



Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	02/15/2024	
Media Program:	Air	
Regulatory Program(s)	Title V, NESHAP	
Company Name:	Arlanxeo Performance Elastomers	
Facility Name:	Orange Site	
Facility Physical Location:	4647 FM 1006	
(city, state, zip code)	Orange, TX 77630	
Mailing address:	4647 FM 1006	
(city, state, zip code)	Orange, TX 77630	
County:	Orange County	
Facility Phone Number	(409) 883-9990	
Facility Contact:	Neil Amedee	HSE Manager
	Neil.amedee@arlanxeo.com	
FRS Number:	110070931059	
Identification/Permit Number:	RN100825363/ FOP 1391, 2281, and 2282/ NSR 22508, 56568, and 18072	
Media Identifier Number:	TX0000004836100020	
NAICS:	325212	
SIC:	2822	
Personnel participating in inspection:		
Colleen McCarthy	Region 6 ECDAT	Inspector
Kenneth McPherson	Region 6 ECDAT	Inspector
Sarah Frey	Region 6 ECDAT	Inspector
Alan Morphis	Arlanxeo	Environmental Lead
Tyler Toups	Arlanxeo	Senior Environmental Engineer
Neil Amedee	Arlanxeo	HSE Manager
EPA Lead Inspector Signature/Date		
	Colleen McCarthy	Date
Supervisor Signature/Date		
	James Leathers	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspectors Colleen McCarthy, Kenneth McPherson, and Sarah Frey (“we”) arrived at the Arlanxeo Performance Elastomers – Orange Site (the “Facility”) at 10:20 on February 15, 2024 for an unannounced inspection. We met with Alan Morphis, Environmental Lead and Tyler Toups, Senior Environmental Engineer. Credentials were presented to Mr. Morphis and we informed them that this was an EPA inspection to evaluate compliance with the facility’s Title V Air Permit and the Clean Air Act. The scope of the inspection is a partial evaluation (“PCE”) focusing on the Facility’s control devices. This inspection occurred as part of a multi-scale monitoring project in the Beaumont-Port Arthur area. Prior to making entry, we observed the Facility’s flare from a public road (see Video 1 in Appendix 1). The off-site observations led to the on-site inspection. Videos taken during the inspection can be found in Appendix 1.

FACILITY DESCRIPTION

The Facility is a synthetic rubber manufacturing plant that operates under several Federal Operating Permits including Permit Number O-2281 issued December 28, 2023, Permit Number O-1391 issued September 22, 2021, and Permit Number O-2282 issued December 27, 2019. The Facility receives 1,3-butadiene to use as feedstock by pipeline or railcar. Butadiene is polymerized with a catalyst to create various synthetic rubbers at the site. The facility manufactures four products: hydrogenated nitrile butadiene rubber (“HNBR” or “Therban”), lithium butadiene rubber (“LiBR”), cobalt butadiene rubber (“CoBR”), and Neodymium butadiene rubber (“NdBR”).

Section II - OBSERVATIONS

Following a site safety briefing, EPA Region 6 inspectors met with Mr. Morphis, Mr. Toups, and Mr. Neil Amedee, HSE Manager, to explain the purpose and scope of the inspection. Mr. Morphis, Mr. Toups, and Mr. Amedee described the various processes at the Facility and familiarized inspectors with the main control devices on-site. In general, process flow at the facility begins at raw materials storage into a polymerization reaction system with a hexane or cyclohexane solvent and is then coagulated and stripped. The process then follows a solvent carrier system which may lead to solvent recovery, storage drying, and feed blending and return to the polymerization reaction. Dewatering and product drying follows coagulation and stripping. Product dryers are vented to atmosphere. A headspace analysis from crumb rubber is completed after dewatering and prior to drying. No stripping occurs after dewatering. Following product drying, the product is baled, packaged, and then stored in the finished product warehouse. Wastewater follows a facultative lagoon system where it ultimately drains into a wastewater outfall located at Cow Bayou.

The facility’s main controls include a steam-assisted flare, a wastewater stripper, a recovery stripper, nonregenerative carbon adsorption systems, and regenerative carbon beds. Facility personnel indicated

the flare controls streams routed from the Therban unit after monochlorobenzene is captured in the regenerative carbon beds, railcar hose purges, pressure relief devices in various units, and solvent tank pressure safety valves. The regenerative carbon beds have continuous emissions monitoring systems, and the nonregenerative carbon adsorption systems are monitoring weekly for 20 parts per million (“ppm”) volatile organic compound (“VOC”) breakthrough by the Facility’s leak detection and repair contractor, APTIM.

After discussing site processes, we entered the facility at 12:25 with Mr. Morphis and Mr. Toups and requested to observe the flare, carbon adsorption systems in the Therban Unit, and storage tanks. Mr. McPherson operated a NEO Photo-ionization Detector (“PID”) and I, Colleen McCarthy, operated a FLIR GF320 Optical Gas Imaging camera (“OGIC”) while in the field.

At 12:30, inspectors monitored a wastewater sump with the PID and did not detect emissions. No emissions were observed at the sump with the OGIC.

At 12:40, we arrived at the flare and observed piping that remained on-site from a temporary flare installation from 2020. Facility representatives indicated that flare tips on the Facility’s flare were replaced in 2020 and a temporary flare was installed to control the flare header streams during the maintenance period. The Facility chose to keep the piping to tie into the flare header if they need to implement another temporary flare in the future. EPA inspectors noted that the flare appeared to have excess amounts of steam based on visual inspection. I observed the flare on-site with the OGIC and observed trailing uncombusted hydrocarbons (see Video 2 in Appendix 1). [AOC 1] According to facility personnel, the facility uses flame intensity cameras to monitor steam.

At 13:10, we arrived at the Therban Unit and met with operators of the unit to sign in and obtain a hot work permit for the OGIC. We noted a strong odor while walking through the unit and detected VOCs using the PID from a drain line from the dewatering process and rotary screen. We continued through the unit to observe the carbon adsorption systems located in an elevated platform area of the process. No emissions were observed. We departed the Therban unit at 13:30.

Following the Therban unit, we observed the hexane and butadiene tanks from the ground. Only two butadiene tanks were in service at the time of the inspection. No emissions from the hexane or butadiene tanks were observed with the OGIC. We concluded our site tour at 13:40.

Section III – AREAS OF CONCERN

1) EPA Inspectors observed uncombusted hydrocarbons and excess steam from the Facility’s flare. This indicates that the flare may be operating with poor efficiency resulting in excess emissions.

EPA Region 6 Inspectors Colleen McCarthy, Sarah Frey, and Kenneth McPherson (“we”) conducted a closing conference at Arlanxeo Performance Elastomers – Orange Site at 13:50 on February 15, 2024, for the inspection. Mr. Morphis, Mr. Toups, and Mr. Amedee were present for the closing conference. We

summarized the facility tour and presented our observations, including the Area of Concern (“AOC”) noted above. The facility made no claims of confidential business information regarding the videos taken on-site. The facility was informed that copies of the videos would be made available to the facility following the inspection. We departed the facility at 14:00.

Section IV – FOLLOW UP

On February 23, 2024, Colleen McCarthy requested additional documentation relating to flare information and data, carbon adsorption system replacement and monitoring records, and butadiene tank rupture disc inspection records.

On March 8, 2024, Mr. Amedee provided the requested records to EPA.

Section V – LIST OF APPENDICES

Appendix 1 – Video Log – 2 FLIR videos taken 2/15/2024

Appendix 1

Video Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

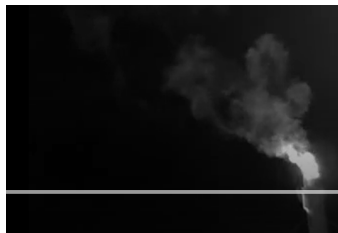
Video Log

Location: Arlanxeo Performance Elastomers – Orange Site		
City: Orange	Orange County	State: Texas



Video 1

Video File Name: [MOV_0391.mp4](#)
Date of Video: 02/15/2024
Time of Video: 09:58
Videographer: Colleen McCarthy
Description: Arlanxeo facility flare observed with emissions from a public road off-site.



Video 2

Video File Name: [MOV_0397.mp4](#)
Date of Video: 02/15/2024
Time of Video: 12:57
Videographer: Colleen McCarthy
Description: Arlanxeo facility flare observed with emissions while on-site.