



United States Environmental Protection Agency
Region 7
Enforcement and Compliance Assurance Division

Air Branch

Air Branch Inspection Report
Unannounced Partial Compliance Evaluation
Evonik Corporation
650 Industrial Park Drive
Blair, NE 68008
FRS# 110040981532

Inspection Date:
April 23, 2024

Christopher Appier, Inspector, ECAD, Air Branch

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APPENDICES

- A – NDEE NOV (1 page)
- B – Construction Permit CP11-024 (19 pages)
- C – Construction Permit CP12-024 (7 pages)
- D – Construction Permit CP13-036 (6 pages)
- E – Construction Permit CP19-022 (4 pages)
- F – CBI Form (2 pages)
- G – Receipt for Documents (1 page)
- H – Photo Log (35 pages)

**This Contents page shows all the sections contained in this report
and provides a clear indication of the end of this report.**

INSPECTION OVERVIEW

INSPECTION OBJECTIVE

The objective of the partial compliance evaluation (PCE) inspection was to confirm the facility's status as a minor source of emissions and compliance of the facility with the Clean Air Act (CAA), specifically those requirements relating to volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) listed in **Table 1**.

Table 1. APPLICABLE PERMIT CONDITIONS

Permit Number	Section
CP13-036	III.(B) Specific Conditions for Granulation
CP19-022	III.(A) Specific Conditions for Fermentation

Table 2 lists the inspection team members.

Table 2. PROJECT TEAM MEMBERS

Team Member	Organization	Project Role
Christopher Appier	EPA Region 7, ECAD, Air Branch	Lead inspector
Charlotte Papp	EPA Region 7, ECAD, Air Branch	Field team member

FACILITY CONTACT INFORMATION

Table 3 lists the primary facility contacts alphabetically.

Table 3. FACILITY CONTACT INFORMATION

Name, Title	Phone No.	Email Address
Paul Caldwell, Site Director	(402) 553-1562	paul.caldwell@evonik.com
Jeff Jacobson, QA Manager	(402) 427-3726	jeff.jacobson@evonik.com
Ryan Jensen, Plant Manager	--	ryan.jensen@evonik.com
David McLean, ESH Regional Coordinator	(402) 237-6955	david.mclean@evonik.com

FACILITY OVERVIEW

The Evonik facility in Blair, Nebraska, began operating in 2000. The facility operates 24 hours per day and employs 127 people. The facility was originally constructed to produce the amino acid L-lysine, sold as Biolys®. In 2019, the facility was expanded and began producing the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) from algae. These products are used in the animal nutrition industry. The facility's operations include fermentation, granulation, and materials handling.

There are no previous compliance monitoring activities at this facility. According to EPA's [Environment and Compliance History Online](#) website, there has been no formal enforcement at this facility for the past five years. The Nebraska Department of Environment and Energy (NDEE) issued a Notice of Violation to Evonik on July 23, 2021, for a failure to submit stack test results within 60 days of completion (**Appendix A**).

According to the active construction permits (**Appendices B, C, D, and E**) issued for the facility, the facility is not subject to any New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants, or Maximum Available Control Technology requirements.

FACILITY OPERATIONS SUMMARY

For both the Biolys® and omega-3 fatty acids (algal) production lines, the facility utilizes fermentation. The requirements for the fermentation process are covered in the construction permit CP19-022. These requirements include conducting a one-time initial performance test on the Omega-3 Fatty Acids Fermentation Exhaust (EP1) for VOCs to demonstrate compliance with the 1.46 lbs/hr emission limit. Construction permit CP11-024, which was superseded by CP19-022, required initial performance testing on the Biolys® Fermentation Exhaust (EP13) to demonstrate compliance with the 0.85 lbs/hr emission limit.

For the production of Biolys®, the facility uses a granulation process. The emission points for the granulation process include Granulators 1 through 4 (EP2, EP3, EP4, and EP14, respectively), and the combination of the Granulation Dryer/Cooler, Biolysis Oil Receiver, and Aquavilys Crusher/Receiver (EP5). The requirements for the granulation process are covered in the construction permit CP13-036. These requirements include VOC emission limits, performance testing requirements, operating parameter monitoring, and calculating and recording VOC emissions.

FIELD ACTIVITIES SUMMARY

The inspection team arrived at the facility on April 23, 2024, at 9:05 a.m. and completed a drive by surveillance inspection. I did not observe visible emissions. I made entry at the front gate at 9:15 a.m. I reviewed site safety information in the guard shack until 9:30 a.m. I then introduced myself and Ms. Papp, presented my credentials, and provided my business card to the facility representatives listed in **Table 3**. I conducted an opening conference during which I explained that the purpose of the visit was to conduct an inspection to determine compliance with the CAA, specifically, the permit requirements listed in **Table 1**. I explained that after asking for some general business information, I would observe process units, emission units, control equipment, and also, review associated records demonstrating compliance with the permit

requirements. I explained to Mr. Caldwell that the facility would have an opportunity to make a claim of business confidentiality at the end of the inspection and provided him with a Confidential Business Information (CBI) form. Mr. Caldwell did make a claim of confidentiality (**Appendix F**).

The inspection team was given a facility tour by Mr. Jensen. I wore a hard hat, steel toed boots, safety glasses, and earplugs during the facility tour per my site health and safety plan.

We broke for lunch at 12:30 p.m. and returned to the facility at 1:40 p.m.

I obtained copies of the records as indicated on the Receipt for Documents (**Appendix G**) via a OneDrive shared folder on the day of the inspection. On May 6, 2024, a log for the baghouse was uploaded to the shared folder. On May 10, 2024, updated potential to emit calculations, control device operating parameters, and a photograph of an oil spill cleanup were uploaded to the shared folder.

On July 29, 2024, I sent Mr. McLean an email inquiring about emission inventory reports. On August 1, 2024, an updated emission inventory was sent to me by Mr. McLean via email.

I conducted a closing conference with the facility representatives listed in **Table 3**. I provided the facility with copies of the receipt for documents and CBI form. I departed the facility at 3:45 p.m.

Observations and potential findings from the facility tour, records review, and measurement activities are noted in the **Investigation Observation and Potential Findings** section below.

Measurement Activities

Ms. Papp conducted field measurements during the onsite inspection under my direction. Ms. Papp used a forward looking infrared (FLIR) camera to monitor for leaking equipment in the fermentation and granulation areas of the site. **Table 4** summarizes field measurement and field sampling activities.

All environmental measurement activities were performed in accordance with the EPA Region 7 quality system. Ms. Papp followed manufacturer and EPA processes for instrument calibration; instrument calibration is documented in an EPA internal database.

Table 4 summarizes field measurement activities.

Table 4. FIELD MEASUREMENT ACTIVITIES

Date and Time	Method and/or Procedure ¹ , and Equipment	Measurer Name
4/23/2024 2:00 p.m. – 2:45 p.m.	Region 7 procedure: <i>FLIR ThermoCAM™ GasFindIR, GF320, and Similar Infrared Cameras</i> Equipment: FLIR, GF320, SN: 44402263	Charlotte Papp
¹ The current version of each procedure, at the time of the investigation, was followed.		

INVESTIGATION OBSERVATIONS AND POTENTIAL FINDINGS

Ambient weather, site conditions, and field activities were documented in the field records. All photographs are attached as **Appendix H** (claimed as CBI). I or a team member under my direct supervision made the following observations during the inspection. I discussed all observations with facility representatives during the closeout meeting unless otherwise noted in the observation description.

These observations are not final compliance determinations. The EPA Region 7 Air Branch case review team will make the final compliance determinations based on its review of this report and other technical, regulatory, and facility information.

Based on the information reviewed, Evonik appears to be a minor source of emissions under the CAA.

The facility conducted and passed an initial performance test for both the Omega-3 Fatty Acids Fermentation Exhaust (EP1) and the Biolys® Fermentation Exhaust (EP13) as required by construction permit CP19-022.

The facility conducted and passed an initial performance test for EP2, EP3, EP4, EP5, and EP14 as required by construction permit CP13-036.

The facility monitors operating parameters and calculates VOC emission estimates as required by construction permit CP13-036.

No leaks were found during the FLIR measurement activities.

Baghouse daily inspection logs were reviewed on site. The logs were well organized and appeared to meet the requirements in the permits.

Replacement bags for the baghouses were observed during the facility tour.

During the facility tour, a barrel of petroleum-based lubricant was observed to be leaking onto the floor (see Image 20240423_154929012_iOS.jpg – claimed as CBI) based on an oil stain

below the barrel. A photograph was submitted to OneDrive on May 10, 2024, documenting cleaning of the oil stain (claimed as CBI).

End of report.