



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

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
La-Co Industries, Inc., Elk Grove Village, Illinois

FROM: Linda H. Rosen, Environmental Engineer
AECAB (IL/IN)

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

TO: File

BASIC INFORMATION

Facility Name: La-Co Industries, Inc.

Facility Location: 1201 Pratt Boulevard, Elk Grove Village, Illinois 60007

Date of Inspection: 8/23/2022

EPA Inspector(s):

1. Linda H. Rosen, Environmental Engineer
2. Brianna Fenzl, Environmental Engineer

Other Attendees:

1. Eric Person, Manager of Manufacturing, La-Co Industries, Inc.

Contact Email Address: eperson@laco.com

Purpose of Inspection: To inspect La-Co Industries, Inc. (La-Co) in relation to Clean Air Act requirements, particularly with respect to its Federally Enforceable State Operating Permit (FESOP).

Facility Type: Specialty chemical manufacturer

Regulations Central to Inspection: La-Co's FESOP No. 95030004, issued July 14, 2014, contains monthly and 12-month limits (re-calculated monthly) for volatile organic material (VOM), particulate matter (PM), and hazardous air pollutants (HAPs) emissions, and production.

Arrival Time: 1:15 p.m.
Departure Time: 4:15 p.m.

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:
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Eric Person unless otherwise noted.

Process Description:

La-Co manufacturers paint products including industrial and agricultural markers. La-Co makes the paint in house and then fills the markers. The facility also occasionally sells the paint it makes in 1-gallon quantities. La-Co also makes chemical indicators. An example are sticks used on welding products to test if they are hot enough. La-Co also makes plumbing products including thread sealant and specialty fluxes (i.e., sodder).

In the paint product manufacturing process, the facility receives liquid solvents, resins (mostly powdered), and colorants (mostly solids) in drums, bags, and pails, as applicable. The materials are blended in approximately 6 paddle blenders or 16 saw tooth blade mixers, which agitate the mix. After blending, the material is tested and if approved, the paint is used to make various types of markers. Some products, such as the agricultural pens, are molded by heating the material and pouring it into a mold. The facility uses 20 plus solvents including glycol ether, ethanol isopropanol, glycol propyl methyl ether, and occasionally toluene. Xylene is specifically used in the manufacture of ear tag ink pens. Ear tag ink pens mark tags positioned on the ears of cattle in all kinds of weather conditions. The ear tag ink is different than the wax used to make agricultural wax crayons. The wax is a low VOM-emitting substance.

In the plumbing products manufacturing process, the material is not merely blended but an acid-base reactions occurs to form salts. This process uses a 31.5% hydrochloric acid (HCl) solution. The HCl solution is brought in by tanker truck and unloaded using submerged filling into an 8,000-gallon tank in the plumbing room. The displaced vapor is run through a 55-gallon drum of water to capture fumes. The plumbing manufacturing process is not a source of VOM emissions, according to Eric Person, but does emit dust and HCl. The detailed formulation for the acid-base reaction is claimed CBI by the facility. We took a photo of the list of ingredients used in this reaction which the facility is also claiming as CBI (photo 1).

Many of the facility blending operations are controlled by Donaldson Torit removable filter canister dust collectors. No operation at the facility is controlled for VOM emissions.

Staff Interview:

The facility operates 5 days per week, 8-10 hours per day, 52 weeks per year and some Saturdays for 8 hours. The company employs 165 at this location.

La-Co tracks its incoming raw materials and products on an inventory basis. As raw materials are used and products are made, the amounts are entered into a spreadsheet. These values are used, along with emission factors, to generate the Illinois EPA annual emission report (AER). The facility calculates VOM and particulate matter (PM) emissions on a calendar year basis.

According to Eric Person, the facility does not calculate emissions monthly or on a 12-month rolling average basis and the facility was not able to produce these records when requested. The facility is also not calculating HCl emissions in any form for any purpose, either internally or for the AERs.

Regarding the dust control on the various mixers, Eric Person inspects the dust control equipment on a monthly basis. He is primarily looking for colorant leakage as an indicator of a problem. The facility also uses the air flow rate and differential pressure as a guide to indicate when the filters need to be changed out. If the flow rate drops or the differential pressure gets too high, then the filters are changed. Eric Person did not know the exact ranges that trigger changeout. He said there have not been visible emissions or complaints from the public.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

We started in the plumbing products manufacturing room. We observed the HCl bulk tank (photo 2). This tank is not heated or agitated. We observed the overhead line that performs subsurface loading into the tank. Next, we observed the HCl reactor which Eric Person believed to be approximately 500 gallons. The lid was open as the reactor was idle. Here, an acid such as HCl is combined with a base to form salt. Fifty-pound bags of solid base material are loaded into the top. The reactor operates about two batches per week. Each batch uses 1,009 pounds of HCl. This reactor does not have air pollution controls of any kind. We observed the saw tooth mixers and thread sealant mixers. These have dust control that is used only during loading of solids; otherwise, these mixers exhaust into the room. The thread sealant mixer was operating during the inspection.

Next, we entered the closed paint room which is the largest source of VOM emissions at the facility. The room was extremely odorous. We observed several inventory totes of solvents including cyclohexane and ethanol isopropanol. All paints are mixed in this room including the paints that use toluene and the paint for the cow ear tag markers that uses xylene. The room had general ventilation, but no VOM emission control.

The next room contained the paint filling operation. Barrels of paint from the paint room are brought to the filling station where the contents are stirred within the closed container to keep it uniform. Pumps pull the liquid through subsurface suction lines into one of two marker filling stations. Each marker is filled with 10 milliliters of paint. This operation was not operating at the time of the inspection because the shift was over.

Finally, we observed the operation that makes the wax crayons. This operation was not operating at the time of the inspection (photo 4). Sacs of powders are conveyed by screw conveyor to the top of the tank where they are mixed with other materials and heated. Sometimes bags are added through the top of the tank directly. There is dust collection for this operation.

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

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

We reviewed the following documents on-site during the inspection and obtained copies:

- 2021 AER
- HCl usage based on inventory for 2020, 2021 and 2022
- 2021 Production by plant area
- Safety Data Sheet for the HCl 31.5 % by weight solution

CLOSING CONFERENCE

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

Compliance Assistance: I explained to Eric Person that Permit Condition 17.a. of the FESOP requires that La-Co calculate its production and material usage on a monthly basis in order to calculate production and emissions on a monthly and 12-month rolling basis.

Concerns:

We discussed the following concerns with the facility:

- The HCl emissions appear to not be accounted for on the 2021 AER nor are they calculated for any purpose;
- The HCl usage was 25.86 tons in 2021 and 20.17 tons in 2020 which is more than 10 tons per year; and
- The 2021 AER does not appear to include emissions from the plumbing products manufacturing operations.

DIGITAL SIGNATURES

Report Author: Linda H. Rosen

Section Supervisor: Frank,
Nathan

Digitally signed by Frank,
Nathan
Date: 2022.09.19 12:01:55
-05'00'

Facility Name: La-Co Industries, Inc.

Facility Location: 1201 Pratt Boulevard, Elk Grove Village, Illinois

Date of Inspection: August 23, 2022

APPENDICES AND ATTACHMENTS

1. Appendix A: Digital Media Log

Facility Name: La-Co Industries, Inc.

Facility Location: 1201 Pratt Boulevard, Elk Grove Village, Illinois

Date of Inspection: August 23, 2022

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Brianna Fenzl	2. Archival Record Location: EPA Region 5 Electronic Records Center
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Image Number	File Name	Date and Time	Description of Image
1	IMG 0239.JPG	2022:08:23, 15:19:01	CBI: Recipe for acid-base reaction in manufacture of plumbing products
2	IMG 0240.JPG	2022:08:23, 15:33:50	HCl tank
3	IMG 0241.JPG	2022:08:23, 15:35:58	HCl reactor
4	IMG 0242.JPG	2022:08:23, 16:00:45	Wax crayon mixer