



Clean Air Act Compliance Inspection Report

United States Environmental Protection Agency
Region 10 – Seattle, WA

Clean Air Act Partial Compliance Evaluation Inspection Report

Nouryon Pulp and Performance Chemicals Moses Lake, WA

Inspection Date: April 21, 2022

Report Author Signature

Date

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Table of Contents

Contents

1. Basic Facility and Inspection Information	3
2. Compliance History	5
3. Inspection Elements/Order	5
4. Facility Walk-Through.....	6
5. Closing Conference.....	6

Attachments

Attachment 1	Approval Order 19AQ-E045
Attachment 2.....	Facility Map

1. Basic Facility and Inspection Information

Facility: Nouryon Pulp and Performance Chemicals
2701 Road N NE
Moses Lake, WA 98837

Mailing Address: Same

AFS/FRS Number: 110070671313

SIC: 2819 (Industrial Inorganic Chemicals)

NAICS: 325180 (Other Basic Inorganic Chemical Manufacturing)

Permit Number: 19AQ-E045

Facility Contacts: Pat Ealy
Moses Lake Site Manager
Nouryon Pulp and Performance Chemicals
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Date of Inspection: April 21, 2022

Inspection Start/End Times: 8:30 AM – 9:30 AM

Inspection Notice: This was an unannounced inspection.

This was a multi-media Clean Air Act (CAA) and Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313 compliance inspection by the Environmental Protection Agency (EPA). EPA Region 10 led the CAA and EPCRA Section 313 inspection and the Washington Department of Ecology Eastern Regional Office participated in the inspections. This report only covers the CAA inspection. The purpose of the CAA inspection was to identify potential compliance concerns with CAA regulations and Approval Order 19AQ-E045 issued by Washington Department of Ecology Eastern Regional Office.

The following facility description is based on information provided by a facility representative in the opening conference as well as a written response by the facility to the records requests. The Nouryon facility in Moses Lake, Washington was originally constructed in 1990 and produces sodium chlorate. Sodium chlorate is primarily sold to the pulp and paper industry for the production of chlorine dioxide, a chemical used to bleach paper pulp. The facility produces approximately 60,000 metric tons of sodium chlorate per year.

Sodium chlorate is produced by converting sodium chlorine to sodium chlorate through an electrolysis chemical reaction. The electrolysis process is comprised of two rectifier transformers that convert 13.2KV 3-phase electricity to high amperage, low voltage DC power. The current passes through a series of cell boxes that contain anode and cathode plates in a circulating mother liquor solution (electrolyte). The mother liquor solution contains chromium chloride in order to minimize a side reaction that produces oxygen and to prevent corrosion in the cell boxes. The mother liquor is 100% contained in the electrolysis process. The sodium chlorate is then transferred to a crystallizer vessel and sodium chlorate crystals are formed, cleaned in a centrifuge, dried in a fluidized bed dryer and then stored in a silo. The finished product is shipped as a 50% liquid solution in a tank truck/railcar or as dry crystal in a railcar or intermittent flexible containers.

The electrolysis process produces hydrogen gas and excess heat. Approximately 50% of the hydrogen produced is sold to a neighboring facility (which does not share common ownership or operators with Nouryon) to be used as boiler fuel; and approximately 2% is burned inside of the process building to provide heat for a fluidized bed dryer; and the remaining hydrogen is vented to the atmosphere. Excess heat is removed with a cooling tower and compressor/condenser chiller units.

Disclaimer

This report is a summary of observations and information gathered from the facility at the time of the inspection and from a subsequent records review. The information provided does not constitute a final decision on compliance with CAA regulations or applicable permits, nor is it meant to be a comprehensive summary of all activities and processes conducted at the facility.

2. Compliance History

A review of EPA's Enforcement and Compliance History Online database¹ shows that at the time of the inspection, the facility was reported as having no CAA violations in the last three years. ECHO shows no formal or informal enforcement actions in the last five years.

3. Inspection Elements/Order

a. Pre-Inspection Observations

I went directly to the facility. No observations were made prior to the scheduled inspection.

b. Entry and Opening Conference with facility representatives

I arrived at the Nouryon facility parking lot at 8:30 AM on April 21, 2022. I met Brendan Whyte, from EPA Region 10, and Gail Wright, from the Washington Department of Ecology Eastern Regional Office, in the parking lot. Inspector Whyte, Wright, and I then walked together to the facility's administrative building. The facility had controlled access and there was a telephone by the front door to the administrative building. I saw signage with instructions to call into the facility in order to gain access. I used the telephone and called into the facility. My call was answered by a facility employee and I introduced myself and explained that EPA was conducting an unannounced CAA and EPCRA Section 313 inspection. The employee stated that the facility was shut down for maintenance. I asked when the facility would be operating again and was told that the facility would be operating again on Monday. I requested if we could still enter the facility and speak to a facility representative. Inspector Whyte, Wright, and I were then buzzed into the administrative building and entered the front office. An employee met us at the front office, explained that Pat Ealy (Moses Lake Site Manager) was on his way and escorted our group to a conference room. The conference room had large windows that provided a good view of the process building. I noted that the facility did not appear to be active.

Mr. Ealy arrived a few minutes later and, Inspector Whyte and I presented our credentials. I explained to Mr. Ealy that I was there to conduct an unannounced CAA and EPCRA Section 313 inspection, but I was informed that the facility was temporarily shut down. Mr. Ealy confirmed that the facility was shut down and stated that the facility was shut down for a week-long maintenance and cleaning twice a year. He also confirmed that the facility would be operating again on Monday. I explained to Mr. Ealy the purpose of the inspection and gave an overview of the inspection process. I stated that this was a multi-media inspection to determine compliance with CAA and EPCRA Section 313 and identified myself as the lead for both inspections. However, I explained that inspections included a walkthrough of the facility and I really needed to see a facility's processes while in operation. I stated that I did not believe it would be effective to walk through the

¹ See <https://echo.epa.gov/>

facility that day and instead I would only request records related to the CAA and EPCRA Section 313. Mr. Ealy asked if EPA would inspect at a later date, and I answered that I was unsure at that time.

I gave Mr. Ealy a list of records requests and we discussed their contents. We briefly discussed each item and Mr. Ealy and I agreed on the records submittal deadline of May 11, 2022. Lastly, Mr. Ealy gave a high-level overview of the facility's process. Inspector Whyte, Wright, and I departed the facility at approximately 9:30 AM.

4. Facility Walk-Through

This inspection did not include a facility tour.

5. Closing Conference

This inspection did not include a closing conference.