water across filters.
- Where monitored, baghouse leak detection devices have no upset conditions.

Note A: water vapor observed from the clean air exhaust is normal and not a concern.

Note B: When starting a new filter the differential pressure may be less than 1 inch of water until a mat of product begins to build on the fabric. Per the baghouse filter OEM manual, it is common that incidental amounts of dust may be present in exhaust air stream for 48 to 96 hours after first start. Such start-up emissions are not expected to be in excess of Part 3 emission standards.

5.0 Malfunction Scenarios during Operation

A reportable malfunction occurs when a control device malfunction results in excess emissions, as defined in the permit and Michigan Air Pollution Control rules.

In the event that a fabric filter fails and normal-operating conditions are not met, there will be corrective measures taken to eliminate the excessive emission and/or return the baghouse filter to a normal-operating condition. These measures are identified in Table 3.

Table 3: Malfunctions and Corrective Actions

Malfunction:	Corrective Action:
Diff. pressure gauge indicating a diff. pressure greater than 5 in. H2O.	Check filter for malfunction. Clean or replace problematic filter bags. Start process.
Pressure relief panel is leaking.	Stop process. Correct or replace panel.
Pulse jet intervals are incorrect for sufficient cleaning.	Check controller for pulse jet system. Adjusting timing interval.
Particulate emissions detected on clean air exhaust side of baghouse filter.	Inspect baghouse filter for upset conditions.
Process piping leaks.	Stop process. Correct or replace flanges, gaskets or leaking sections.
Defective or damaged pressure gauges.	Replace gauges.
Pressure gauges plugged with debris.	Clean hose of debris. If not possible, replace lines with new hose sections.
Baghouse filter bag blinding.	Check filter and pulse jet system for malfunction.
Visible Emissions present	Investigate cause, shut line down if visible emissions continue for more than 2-3 minutes and implement corrective action(s) based upon investigation.

5.1 Control of Fugitive Product during Maintenance

When a baghouse malfunction occurs where it is necessary to replace fabric filters, this action will be performed by authorized personnel who have been trained to do so correctly. Repairs and replacement of equipment will be done only by those properly trained. As part of the training, employees will collect and properly dispose of any spilt product. During filter sock replacements, repairs or equipment replacements, emphasis will be made to minimize spills or the release of fugitive product to the most practical extent possible. It will be a requirement that all material be collected, bagged and disposed of before starting equipment.

Table 4: Controls to Limit Fugitive Dust Release during Maintenance

Maintenance Action:	Control Measure:
Manually removing product from baghouse filters.	Employee training on how to properly empty filter material and dispose of content.
Maintenance removal of process equipment.	Removal of all baghouse filter content before removing process equipment.
Collection and disposal of spilt or fugitive material from baghouse filters.	Manual collection of fugitive PM on floors and disposal using waste bags. Affected process line will not start until completed.

As stated previously, a malfunction of the control device(s) should not result in emissions in excess of any applicable air quality limit or standard (e.g., Rule 331). If it is determined that an emission standard has been exceeded, appropriate notification to EGLE-AQD will be made.

J. Rettenmaier USA, LP

16369 US 131 Highway
Schoolcraft, Michigan 49087

JRS Fibers for Life.

Potential To Emit Evaluation

Prepared By

GZA GeoEnvironmental, Inc.
19500 Victor Parkway
Livonia MI 48152

June 1, 2023

BACKGROUND AND PROJECT DESCRIPTION

JRS USA's Schoolcraft fiber plant produces powdered cellulose for use as a functional ingredient in food, feed, and other industrial applications. The plant uses a dry milling process to convert cellulose pulp derived from woods, grains, fruits, and other vegetation into its finished product. The plant employs dust collection and filtration units to remove particulate generated by its operations from the air before it is expelled, as well as control systems to monitor those units and shut lines down if problems are detected.

This Potential to Emit (PTE) evaluation was developed in response to a request by the Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division (EGLE-AQD).

EMISSION PROFILE

An emission profile was developed to support the evaluation of the manufacturing process, as well as ancillary operations at the facility such as welding operations, parts washing operations, and natural gas combustion equipment. For purposes of determining permit program applicability (e.g, Federal New Source Review or Title V Renewable Operating Permit Program), emissions of criterial pollutants were evaluated, including nitrogen oxide (NOx), carbon monoxide (CO), particulate matter (PM), volatile organic compounds (VOCs), sulfur dioxide (SO2), and lead. Hazardous air pollutant (HAP) and greenhouse gas (GHG) emissions were not quantified as it can be determined based on the emission profile contained herein that resultant emissions would not result in the facility being considered "major" under a state or federal program (e.g., HAP emissions cannot be greater than total VOC emissions, which are negligible.)

The primary emission source at the facility consists of the cellulose manufacturing operation, which includes the use of 27 baghouses for particulate matter (PM) controls part of the manufacturing operation. The baghouses utilized at the facility are stated have better than 99.99% control efficiency, and all but one of the baghouses are integral to the operation of the facility, i.e., the baghouses return any captured product to the production line so that intermediate or finished product is not lost to the atmosphere. Potential emissions therefore include controlled emissions from 26 of the baghouses. Potential emissions from the single baghouse that does not return collected product to a production line did not consider baghouse controls when estimating PM, PM_{10} and $PM_{2.5}$ emissions.

Potential emissions were based upon 8,760 hours of operation per year, as applicable. For maintenance operations which are non-production based, such as maintenance welding or parts washing, an operational ratio was utilized to estimate material usage at 8,760 hours of operation as compared to actual usage over a typical annual time period. For the emergency generator, PTE is based upon 500 hours of operation per year, consistent with US EPA's approach for calculating potential emissions from emergency generators.

Table 1 presents a summary of the PTE from all facility operations. Table 2 provides a list of individual natural gas combustion units, Table 3 calculates emissions from each individual emergency generator, and Table 4 provides the PM emissions for the Cellulose Production Operations, as previously provided to AQD.

The PTE supports that the facility is not subject to the federal New Source Review or Title V Operating Permit programs.

J. Rettenmaier USA LP
Schoolcraft, MI
Table 1 - Potential To Emit Summary

JRS Fibers for Life.

Process	Process/ Equipment Description	Material Used	Annual Material Usage (Actual)	Units	Annual Material Usage (Potential)	Units	Discharge	Control Device	Exemption Citation
Natural Gas Fired Units[a]	Building Heat	Natural Gas	NA	MMcf/ yr	48.44	MMcf/ yr	Ambient	None	336.1282(b)(i)
Emergency Engines[a]	NG fired RICE	Natural Gas	NA	hours/yr	500	hours/yr	Ambient	None	336.1285(2)(g)
Cold Cleaning[b,c]	Misc. Metal Cleaning	Voltz II	7	Gal/yr emitted	8	Gal/yr emitted	Inside Building	None	336.1281(2)(h)
Welding - Non-Production[c,d]	MIG/TIG/Spot	Welding Wire/Rod	73	Lb/yr	88	Lb/yr	Inside Building	None	336.1285 (2)(i)
Cellulose Manufacturing[e]	Processing, Transfer and Packaging	Cellulose Fibers					Ambient/Inside Building	Dust Collector	336.1291
FACILITY TOTALS									

[a] Individual emission unit detail for natural gas equipment can be found in Table 2 and Table 3, respectively.

[b] Based upon purchasing records from May 2018 - May 2023

[c] Potential usage based upon a production ratio of 1.20 as follows: 8760 hours potential/7300 hours typical operation

[d] Based on purchasing records for Dec 2021 - May 2023, weld wire usage = 1/16" TIG rod 1.88 lbs/mo & 0.045 MIG 4.2 lbs/mo (total 6.08 lb/mo = 73 lb/yr)

[e] Values calculated in Table 4 - PTE For Cellulose Production, as provide to EGLE-AQD on May 8, 2023

[f] For all Processes except Celluolose Manufacturing, emissions of PM_{10} are conservatively assumed to be equal to PM

J. Rettenmaier USA LP
Schoolcraft, MI
Table 1 - Potential To Emit Summary

JRS Fibers for Life.

Process	CRITERIA POLLUTANT EMISSIONS - TONS PER YEAR (TPY) POTENTIAL EMISSIONS																				
	NOx			CO			VOCs			PM			PM10[f]			SO2			LEAD		
	EF	EF Units	PTE.	EF	EF Units	PTE.	EF	EF Units	PTE.	EF	EF Units	PTE.	EF	EF Units	PTE.	EF	EF Units	PTE.	EF	EF Units	PTE.
Natural Gas Fired Units[a]	100	lb/ MMcf	2.42	84	lb/ MMcf	2.03	5.5	lb/ MMcf	0.13	7.6	lb/ MMcf	0.18	7.6	lb/ MMcf	0.18	0.6	lb/ MMcf	0.01	0.0005	lb/ MMcf	1.21E-05
Emergency Engines[a]	4.08	lb/MM Btu	2.31	0.317	lb/MM Btu	0.18	0.118	lb/MM Btu	0.07	0.00991	lb/MM Btu	0.01	0.00991	lb/MM Btu	0.01	0.00059	lb/MM Btu	0.00			
Cold Cleaning[b,c]							6.47	lb/gal	0.03												
Welding - Non-Production[c,d]										0.02	lb PM/ lbs weld wire	0.01	0.02	lb PM/ lbs weld wire	0.01						
Cellulose Manufacturing[e]										N/A	N/A	14.41	N/A	N/A	0.68						
FACILITY TOTALS			4.73			2.21			0.23			14.61			0.88			0.01			1.21E-05

J. Rettenmaier USA LP
Schoolcraft, MI
Table 2 - Natural Gas Fired Equipment

JRS Fibers for Life.

ID	Mfg.	Equipment Description	Input Rating MMBtu/hr
Boiler 1	Laars	Warehouse E	2.0
Boiler 2	Weil-McLain	Shipping	0.91
Boiler 3	Weil-McLain	Shipping	0.91
Boiler 4	Weil-McLain	Building 1 production area	0.91
Boiler 5	Weil-McLain	Building 1 production area	0.91

TOTAL	5.64	MMBtu/hr
	48.44	MMcf/yr NG

J. Rettenmaier USA LP
Schoolcraft, MI
Table 3 - Natural Gas Engine Emissions

Emissions Unit	Engine Kw Rating	Engine MMBtu Rating	Annual Operation (hrs)	Emission Factors (lb/MMBtu) AP-42 Table 3.2-2					Potential Annual Emissions (tons/yr)				
				SO_2	NOx	CO	PM	VOC	SO_2	NOx	CO	PM	VOC
Building 5 Cummins Onan	65	0.63	500	0.00059	4.08	0.317	0.00991	0.118	0.00	0.65	0.05	0.00	0.02
Front Office Cummins Onan	42	0.41	500	0.00059	4.08	0.317	0.00991	0.118	0.00	0.42	0.03	0.00	0.01
Building 1 Cummins Onan	125	1.22	500	0.00059	4.08	0.317	0.00991	0.118	0.00	1.24	0.10	0.00	0.04
All Engines (Total Engine MMBtu)	**232**	**2.26**	**500**	**0.00059**	**4.080**	**0.31700**	**0.00991**	**0.118**	**0.00**	**2.31**	**0.18**	**0.01**	**0.07**

Assumptions/Calculations

1) Emission factors from AP-42 are conservative, i.e., certified engine standards not taken into consideration
2) Engine Rating in MBtu = (Kw)(.003412)/35% engine efficiency
3) Engine Annual Operating Hours estimated at 500 hours per year for each engine based on EPA guidance for NSR permitting

Miller Johnson
45 Ottawa Ave SW, Ste 1100
Grand Rapids, MI 49503-4009

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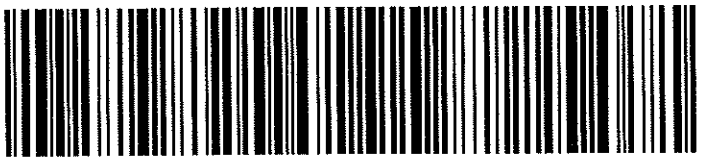

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DEPARTMENT OF ENVIRONMENT
GREAT LAKES AND ENERGY
AIR QUALITY DIVISION
KALAMAZOO DISTRICT
ATTN: MONICA BROTHERS
7953 ADOBE
KALAMAZOO MI 49009-5025