


2700-FM-AQ0023 Rev. 1/2008 		<b>INSPECTION REPORT</b>		Commonwealth of Pennsylvania Department of Environmental Protection Air Quality Program	
Date(s) of Inspection: <b>8/30/23</b>	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): <b>PA-04-00740A, B, C</b>	Expiration Date:	Case #: <b>04-00740</b>
Company Name: <b>Shell Chemical Appalachia LLC</b>			Municipality: <b>Potter Township</b>		PF ID #: <b>775836</b>
Plant Name: <b>SHELL CHEM APPALACHIA /PETROCHEMICALS COMPLEX</b>			Physical Location: <b>Route 18</b>		Federal ID — Plant Code #: <b>46-1624986-1</b>
Responsible Official: <b>William Watson</b>			Mailing Address: <b>300 Frankfort Road</b>		
Title: <b>General Manager</b>			<b>Monaca, PA 15061-2210</b>		
Phone #(s): <b>724-709-2825</b>					
<b>Mark (X) All Inspection Types That Apply To This Inspection:</b>					
<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 type="checkbox"/>	Other:	<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 type="checkbox"/> N/A			Date Received:		
<b>Mark (X) All Activities That Apply:</b>					
<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 checked="" type="checkbox"/> In <input type="checkbox"/> Out <input type="checkbox"/> Pending <input type="checkbox"/> Awaiting Co. Report Needs a Follow-Up Inspection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
SIC: 2821 NAICS: 221112					
I observed the Shell Chemicals facility tonight from 9:20 PM to 11:20 PM. I was located across the Ohio River along Route 68 and also at the Dock 6 building. I observed the steam plumes from the Cooling Towers, Ethane Cracking Furnaces and the Elevated Flare. I observed the Multipoint Ground Flare (MPGF) in operation tonight. The weather was overcast, damp and 62 degrees F. I did not observe any visible, fugitive or malodor emissions tonight.					
Company Representative: <b>MEMO TO FILE</b>		Title: _____	Signature: _____	Date: _____	
DEP Representative: <b>Scott Beudway</b>		Title: <b>Air Quality Specialist</b>	Signature: <b>Scott Beudway/SB</b>	Date/Time: <b>8/30/23</b>	
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.					

## Shell Chemical Appalachia LLC, 04-00740

I contacted Shell Chemicals to inform them 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. Shell Chemicals also submitted records (attached) of an analysis of the gas composition for the material being routed to the flare.

### Sources reported to be in operation during my site observation:

8/30/2023 9:20 PM to 11:20 PM Source and Controls Status

031 Ethane Cracking Furnace 1 - Operating (Normal/Cracking)  
032 Ethane Cracking Furnace 2 - Operating (Normal/Cracking)  
033 Ethane Cracking Furnace 3 - Operating (Normal/Cracking)  
034 Ethane Cracking Furnace 4 - Operating (Normal/Cracking)  
035 Ethane Cracking Furnace 5 - Not Operating (Pilots Only)  
036 Ethane Cracking Furnace 6 - Not Operating (No Pilots)  
037 Ethane Cracking Furnace 7 – Not Operating (Hot Steam Standby)

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 – Stand by  
107 Natural Gas Fired Emergency Generator Engines - Standby

201 Ethylene Manufacturing Line - Operating  
202 Polyethylene Manufacturing Lines – PE1 Operating, PE2 Operating, PE3 Not Operating  
203 Process Cooling Tower - Operating  
204 Low Pressure (LP) Header System – LP Incinerator out of service during the inspection window due to shear pin break; vent gas routed to the Multi Point Ground Flare (MPGF)  
205 High Pressure (HP) Header System - Operating HP Ground Flare A and B, HP Elevated Flare on Standby  
206 Spent Caustic Vent Header System –Operating Spent Caustic Vent Incinerator

301 Polyethylene Pellet Material Storage/Handling/Loadout – Not 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) - 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 Operating

## **PADEP Policy Information**

DEP is now accepting permit and authorization applications, as well as other documents and correspondence, electronically through the OnBase Electronic Forms Upload tool. Please use the link below to view the webpage, get instructions, and submit documents:

<https://www.dep.pa.gov/DataandTools/Pages/Application-Form-Upload.aspx>

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 ([ra-epstacktesting@pa.gov](mailto:ra-epstacktesting@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.

SWRO: Any email submission to [ra-epstacktesting@pa.gov](mailto:ra-epstacktesting@pa.gov) should also be CC-ed to [ra-epswstacktesting@pa.gov](mailto: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).

**Shell Polymers HP Flare System GC Hourly Average Compositions\***

Date and Time	Elemental Hydrogen % mol	Nitrogen % mol	Methane % mol	Ethane % mol	Acetylene % mol	Ethylene % mol	C3 % mol	C4 % mol	C4 Olefins % mol	C5 % mol	C6+ % mol	Total % mol
30-Aug-23 21:00:00	32.01	4.93	53.89	3.09	0.00	4.99	0.09	0.04	0.00	0.58	0.36	100
30-Aug-23 22:00:00	35.34	4.60	50.76	3.10	0.00	5.20	0.09	0.04	0.00	0.53	0.34	100
30-Aug-23 23:00:00	46.19	3.47	39.08	2.42	0.00	8.03	0.07	0.03	0.00	0.41	0.30	100

**Shell Polymers LP System Thermal Oxidizer GC Hourly Average Compositions\***

Date and Time	Elemental Hydrogen % mol	Nitrogen % mol	Methane % mol	Ethane % mol	Acetylene % mol	Ethylene % mol	C3 % mol	C4 % mol	C4 Olefins % mol	C5 % mol	C6+ % mol	Total % mol
30-Aug-23 21:00:00	1.20	35.73	56.93	2.85	0.00	2.50	0.09	0.04	0.05	0.58	0.04	100
30-Aug-23 22:00:00	1.30	35.23	56.96	3.06	0.00	2.63	0.10	0.04	0.06	0.58	0.04	100
30-Aug-23 23:00:00	1.42	37.25	54.33	3.19	0.00	2.94	0.11	0.04	0.05	0.62	0.04	100

**Shell Polymers LP System Multipoint Ground Flare PE1/2 Episodic Vent Header\***

Date and Time	Elemental Hydrogen % mol	Nitrogen % mol	Methane % mol	Ethane % mol	Acetylene % mol	Ethylene % mol	C3 % mol	C4 % mol	C4 Olefins % mol	C5 % mol	C6+ % mol	Total % mol
30-Aug-23 21:00:00	0.03	14.54	81.18	4.01	0.00	0.00	0.14	0.03	0.00	0.00	0.07	100
30-Aug-23 22:00:00	0.03	14.43	81.03	4.26	0.00	0.00	0.15	0.04	0.00	0.00	0.06	100
30-Aug-23 23:00:00	0.03	14.28	80.82	4.60	0.00	0.00	0.17	0.04	0.00	0.00	0.05	100

\* All data still subject to final QC for purposes of emissions inventory calculations and submittals