


2700-FM-AQ0023 Rev. 1/2008 		INSPECTION REPORT		Commonwealth of Pennsylvania Department of Environmental Protection Air Quality Program	
Date(s) of Inspection: 2/13/23	TV <input type="checkbox"/> SM <input type="checkbox"/> NM <input type="checkbox"/>	PA <input type="checkbox"/> GP <input type="checkbox"/> MEGA <input checked="" type="checkbox"/>	Permit #(s): PA-04-00740A, B, C	Expiration Date:	Case #: 04-00740
Company Name: Shell Chemical Appalachia LLC			Municipality: Potter Township	County: Beaver	
Plant Name: SHELL CHEM APPALACHIA /PETROCHEMICALS COMPLEX			Physical Location: Route 18	Federal ID — Plant Code #: 46-1624986-1	
Responsible Official: William Watson			Mailing Address: 300 Frankfort Road		
Title: General Manager			Monaca, PA 15061-2210		
Phone #(s): 724-709-2825					
Mark (X) All Inspection Types That Apply To This Inspection:					
<input type="checkbox"/>	Full Compliance Evaluation (FCE)	<input type="checkbox"/>	Plan Approval Inspection	<input type="checkbox"/>	File Review (FR)
<input type="checkbox"/>	Operating Permit Inspection (PI)	<input type="checkbox"/>	Initial Permit Inspection (IPI)	<input checked="" type="checkbox"/>	Complaint Inspection (CI)
<input checked="" type="checkbox"/>	Routine/Partial (RTPT)	<input type="checkbox"/>	Follow-Up Inspection (Ref. Date: _____)	<input type="checkbox"/>	Sample Collection (SC)
<input type="checkbox"/>	Minor Source(s) Inspection (RFD)	<input type="checkbox"/>	Stack Test Observation	<input type="checkbox"/>	Multi-Media Inspection (MM)
<input checked="" type="checkbox"/>	Other: ERT Response	<input type="checkbox"/>	Announced		
Annual Compliance Certification Received: <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A			Date Received:		
AIMS Report Received: <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A			Date Received:		
Mark (X) All Activities That Apply:					
<input type="checkbox"/>	File Review	<input type="checkbox"/>	Pre-Inspection Briefing	<input type="checkbox"/>	Exit Interview/Briefing
<input type="checkbox"/>	Pre-Inspection Observations	<input type="checkbox"/>	Check For New/Unreported Sources	<input type="checkbox"/>	Sample(s) Collected
<input type="checkbox"/>	Visible Emissions Observations	<input type="checkbox"/>	Verify Operation of CEMS	<input type="checkbox"/>	Other
Compliance Status: <input type="checkbox"/> In <input checked="" type="checkbox"/> Out <input type="checkbox"/> 3Pending <input type="checkbox"/> Awaiting Co. Report Needs a Follow-Up Inspection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
SIC: 2821 NAICS: 221112					
<p>My inspection today was an ERT response to a malfunction causing visible emissions at Shell Chemicals. The malfunction occurred at 3:28 PM on 2/12/23. Shell Chemicals did report the malfunction to PADEP Air Quality. The Ethane Cracking Unit (ECU) malfunction and subsequent compressor failure led to a malfunction with material being sent to the flares to combust. Shell stated that the flares were in operation but they were having visible emissions issues. Subsequently, the Department received complaints from the public concerning the visible emissions. I was dispatched at 5:34 PM to investigate the incident. The weather was clear, dry, 50 degrees F.</p> <p>I observed Monaca, Center Township and Potter Township downwind of the Shell Chemicals facility and did not observe any malodors.</p> <p>I arrived on site at Gate #3 of Shell Chemicals at 6:18 PM on 2/13/23.</p>					
Company Representative: MEMO TO FILE		Title: -----	Signature: -----	Date: -----	
DEP Representative: Scott Beaudway		Title: Air Quality Specialist	Signature: Scott Beaudway/SB	Date/Time: 2/13/23	
This document is official notification that a representative of the Department of Environmental Protection, Air Quality Program, inspected the identified site. The findings of this inspection are shown above and on any attached pages, and may include violations uncovered during the inspection. Violations may also be discovered upon review of sample results or from any additional review of Department records. Notification will be forthcoming, if such violations are noted.					

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I observed visible emissions from the High Pressure Ground Enclosed Flare (C205B). I did not observe any visible emissions from the Elevated Flare (C205C) (only steam) or the other High Pressure Ground Enclosed Flare (C205A). I did not observe any visible emissions or fugitive emissions from any other source on site. I did not observe any odor emissions in Potter Township or on Shell Chemicals property. Shell Chemicals security approached me at 6:37 PM. I informed them I would need to speak to a manager on site tonight to discuss the malfunction. I observed visible emissions from C205B continuously from 6:20 PM to 6:48 PM when we left to drive to the Admin. building. I took three photographs of the Elevated and Ground Enclosed Flares from 6:20 PM through 6:26 PM. These photos were taken after sunset so I did not attempt a Method 9 reading.

I spoke with Jim Sewell and Jason Shultz of Shell Chemicals. We discussed the malfunction. Jim said the malfunction started at 3:25 PM today. He said that C205A was offline for maintenance so all of the material was sent to the Elevated Flare (C205C) and the other High Pressure Ground Flare (C205B). He said that visible emissions were observed from 3:25 PM through 6:13 PM from C205C but not continuously visible. Visible emissions from C205B are continuing. Shell Chemicals will submit a malfunction report to the Department as required within 30 days.

Jim stated that the C205C flare also broke its glycol seal, venting a mixture of water and glycol onto Shell Chemical's property. They did survey the area and did not observe any of the glycol/water mixture on the public road or adjacent river. Shell will resume their investigation in the morning when its light. Shell Chemicals will contact PADEP Clean Water to report the glycol/water release.

I was also contacted by two previous Shell Chemicals complainants tonight informing me of the visible emissions from flaring. A news reporter also called me and left a message. I contacted Beth Speicher, PADEP Air Quality Manager, and informed her of my observations tonight and also of the contacts by the complainants and the news reporter. I forwarded the news reporter's voicemail to Beth Speicher.

I observed the following violations today:

1) PA-04-00740C, Section D, Source 205, Condition #001, states visible emissions from both the HP ground flares and emergency elevated flares shall not exceed 0% except for a total of five minutes during any consecutive two-hour period. By permitting visible emissions greater than 0% opacity from the HP ground flare in excess of five minutes on 2/13/23, Shell caused violations of PA-04-00740C and 25 Pa. Code § 127.25.

2) 40 CFR § 60.18 (b)(1), states flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. By permitting these visible emissions from the HP ground flare on 2/13/23, Shell caused a violation of 40 CFR § 60.18.

I contacted Shell Chemicals to inform her of my observations and to request the list of operating sources and control devices. Shell Chemicals provided a list of sources and control devices in operation at the time of my observations.

Sources reported to be in operation during my site observation:

- 031 Ethane Cracking Furnace 1 - Operating Cracking at Reduced Rate
- 032 Ethane Cracking Furnace 2 - Operating Cracking at Reduced Rate
- 033 Ethane Cracking Furnace 3 - Not Operating (Pilots Only)
- 034 Ethane Cracking Furnace 4 - Operating (Taking Ethane Feed Out)
- 035 Ethane Cracking Furnace 5 - Operating Hot Steam Standby
- 036 Ethane Cracking Furnace 6 - Not Operating (Pilots Only)
- 037 Ethane Cracking Furnace 7 - Operating Hot Steam Standby

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101 Cogen 1 CT+ DB - Operating
102 Cogen 2 CT+ DB - Operating
103 Cogen 3 CT+ DB - Operating

104 Cogeneration Plant Cooling Tower - Operating
105 Diesel-Fired Emergency Generator Engines - Standby
106 Fire Pump Engines - Standby
107 Natural Gas Fired Emergency Generator Engines - Standby

201 Ethylene Manufacturing Line - Malfunction and in process of slowdown to shutdown
202 Polyethylene Manufacturing Lines - PE1/PE2 Reducing operation and in process to shutdown. PE3 Not Operating
203 Process Cooling Tower - Operating
204 Low Pressure (LP) Header System - Operating LP Incinerator and Multipoint Ground Flare
205 High Pressure (HP) Header System - Operating HP Ground Flare B and Flaring. HP Ground Flare A temporarily out of service for maintenance. HP Elevated Flare ended flaring at 6:13PM
206 Spent Caustic Vent Header System - Operating Spent Caustic Vent Incinerator

301 Polyethylene Pellet Material Storage/Handling/Loadout - Operating
302 Liquid Loadout (Recovered Oil) - Not Operating
303 Liquid Loadout (Pyrolysis Fuel Oil, Light Gasoline) - Not Operating
304 Liquid Loadout (C3+, Butene, Isopentane, Isobutane, C3+ Ref) - Not Operating
305 Liquid Loadout (Coke Residue/Tar) - Not Operating

401 Storage Tanks (Recovered Oil, Equalization Wastewater) - Operating
402 Storage Tank (Spent Caustic) - Operating
403 Storage Tanks (Light Gasoline) - Not Operating
404 Storage Tanks (Hexene) - Operating
405 Storage Tanks (Misc Pressurized/Refrigerated) - Operating
406 Storage Tanks (Diesel Fuel > 150 Gallons) - Operating
407 Storage Tanks (Pyrolysis Fuel Oil) - Operating
408 Storage Tanks (Diesel Fuel < 150 Gallons) - Operating
409 Methanol Storage Vessels and Associated Components -Operating

501 Equipment Components - Operating
502 Wastewater Treatment Plant - Operating
503 Plant Roadways - In Use

All Listed Controls - HP Ground Flare A temporarily out of service for maintenance. All other controls operating

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Effective January 16, 2021, all air quality applications, Permits, Requests for Determinations and initial Asbestos Notifications will be subject to new and/or increased fees. The new fees and other PADEP Air Quality information can be found at: <https://www.dep.pa.gov/Business/Air/Pages/default.aspx>

As of July 29, 2021, the Source Testing Section has gone paperless. An individual Source Testing Section reviewer may request a hard copy from the facility or the consultant. Note that the section will continue to require electronic submissions of protocols and reports to the resource email account (rapstacktesting@pa.gov) or by disk and snail mail when the file is over 35 MBs). Periodic Monitoring reports (generally three 20-minute test runs) shall only be submitted to the regional office.

As of November 10, 2021, there have been some changes to how the regional offices will accept electronic submission. OnBase submissions of protocols and reports will no longer be accepted for Source Testing.

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SWRO: Any email submission to ra-epstacktesting@pa.gov should also be CC-ed to ra-epswstacktesting@pa.gov. Beyond that email cc, no further submission is necessary to DEP SWRO (i.e. no hard copy or disk needed for SWRO).