



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Stella-Jones Corporation, Bangor, Wisconsin

FROM: Dakota Prentice, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Stella-Jones Corporation

Facility Location: W1038 County Road U, Bangor, Wisconsin

Date of Inspection: March 23, 2022

EPA Inspector(s):

1. Dakota Prentice, Environmental Engineer
2. Vicky Mei, Environmental Engineer
3. Tess Russell, Environmental Engineer

Other Attendees:

1. Alex Clark, Stella-Jones – Environmental Manager (via phone)
2. Ryan Peterson, Stella-Jones – Plant Manager
3. Kyle Thompson, Stella-Jones – Safety Supervisor
4. Amy Werlein, Stella-Jones – EH&S Supervisor (via phone)
5. Jordan Haines, Stella-Jones – Treatment Supervisor

Contact Email Address: Amy Werlein – awerlein@stella-jones.com

Purpose of Inspection: to determine compliance with operating permits issued by the Wisconsin Department of Natural Resources and the Wisconsin state implementation plan.

Facility Type: Treated Railway Tie Manufacturing

Regulations Central to Inspection: The facility is subject to state implementation plan and operating permit requirements.

Arrival Time: 8:50AM

Departure Time: 11:20AM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet
- ☐ Small Business Resource Information Sheet not provided.
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Stella-Jones representatives unless otherwise noted.

Process Description:

Treated railway tie manufacturing begins with the delivery of wood via rail and truck from multiple sawmills. The facility manufactures the rail ties from hardwoods. The wood is cut to size for use as either a switch tie or a cross tie at onsite sawmills. The cut wood is then allowed to air dry onsite for an extended period. Although most wood is air dried prior to processing, some “green wood” or non-air dried wood is processed and treated at the facility.

The facility has three treatment cylinders. Wood first enters a treatment cylinder to undergo either a rousing or boulton process. The rousing process is for wood that has been air dried, while the boulton process is for green wood. The boulton process uses vacuum and heat in the presence of a creosote/oil mixture to start the process, after which, the wood is handled in the same way as the air-dried wood through the rousing process. In the rousing process, the wood is exposed to elevated temperatures and pressures both with and without the cylinder being filled with the creosote/oil mixture. The process is completed after a final vacuum is applied to the cylinder after the creosote/oil mixture has been pumped out. The treated ties are then set briefly on a drip pad prior to going to storage for shipment to customers.

Staff Interview: Each treatment cylinder has a dedicated work tank that holds the creosote/oil mixture used in that treatment cylinder. As the creosote/oil mixture is pumped from the work tank to the cylinder, displaced gas in the cylinder is sent to the work tank. The displaced gas after the work tanks is routed to a common knock-out tank before being vented to the atmosphere. When the cylinders are in a vacuum phase of the treatment cycle, emissions are routed to a boulton tank where oil and vapors separate. The vapors are sent to a condenser that sends liquid to the wastewater treatment plant. At

the treatment plant, the water goes through a product recovery step, consisting of oil separation and recovery, then to a pretreatment process, and finally to evaporators.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA walked the facility and observed a sawmill, the treatment cylinders, work tanks, and the wastewater treatment plant. At the work tanks, which are located indoors, EPA accessed the roof and observed that a modification has been made to how these units are vented to the atmosphere. A stack that historically had been the emission point for all the tanks had been capped to allow for these emissions to travel through a recently installed knock-out tank prior to venting to the atmosphere.

Photos and/or Videos: were taken during the inspection.
See Appendix A and B

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. Plant diagram (copy obtained)
2. Two charge reports (copies requested)

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Permit application for construction of Cylinder No. 3
- Most recent permit application for operating permit
- Creosote and oil usage – five years of data
- Cubic feet of railway tie production – five years of data
- Pressure drop reading at sawmill cyclones – last six months of data
- Charge reports reviewed during inspection
- Temperature records associated with the condenser – six months of data

DIGITAL SIGNATURES

Report Author: DAKOTA PRENTICE Digitally signed by DAKOTA PRENTICE
Date: 2022.04.08
15:11:28 -05'00'

Section Supervisor: Frank, Nathan Digitally signed by Frank, Nathan
Date: 2022.04.13
13:13:03 -05'00'

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APPENDICES AND ATTACHMENTS

Appendix A – Digital Image Log

Appendix B – Digital Video Log

Facility Name: Stella-Jones Corporation
Facility Location: W1038 County Road U, Bangor, Wisconsin
Date of Inspection: March 23, 2022

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: V. Mei	2. Archival Record Location: Region 5 Electronic Records Center
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Image Number	File Name	Date and Time (incl. Time zone and DST)	Latitude and Longitude	Description of Image
1	IMG_0012.JPG	2022:03:23 09:07:57	Not Available	Switch Tie Sawmill - Cyclone
2	IMG_0013.JPG	2022:03:23 09:09:47	Not Available	Cross Tie Sawmill - Cyclone
3	IMG_0014.JPG	2022:03:23 09:20:17	Not Available	Treatment Cylinder No. 3
4	IMG_0015.JPG	2022:03:23 09:20:36	Not Available	Treatment Cylinder Nos. 1 (right) and 2 (left)
5	IMG_0016.JPG	2022:03:23 09:24:37	Not Available	Back of Cylinder No. 3
6	IMG_0017.JPG	2022:03:23 09:24:46	Not Available	Back of Cylinder No. 2
7	IMG_0018.JPG	2022:03:23 09:25:19	Not Available	Back of Cylinder No. 1
8	IMG_0019.JPG	2022:03:23 09:26:48	Not Available	Work Tanks and Storage Tanks
9	IMG_0020.JPG	2022:03:23 09:30:09	Not Available	Condenser (foreground) and Bolton Tank (background)
10	IMG_0021.JPG	2022:03:23 09:34:51	Not Available	Bolton Tank Nos. 2 (left rear) and 3 (right rear) and Condenser Nos. 2 (right front) and 3 (left front)
11	IMG_0022.JPG	2022:03:23 09:38:15	Not Available	Work Tank Header
12	IMG_0023.JPG	2022:03:23 09:43:56	Not Available	Roof of Building Housing Work Tanks
13	IMG_0024.JPG	2022:03:23 09:44:57	Not Available	Roof of Building Housing Work Tanks

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APPENDIX B: DIGITAL VIDEO LOG

1. Inspector Name: T. Russell	2. Archival Record Location: Region 5 Electronic Records Center
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Video Number	File Name	Date and Time (incl. Time zone and DST)	Latitude and Longitude	Description of Image
1	MOV_0164.mp4	3/23/2022 11:43	Not Available	Knock-out tank venting to atmosphere (Building 7)
2	MOV_0165.mp4	3/23/2022 11:45	Not Available	Capped work tank vent; knock-out tank vent (Building 7)
3	MOV_0166.mp4	3/23/2022 11:46	Not Available	Water treatment (Building 2) and Boiler (Building 1) stacks; view from Building 7 roof
4	MOV_0167.mp4	3/23/2022 11:58	Not Available	Boiler stacks (Building 1); view from ground
5	MOV_0168.mp4	3/23/2022 11:59	Not Available	Water treatment evaporator stack (Building 2); view from ground
6	MOV_0169.mp4	3/23/2022 12:05	Not Available	Knock-out tank (Building 7); view from ground