

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

SUBJECT:	CLEAN AIR ACT INSPECTION REPORT Americas Styrenics LLC, St. James, Louisiana
FROM:	Jason Schenandoah, Environmental Engineer AECAB (IL/IN)
THRU:	Nathan Frank, Section Supervisor AECAB (IL/IN)
TO:	File

BASIC INFORMATION

Facility Name: Americas Styrenics LLC (AmSty)

Facility Location: 9901 LA-18, St James, LA 70086

Date of Inspection: April 11-12, 2022

EPA Inspector(s):

- 1. Jason Schenandoah, Environmental Engineer
- 2. Constantinos Loukeris, Environmental Engineer
- 3. Ben Rosenthal, Environmental Engineer
- 4. James Haynes, Environmental Engineer

Other Attendees:

- 1. Jacob LaSavia, Plant Manager, AmSty
- 2. Kristen Newman, Environmental Air Specialist, AmSty
- 3. Durell Morris, Environmental Specialist, AmSty
- 4. Jodi Fife, API Mechanical Inspector, Reliability Technician Specialist, AmSty
- 5. Dave Thomas, Environmental Compliance Manager, AmSty
- 6. Tjokro Hermanto, Manager: Conduct of Operations, AmSty
- 7. Ben Brignic, Operations Coordinator, AmSty
- 8. Israel Billoit, Logistics Manager, AmSty
- 9. Kevin Sanchez, Monitoring Supervisor, Clean Harbors
- 10. Sammie Coleman, Monitoring, Clean Harbors

Contact Email Address: dmorris@amsty.com

Purpose of Inspection: To ensure compliance with the Clean Air Act

Facility Type: Sytrene manufacturing facility

Regulations Central to Inspection: 40 CFR 63.11(b)(4): Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. 40 C.F.R. Part 63 Subpart H: National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks. 40 C.F.R. Part 60 Subparts K and Kb: Floating roof tank seal gap inspections.

Arrival Time: 9:25 am Departure Time: 4:50 pm

Arrival Time: 8:35 am Departure Time: 1:15 pm

Inspection Type:

- ☑ Unannounced Inspection
- \Box Announced Inspection

OPENING CONFERENCE

- Discrete Presented Credentials
- \boxtimes Stated authority and purpose of inspection
- □ Provided Small Business Resource Information Sheet
- Small Business Resource Information Sheet not provided. Reason: Not a small business.
- Provided CBI warning to facility

The following information was obtained verbally from AmSty personnel unless otherwise noted.

Process Description:

Benzene, received by barge and stored in one of three external floating roof tanks, is reacted with ethylene, received by pipeline, to create ethylbenzene through an alkylation process in the ethylbenzene unit (EB unit). Most ethylbenzene is then routed to one of two styrene monomer (SM) units to undergo a dehydrogenation process to produce styrene; some ethylbenzene is sold instead of undergoing further reactions. Emissions from the EB unit are routed to a flare for control. Styrene is then stored in temperature-controlled tanks to await shipment via barge, ship, rail, or truck. Polyethylbenzene residue, toluene, and diethylbenzene are biproducts of the process that is also sold by AmSty.

Staff Interview: The EB unit operates under pressure, while the SM units operate on a vacuum. The flare that controls emissions from the EB unit is steam assisted and manually adjusted. Loading and unloading operations are vapor balanced. The external floating roof (EFR) tanks

operate with a mechanical shoe primary seal and a wiper blade secondary seal on the roof. The EFR tanks utilize anti-rotational guide poles with teflon seals.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

The flare was observed to have visible black smoke several times throughout the two-day inspection. There was constant black smoke observed from 9:26 am to 9:32 am on April 11, 2022 and constant black smoke from 8:39 am to 8:44 am on April 12, 2022. Black smoke was noted at 9:42 am, 10:05 am, 10:28 am, and 1:23 pm on April 11, 2022. EPA inspectors utilized a Forward Looking Infrared (FLIR) camera to conduct optical gas imaging (OGI) throughout AmSty's facility. A video was taken of the flare on April 12, 2022 and is documented in Appendix A. OGI was performed on several storage tanks at the facility. Two videos were taken of tank MF322; emissions were imaged venting from a pontoon vent. A camera is used for operators to view the flare in the control room. The screen is located across the room from the main control screens and EPA noted that the resolution on the viewing screen made it difficult to note any visible emissions. Some pressure relief valves on the EB unit were noted to have a bypass and would allow for emissions to be uncontrolled. Detectable emissions at the pressure relief valves are noted in the table in Appendix B.

Photos and/or Videos: were taken during the inspection. See Appendix A: Digital Image Log

Field Measurements: were taken during this inspection.

• Two Toxic Vapor Analyzer 2020s (TVA) (EPA units A56584 and SL1555) were used to perform Method 21 throughout the Facility. Measurements taken with the TVAs are tabulated in Appendix B: Field Measurement Data.

CLOSING CONFERENCE

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

Requested documents:

- Last three years of flare monitoring data
- Tank levels and flow for April 12, 2022
- Tank seal inspections
- First half 2021 semi-annual fugitive emissions report
- LDAR backup data file

Compliance Assistance: EPA informed AmSty personnel about the visible emissions on the flare. EPA informed AmSty personnel that some pressure relief valves have a design issue that allows for bypassing of emissions from emissions control.

Concerns: Visible emissions for greater than 5 continuous minutes on both days of the inspection. Potential bypassed emissions at some pressure relief valves.

DIGITAL SIGNATURES

Report Author:

	Frank,	Digitally signed by Frank, Nathan
Section Supervisor:	Nathan	Date: 2022.06.09 09:31:58 -05'00'

Facility Name: Facility Name Facility Location: Facility Address **Date of Inspection:** Select date by clicking on the arrow

APPENDICES AND ATTACHMENTS

- 1.
- Appendix A: Digital Image Log Appendix B: Field Measurement Data 2.

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Jason	2. Archival Record Location: Region 5 Electronic	
Schenandoah/Constantinos Loukeris	Records System (ERC)	

Image	File Name	Date and Time	Latitude	Description of Image
Number		(incl. Time zone	and	
		and DST)	Longitude	
	MOV_0170.mp4	4/12/2022 9:57		FLIR video of the flare
1				
	MOV_0172.mp4	4/12/2022 13:00		FLIR video of external floating roof,
2				no gases imaged
	MOV_0173.mp4	4/12/2022 13:05		FLIR video of the flare
3				
	MOV_0174.mp4	4/12/2022 13:15		Tank MF 322 pontoon vent
4				
	MOV_0175.mp4	4/12/2022 13:19		Tank MF 322 pontoon vent
5				

APPENDIX B: FIELD MEASUREMENT DATA

FID Instrument	TVA 2020: A56584	TVA 2020: SL1555
500 ppm	481 ppm	496 ppm
10000 ppm	9857 ppm	10200 ppm
Bump Check		
500 ppm	450 ppm	440ppm

Table 1: Instrument Calibration 4/11/2022

FID Instrument	TVA 2020: A56584	TVA 2020: SL1555
500 ppm	475 ppm	499 ppm
10000 ppm	9821 ppm	9981 ppm

Table 2: Instrument Calibration 4/12/2022

Components	Number Measured
Valves	679
Pumps	12
Plugs	40

Table 3: Total Components Measured

Components	Number Measured
Valves	3
Open ended lines	2

Table 4: Leaks Detected