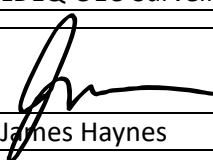




Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	04/18/2022	
Media Program:	Air	
Regulatory Program(s)	SIP, Title V	
Company Name:	Evonik Corporation	
Facility Name:	Reserve Plant	
Facility Physical Location:	474 West 19 th Street	
(city, state, zip code)	Reserve, LA, 70084	
County/Parish:	St. John the Baptist Parish	
Facility Phone Number	(973) 929-8000	
Facility Contact:	Brittany Breaux	EHSS Manager
	brittany.breaux@evonik.com	
FRS Number:	110017758381	
Identification/Permit Number:	LDEQ Agency Interest Number 13560	
Media Identifier Number:	AFS # 22-095-00023	
NAICS:	325613	
SIC:	2843	
Personnel participating in inspection:		
James Haynes	EPA-R6-ECAD-Air Toxics Enforcement	Physical Scientist
Christopher Williams	EPA-OECA-OCE-AED	Chemical Engineer
Richard Helmich, Ph.D.	EPA-OECA-OCEFT-ONEIC-LB	Senior Chemist
David Mahoney	EPA-OECA-OCEFT-ONEIC-FB-CRSS	Physical Scientist Technician
Ali Gitipour, Ph.D.	EPA-ORD-CEMM-AMCD	Federal Postdoctoral Research Fellow/Chemical Engineer
Cory Lormand	LDEQ-OEC-Surveillance Division	Environmental Scientist
EPA Lead Inspector Signature/Date	 James Haynes	6/28/2022 Date
Supervisor Signature/Date	 James Leathers	 Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

On April 18, 2022, the Government Team consisting of Mr. Richard Helmich (EPA-NEIC), Mr. Ali Gitipour (EPA-ORD), Mr. David Mahone (EPA-NEIC), Mr. Christopher Williams (EPA-AED), and Mr. Cory Lormand (LDEQ) arrived at the Evonik Corporation's (Evonik) Reserve Plant in St. John the Baptist Parish at around 08:45 local time to conduct an unannounced Clean Air Act ("CAA") inspection.

The Government Team signed in at the reception area and were directed to a conference room in the main office building. The Government Team watched a safety video and were introduced to Evonik representatives Mr. John Marion, Site Manager, and Ms. Brittany Breaux, EHSS Manager. Mr. Williams presented his inspector credentials to Mr. Marion and Ms. Breaux and notified them of the Government Team's intent to conduct a CAA Partial Compliance Evaluation ("PCE"). This inspection occurred as part of the Administrator's Multi-Scale Monitoring Project called the Pollution Accountability Team (PAT).

FACILITY DESCRIPTION

The Reserve Plant (LDEQ Agency Interest No. 13560) primarily produces alkoxylate alcohols by combining alcohols and ethylene oxide ("EO") and/or propylene oxide ("PO") in the presence of a catalyst. The facility currently uses four batch reactors to produce a variety of surfactant products from the reaction of ethylene oxide with alcohols, fatty acids, amines and glycols. Storage tanks receive and store raw materials and products used and produced by this process. Raw material and products are received and shipped via railcar, truck, drum and tote.

Section II – OBSERVATIONS

Opening Conference

At around 09:00, the Government Team conducted an opening conference with Evonik representatives, Mr. Marion and Ms. Breaux. Mr. Helmich explained that the compliance evaluation would include a mobile air monitoring survey of the facility using Geospatial Measurement of Air Pollution ("GMAP") and provided an overview of the vehicle and equipment. Mr. Williams explained that he would be using a FLIR GF320 optical gas imaging ("OGI") camera and a handheld photoionization detector ("PID") to locate any emission sources upwind of any detections made by GMAP. Mr. Helmich and Mr. Williams asked the Evonik representatives to begin processing any hot work permits required by the company to gain full access to the facility using the described equipment. Mr. Williams asked the company to let the Government Team know if any Confidential Business Information is obtained during the PCE, so that the information could be treated by the custodians as such.

Mr. Marion explained that currently there was a batch in process, and that two other batches would begin later in the evening. Mr. Williams explained that on Saturday April 16th, EPA had also measured

elevated concentrations of EO (between 5 and 10 parts-per-billion (“ppb”)) using GMAP in the communities adjacent to the facility at around 11:30. Mr. Marion confirmed that the facility had not experienced any upsets over the weekend and was operating normally. Ms. Breaux provided the schedule for rail unloading of EO and PO and described that the most recent unloading of EO occurred Saturday beginning around 23:15. Ms. Breaux said that operations staff anticipated that loading of EO would begin later in the evening after 18:00. Mr. Marion said that the facility operates a caustic wet scrubber to control all waste process streams that contain EO and that the scrubber vent stack is an authorize emissions point. At around 09:45 the opening conference concluded, and the Government Team prepared the mobile air monitoring vehicle and equipment for entry into the operations area.

GMAP Site Tour*

**The EO concentrations identified below are preliminary and will be verified through analysis of the samples obtained during the site tour; the analysis results will be available at a later date.*

At around 10:00, Mr. Williams took a photo of the Evonik Reserve facility entry sign (DC_169.jpg) and the Government Team began the site tour. Conditions were some cloud cover, and moderate winds coming from north. In the mobile air monitoring vehicle, Mr. Helmich, Mr. Gitipour and Mr Mahone were escorted by Ms. Breaux. On foot, Mr. Williams and Mr. Lormand were escorted by Mr. Marion and Mr. Steven Millet, Operator. The mobile air monitoring vehicle drove on all available roads in the operations area.

At around 10:15 downwind of the scrubber stack, GMAP detected elevated concentrations of EO (at around 30 ppb) at ground-level. Using OGI, Mr. Williams recorded video MOV_170 of emissions emanating from the scrubber stack. Mr. Williams observed a sweet odor while standing downwind of the scrubber stack. Mr. Helmich took an air canister sample (NEIC# 4606 and ORD# 12172) while positioned in the plume downwind while in the EO plume at 10:59.

At around 11:05 the Government Team exited the operations area and returned to the conference room.

At 11:17, the Government Team conducted a closing conference with Evonik representatives Mr. Marion and Ms. Breaux. Mr. Helmich and Mr. Williams provided a summary of their observations of the emissions coming from the scrubber stack. The elevated EO concentrations measured onsite and offsite were a concern to EPA. Ms. Breaux was identified as the Evonik contact for any further questions and any reports. The Government Team notified Evonik of their plans to return later in the evening after 18:00 to conduct mobile air monitoring during rail unloading of EO. The closing meeting concluded at around 11:30 and the Government Team exited the Evonik facility.

Region 6 Follow-up Inspection

At 15:15, Mr. Haynes conducted a separate site-entry for a follow-up inspection of the Reserve Plant. Mr. Haynes watched a safety video and met with Evonik representatives Mr. Marion, Ms. Breaux, and Mr. Dustin Lowry, Operations Supervisor. Mr. Haynes presented his inspector credentials to Mr. Marion

and Ms. Breaux and notified them of his intent to conduct a CAA PCE in response to the elevated readings and findings from the GMAP and GMAP Site Tour. Mr. Lowry provided Mr. Haynes with an overview of the site operations and current conditions. Mr. Haynes indicated that he would be using a Toxic Vapor Analyzer (TVA) Model 2020, a FLIR OGI Model GF320, and a Nikon digital camera during the site inspection. Mr. Haynes asked the Evonik representatives to begin processing any hot work permits required by the company to gain full access to the facility using the described equipment. Mr. Haynes used the equipment to screen equipment for leaks that were in light liquid and/or gas/vapor service at the rail cars and on top of the EO tank. No elevated readings were noted. Using the OGI camera, Mr. Haynes noted light hydrocarbons from the scrubber stack and took digital images of the reactors, scrubber, and other associated equipment.

Mr. Haynes shared all media files with Evonik upon returning to the office and requested additional records for further review.

GMAP during rail loading of EO

At around 19:45, the Government Team returned to the Evonik facility and met James Haynes (EPA-R6) who had been conducting a follow-up CAA inspection and Evonik representatives Mr. Millet, Mr. Marion and Ms. Breaux. Mr. Millet confirmed that EO loading by rail had started. The Government Team and Mr. Haynes entered the operations area. In the mobile air monitoring vehicle, Mr. Helmich, Mr. Gitipour and Mr. Mahone were escorted by Ms. Breaux. Mr. Williams, Mr. Haynes, and Mr. Lormand were escorted by Mr. Marion and Mr. Millet. Winds were moderate from the northeast. The mobile air monitoring vehicle drove to a position downwind of the scrubber stack and took air measurements during rail loading of EO. GMAP detected elevated concentrations of EO (at around 30 ppb) at ground-level.

At around 20:45, the Government Team, including Mr. Haynes exited the operations area, provided Evonik representatives with a description of the mobile measurements taken that evening and left the Evonik facility.

Section III – AREAS OF CONCERN

During the closing meeting the Government Team notified the company that the elevated EO concentrations measured onsite downwind of the scrubber stack, and the EO concentrations measured offsite were a concern to EPA.

Separately, Mr. Haynes noted potential concerns with the Reserve Plant's leak detection and repair program; however, further investigation is necessary.

Section IV – FOLLOW UP

EPA electronically received the LDAR database on May 13, 2022, after exiting the Facility on April 18, 2022.

Section V – LIST OF APPENDICES

Appendix 1 – Photo and Video Log – 1 photo and 1 OGI video taken April 18, 2022.

Appendix 1

Photo and Video Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Appendix 1

Photo and Video Log

Location: Evonik Corporation Reserve Plant		
City: Reserve	St. John the Baptist Parish	State: Louisiana



File Name: DC_169.jpg
Date taken: 04/18/2022
Time taken: 10:00 am
Videographer: Christopher Williams
Description: Photo of the Evonik Reserve Plant entry sign.



File Name: MOV_170.mp4
Date taken: 04/18/2022
Time taken: 10:20 am
Videographer: Christopher Williams
Description: OGI video of emissions emanating scrubber vent stack.