



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

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Bell Lumber and Pole Company, New Brighton, Minnesota

FROM: Carlo Demma, Physical Scientist
AECAB (MN/OH)

THRU: Brian Dickens, Section Supervisor
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Bell Lumber and Pole Co.

Facility Location: 778 1st St NW, New Brighton, MN 55112

Date of Inspection: April 29, 2022

EPA Inspector(s):

1. Carlo Demma, Physical Scientist (Air)
2. Tess Russell, Environmental Engineer

Other Attendees:

1. Jennifer Carlson, Environmental Specialist, Minnesota Pollution Control Agency (MPCA) Air Compliance Unit
2. Brittney Fyock, Environmental Specialist, MPCA Air Compliance Unit
3. Brian Stepaniak, Environmental Health & Safety Manager, Bell Lumber and Pole
4. Kyle Nowatzke, Plant Manager, Bell Lumber and Pole
5. Forrest Shultz, Director of Research and Development, Bell Lumber and Pole
6. Shannon Froiland, Environmental Engineer, GHD (Consultant)

Contact Email Address: Brian.Stepaniak@blpole.com

Purpose of Inspection: EPA conducted this inspection to assess compliance with good air pollution control practices for minimizing air emissions found at 40 C.F.R. 63.6(e)(1) and NESHAP QQQQQQ.

Facility Type: Wood Preserving

Regulations Central to Inspection: Bell Lumber and Pole's wood preserving operation, specifically the pressure treating cylinders and preservative usage, is subject to the wood preserving requirements of Subpart 40 C.F.R. Part 63 Subpart QQQQQQ. Bell Lumber and Pole is also subject to 40 C.F.R. 63.6(e)(1) in Subpart A of the General Provisions of the CAA.

Arrival Time: 8:15 AM CST

Departure Time: 12:30 PM CST

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. Reason: Not a small business.
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Kyle Nowatzke, Brian Stepaniak, and Forrest Shultz unless otherwise noted.

Process Description:

Bell Lumber and Pole Company (Bell Pole) pressure treats wood utility poles, lumber, larch, and laminated wood products on a batch basis with a solution of a proprietary co-solvent, pentachlorophenol (PCP), and No. 2 diesel fuel. The facility has approximately 60 employees and treats wood products on a 24/7 basis. The yard operations are daily from 5:00AM until midnight, and framing operations are 5:00AM until 2:00AM. Bell Pole indicated that business has increased significantly since the price and demand for wood products has risen. Kyle Nowatzke identified red pine as the facility's current highest production wood type.

Raw materials arrive onsite via truck and are stored in the yard in bunks. A shaver shaves a thin layer of wood off the poles before they go to framing, where poles are cut to length and drilled with holes to improve the efficacy of the treatment process. The poles may also be heated in one of two kilns, but not always. Then the poles go through the pressure treatment process in one of two treatment cylinders, to a drip pad in the treatment building, through QAQC checks, and either back to storage in the facility's bunks or shipped out to customers.

Staff Interview:

EPA was informed Bell Pole performs odor tests on a regular basis, though no timeframe was specified. The company informed EPA that the wood preserving industry is shifting away from the use of PCP, but that Bell Pole has enough PCP to potentially last several more years. The

company stated that DCOI (4,5-Dichloro-2-n-Octyl-4-Isothiazolin-3-One) is being targeted as the next chemical to replace PCP. DCOI is a non-restricted use pesticide as compared to PCP which has been designated as restricted use since 1984.

After the pressure treatment process, initial vacuum is applied to the cylinder. The cylinder door will not open until the 90-minute final vacuum process is completed. Emissions enter the product recovery system (PRS) consisting of a condenser and a scrubber. Bell Pole utilizes a “Crack and Vac” procedure after the final vacuum where the tank door is cracked slightly, and vacuum is applied for an additional 30 minutes. There is a hood directly above the cylinder door to capture any air emissions from the opening of the cylinder, and a drip pad directly below; the hood vents to the atmosphere with no air pollution controls.

The condenser in the PRS runs only when vacuum is being pulled through the cylinder. Condensate is sent to a decant tank where separation processes separate oil to be re-used in the treatment process and non-oil waste liquid to go to wastewater treatment. The facility measures the quantity of condensate produced, and potentially the temperature of the exhaust downstream of the condenser, but facility representatives were unaware of other condenser parameters monitored on a regular basis. The condenser is not steam injected. Emissions from the condenser are routed to a recently replaced diesel scrubber at the roof of the treatment building.

A dissolver tank is located in the mixing room where Bell Pole drops 2000-pound blocks of PCP twice a day. The PCP is agitated, and heat is applied; Diesel No 2 is also added along with proprietary co-solvent. Emissions from the dissolver tank are routed to the scrubber, but not first through the condenser. The company stated that a rubber seal which seals the mixing tank commonly becomes compromised and is regularly changed, on a one to six-month basis, but only after it fails. When the rubber gasket seal is broken all members of Bell Pole team in attendance stated, “you can smell it”.

Bell Pole is not required by any air permit to run the scrubber, but the facility’s Management Plan requires the vapor recovery system (including the scrubber) to be in operation during the treatment process. Thus, Bell Pole’s operating procedure is to immediately stop work if the scrubber fails or stops working. It was noted that un-controlled passive VOCs are emitted if the scrubber is turned off. Above the scrubber, the facility representatives mentioned there is a “damper” which has not been used in several years; it is not required by any permit. The facility does not deem it cost-effective to fix and bring the damper back into operation. The damper could be used to disperse the scrubber emissions higher into the air.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA parked the government vehicle at 840 2nd St. NW, New Brighton MN 55112, approximately 0.06 miles due west of the Bell Pole treatment building at the entry of the neighborhood to perform an observational smell test. It was 8:15 AM CST and ambient conditions were as follows: Temperature of 47°F, Wind 11 Mph from the East/Southeast, Dew

Point 39°, Humidity 72%, Pressure 29.95 (in). EPA immediately noted odors when downwind of the facility. EPA noted a smell of lacquer strong enough to irritate one's throat with mouth closed. EPA observed the same strong odors while inside the treatment building.

When EPA parked in the guest parking lot at 8:30 AM, EPA observed large amounts of dust being generated by the Pettibone machine. Wind speeds were at 11 Mph from the East/Southeast.

EPA inspected the following emission units while on site: pole shaver, two kilns, two oil heaters, cylinder 1, partial cylinder 2, and oil decant tank 1. EPA inspected the following Emissions Controls: cyclone, condenser 1, HVAC secondary building (roof) air filters, and the scrubber. Cylinder #2 was down at the time of the inspection due to a reoccurring failure of the cylinder's vacuum pump and the installation of two new valves. While Cylinder 1 was operating, the scrubber was at 13 psi and the condenser temperature was 109°F.

Inside the treatment building near the loading area for Cylinder 1, EPA observed one major section of the building's HVAC was damaged and nearly completely severed, yet Bell Pole still had air flow running through it. No temporary duct tape was affixed to the damaged duct work. Carbon filter air panels that were originally affixed to the treatment building's air filtration system were all removed. The carbon air filters were listed in a permit application form dated 1996. NESHAP QQQQQQ requires Bell Pole to operate the treatment process according to a management practice plan to minimize air emissions.

EPA observed several poor housekeeping procedures which included: leaving entry and exit doors open which led into the treatment building, leaving the garage door in the tram transfer bay open, multiple holes in the treatment building's exterior walls, and oily rags left laying on equipment.

EPA observed a leaking joint on a section of pipe directly affixed to the top of Cylinder 1 with the FLIR camera. Cylinder 1 was in an active charge mode. Bell Pole indicated to EPA that it may be a pressure return line, but that they were not sure.

Inside the tram transfer bay in the treatment building, EPA observed a major spill of treatment product. Bell Pole informed EPA that it had been like this for approximately seven days. The primary containment drip pad below Cylinder 2 was completely submerged in treatment product. The tram transfer bay area has several large runners going across the length of the ground and in those runners are small holes where product spills are channeled down the length of the transfer bay. EPA's photograph clearly shows a dark stain or sludge line above the level of the current spill.

EPA observed recently treated poles emanating fugitive organic material emissions with the FLIR Camera. The poles were no longer on the drip pad and were moved to the adjacent rail line for transport out of the treatment building. Bell Pole's plant manager told EPA the poles were removed from the drip pad approximately 3 hours earlier; the standard is to remove them from the drip pad is after the last drip.

EPA performed USEPA Method 082 on the fugitive emissions from the shaver. The shaver was not routing to the cyclone since it was routing to an enclosed trucking container. EPA observed no visible emissions from the shaver while it was being operated in this fashion. Results were 0% opacity over a six-minute average.

Photos and/or Videos: were taken during the inspection.

- FLIR Infrared Thermal Imaging.

Field Measurements: were taken during this inspection.

- Observational Odor Test (smell test).
- USEPA Method 082 Visible Emission Observations.

CLOSING CONFERENCE

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

Requested documents:

- A copy of the agreement (MOU) with the City of New Brighton from November 13, 2007, regarding “legal non-conforming use”.
- The results of the (new) scrubber efficiency test mentioned during the inspection (estimated date, Oct 2021).
- Manufacturer’s specifications for the scrubber.
- Any maintenance logs indicating when maintenance is performed/leaks are addressed on the dissolver/mixing tank.
- Confirmation of the date of the latest stack test and conformation of the installation of the second cylinder.
- All documentation determining use of activated carbon air filters was no longer necessary and specify the date Bell removed them.
- The latest Management Practice Plan which details minimization of air emissions as required by NESHAP QQQQQQ and any other Operation Plan(s) that might be referenced in it, including but not limited to the Facility’s SPCC Plan and the Facility’s Contingency Plan.
- Provide Charge Records for the year-to-date for each cylinder with information including but not limited to: wood type, amount of preservative used, and pressure readings inside the cylinder.
- A statement regarding the spill USEPA observed in the loading area near Cylinder 2 and any corrective actions taken since EPA was on site.
- Copy of SDS sheets for compounds used to create formula for wood treating.

Concerns: MPCA instructed the facility to control fugitives from the roadways through water application, when needed; MPCA suggested the facility maintain a speed limit for moving vehicles and a record of when and how much water is applied to control roadway fugitive emissions. EPA expressed concerns regarding Bell Pole’s removal of the activated carbon filters from the wood treatment building’s HVAC, and the damaged HVAC vent. EPA expressed the poor housekeeping procedures concerns to Bell Pole during the site tour. EPA expressed

concern regarding the leaking joint on Cylinder 1 during the site tour. EPA expressed concerns that any spills, but especially those dealing with preservative from the pressure cylinders, should be cleaned up promptly according to NESHAP QQQQQQ.

DIGITAL SIGNATURES

Report Author: **CARLO
DEMMA**  Digitally signed by CARLO
DEMMA
Date: 2022.06.09 08:06:27
-05'00'

Section Supervisor: **Brian Dickens**  Digitally signed by Brian
Dickens
Date: 2022.06.09 09:41:17
-05'00'

Facility Name: Bel Lumber and Pole Company
Facility Location: 778 First Street Northwest
Date of Inspection: April 29, 2022

APPENDICES AND ATTACHMENTS

1. Appendix A: Photo and Video Log
2. Appendix B: Field Measurement Data

Facility Name: Bell Lumber and Pole Company

Facility Location: 778 First Street Northwest

Date of Inspection: April 29, 2022

APPENDIX A: DIGITAL IMAGE AND VIDEO LOG

1. Inspector Name: Carlo Demma	2. Archival Record Location: <i>ERC</i> <i>Enf_BellLumber&pole_MN_22_InspectionReport</i>
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Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	IMG_3042.JPG	2022:04:29 08:59:30	Process flow diagram
2	IMG_3043.JPG	2022:04:29 09:41:37	Road dust_1
3	IMG_3044.JPG	2022:04:29 09:41:45	Road dust_2
4	IMG_3045.JPG	2022:04:29 09:48:11	Treated laminated wood
5	IMG_3046.JPG	2022:04:29 09:51:08	Untreated lumber and poles_1
6	IMG_3047.JPG	2022:04:29 09:51:11	Untreated lumber and poles_2
7	IMG_3048.JPG	2022:04:29 09:56:10	Bell Pole tag_1
8	IMG_3049.JPG	2022:04:29 09:56:15	Bell Pole tag_2
9	IMG_3050.JPG	2022:04:29 10:01:34	Oil decant tank #1
10	IMG_3051.JPG	2022:04:29 10:07:30	Recovery system control program
11	IMG_3052.JPG	2022:04:29 10:15:12	Condenser #1 drain valve
12	IMG_3053.JPG	2022:04:29 10:21:14	Drip tray and drip pads under leaky equipment
13	IMG_3054.JPG	2022:04:29 10:29:17	Leaking joint off Cylinder #1
14	IMG_3055.JPG	2022:04:29 10:29:22	Leaking joint off Cylinder #1_2
15	IMG_3056.JPG	2022:04:29 10:29:32	Leaking joint off Cylinder #1_3
16	IMG_3057.JPG	2022:04:29 10:36:21	Cylinder #1 Door
17	IMG_3058.JPG	2022:04:29 10:36:29	Open loadout door
18	IMG_3059.JPG	2022:04:29 10:37:57	Treatment product spill_1
19	IMG_3060.JPG	2022:04:29 10:38:02	Treatment product spill_2
20	IMG_3061.JPG	2022:04:29 10:39:28	Pole drip pad

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21	IMG_3062.JPG	2022:04:29 11:06:56	USEPA Method 082
22	IMG_3063.JPG	2022:04:29 11:07:11	USEPA Method 082
23	IMG_3064.JPG	2022:04:29 11:07:26	USEPA Method 082
24	IMG_3065.JPG	2022:04:29 11:07:41	USEPA Method 082
25	IMG_3066.JPG	2022:04:29 11:07:56	USEPA Method 082
26	IMG_3067.JPG	2022:04:29 11:08:11	USEPA Method 082
27	IMG_3068.JPG	2022:04:29 11:08:26	USEPA Method 082
28	IMG_3069.JPG	2022:04:29 11:08:41	USEPA Method 082
29	IMG_3070.JPG	2022:04:29 11:08:56	USEPA Method 082
30	IMG_3071.JPG	2022:04:29 11:09:11	USEPA Method 082
31	IMG_3072.JPG	2022:04:29 11:09:26	USEPA Method 082
32	IMG_3073.JPG	2022:04:29 11:09:41	USEPA Method 082
33	IMG_3074.JPG	2022:04:29 11:09:56	USEPA Method 082
34	IMG_3075.JPG	2022:04:29 11:10:11	USEPA Method 082
35	IMG_3076.JPG	2022:04:29 11:10:26	USEPA Method 082
36	IMG_3077.JPG	2022:04:29 11:10:41	USEPA Method 082
37	IMG_3078.JPG	2022:04:29 11:10:56	USEPA Method 082
38	IMG_3079.JPG	2022:04:29 11:11:11	USEPA Method 082
39	IMG_3080.JPG	2022:04:29 11:11:26	USEPA Method 082
40	IMG_3081.JPG	2022:04:29 11:11:41	USEPA Method 082
41	IMG_3082.JPG	2022:04:29 11:11:56	USEPA Method 082
42	IMG_3083.JPG	2022:04:29 11:12:11	USEPA Method 082
43	IMG_3084.JPG	2022:04:29 11:12:26	USEPA Method 082
44	IMG_3085.JPG	2022:04:29 11:12:41	USEPA Method 082

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45	IMG_3086.JPG	2022:04:29 11:12:56	USEPA Method 082
46	IMG_3087.JPG	2022:04:29 11:13:11	USEPA Method 082
47	IMG_3088.JPG	2022:04:29 11:13:26	USEPA Method 082
48	IMG_3089.JPG	2022:04:29 11:13:41	USEPA Method 082
49	IMG_3090.JPG	2022:04:29 11:13:56	USEPA Method 082
50	IMG_3091.JPG	2022:04:29 11:14:11	USEPA Method 082
51	IMG_3092.JPG	2022:04:29 11:14:26	USEPA Method 082
52	IMG_3093.JPG	2022:04:29 11:14:41	USEPA Method 082
53	IMG_3094.JPG	2022:04:29 11:14:56	USEPA Method 082
54	IMG_3095.JPG	2022:04:29 11:15:11	USEPA Method 082
55	IMG_3096.JPG	2022:04:29 11:15:26	USEPA Method 082
56	IMG_3097.JPG	2022:04:29 11:15:41	USEPA Method 082
57	IMG_3098.JPG	2022:04:29 11:15:56	USEPA Method 082
58	IMG_3099.JPG	2022:04:29 11:16:11	USEPA Method 082
59	IMG_3100.JPG	2022:04:29 11:16:26	USEPA Method 082

Facility Name: Bell Lumber and Pole Company

Facility Location: 778 First Street Northwest

Date of Inspection: April 29, 2022

INFRARED OPTICAL GAS IMAGING LOG

1. Inspector Name: Tess Russell	2. Archival Record Location: <i>ERC</i> <i>Enf_BellLumber&pole_MN_22_InspectionReport</i>
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Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Video
1	MOV_0260.mp4	5/4/2022 11:53	Side vent off the wood treatment building
2	MOV_0261.mp4	5/4/2022 11:53	Condenser and condensate collector for Cylinder 1
3	MOV_0262.mp4	5/4/2022 11:53	Drip pad between Cylinder 1 and associated Work Tank
4	MOV_0263.mp4	5/4/2022 11:54	Leaking gasket atop Cylinder 1
5	MOV_0264.mp4	5/4/2022 11:54	Leaking gasket atop Cylinder 1 (2)
6	MOV_0265.mp4	5/4/2022 11:54	Cylinder 1 door
7	MOV_0266.mp4	5/4/2022 11:54	Spill in wood treatment building
8	MOV_0267.mp4	5/4/2022 11:54	Spill in wood treatment building (2)
9	MOV_0268.mp4	5/4/2022 11:54	Drying poles in wood treatment building
10	MOV_0269.mp4	5/4/2022 11:54	Vent from wood treatment building
11	MOV_0270.mp4	5/4/2022 11:54	Vent from wood treatment building
12	MOV_0271.mp4	5/4/2022 11:54	Top of wood preserving building - scrubber stack

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Facility Location: 778 First Street Northwest
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APPENDIX B: FIELD MEASUREMENT DATA

Attachment A VISIBLE EMISSION OBSERVATION FORM

Method Used Alternative Method 082		
Equipment Digital Opacity Camera #2		
Facility Name Bell Lumber and Pole Company		
EO Street Address 778 First Street Northwest		
EO City New Brighton	EO State MN	EO Zip 55112
Process Wood Shaving	Unit Shaver	Operating Mode N/A
Control Equipment Cyclone	Operating Mode N/A	
Describe Emission Point Saw dust		
Wind Dir Southeast		
Vertical Angle to Obs. Pt. Start 5.41 End Same		Direction to Obs. Pt. Start 86.9 End Same
Distance and Direction to Observation Point from Emission Point Start 348.71 / 9.9 End Same		
Describe Emissions Start Brown Particles End Same		
Emission Color Start Dust End Same		Water Droplet Plume Attached: () Detached: () N/A: (X)
Describe Plume Background Start White Truck End Same		
Background Color Start Gray End Same		Sky Conditions Start Overcast End Same
Wind Speed Start 11 End Same		Wind Direction Start 270 End Same
Ambient Temp. Start 50 End Same	Wet Bulb Temp. Start 37.66 End Same	RH Percent Start 31 End Same



Form Number					Page	of
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Observation Date 4/29/2022		Time Zone CST		Start Time 11:06:08	End Time 11:12:08	
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1						
2	0	0	0	0		
3	0	0	0	0	6-minute avg = 0%	
4	0	0	0	0		
5	0	0	0	0		
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Observers Name (Print) Carlo Demma		
Observers Signature Carlo Demma		Date 04/29/2022
Organization USEPA		
Certified By CJD		Date 4/29/2022
Longitude 45.03.06565	Latitude 093.11.49848	Declination