


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>8/15/23</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 performed a Routine Partial Inspection on-site at Shell Chemical Appalachia LLC, Petrochemical Complex in Potter County today. The Department also discussed the Consent Order & Agreement with Shell Chemicals today.					
I was on site from 7:45 AM to 5:00 PM today.					
I observed the Ethane Cracking Furnaces, the HP Ground Flares, the HP Elevated Flare, the WWTP, the Multipoint Ground Flare, the LP Incinerator and the Spent Caustic Vent Incinerator during my inspection today.					
I did not observe any visible, fugitive or malodor emissions today.					
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>8/15/23</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:

8/15/2023 7:45 AM to 5:00 PM Source and Controls Status

- 031 Ethane Cracking Furnace 1 - Operating (Normal/Cracking)
- 032 Ethane Cracking Furnace 2 – Operating (Hot Steam Standby)
- 033 Ethane Cracking Furnace 3 – Operating (Normal/Cracking)
- 034 Ethane Cracking Furnace 4 - Operating (Hot Steam Standby)
- 035 Ethane Cracking Furnace 5 – Not Operating (Pilots Only)
- 036 Ethane Cracking Furnace 6 - Not Operating (No Pilots)
- 037 Ethane Cracking Furnace 7 - Operating (Normal/Cracking)
  
- 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 - Operating
- 202 Polyethylene Manufacturing Lines – PE1 operating, PE2 operating, PE3 down
- 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 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 -Operating
- 302 Liquid Loadout (Recovered Oil) - Not Operating
- 303 Liquid Loadout (Pyrolysis Fuel Oil, Light Gasoline) – Loading Hexene for a portion of the inspection window
- 304 Liquid Loadout (C3+, Butene, Isopentane, Isobutane, C3+ Ref) – Loading C3+ for a portion of the inspection window
- 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

## Shell Chemical Appalachia LLC, 04-00740

### 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
15-Aug-23 07:00:00	42.72	3.77	47.96	2.22	0.00	2.99	0.06	0.03	0.05	0.17	0.04	100
15-Aug-23 08:00:00	42.78	3.76	47.79	2.26	0.00	3.06	0.07	0.03	0.05	0.17	0.05	100
15-Aug-23 09:00:00	42.65	3.85	47.81	2.28	0.00	3.04	0.07	0.03	0.06	0.18	0.05	100
15-Aug-23 10:00:00	40.25	5.21	44.84	2.10	0.00	2.52	3.61	0.16	1.18	0.10	0.03	100
15-Aug-23 11:00:00	39.48	4.69	44.15	2.07	0.00	2.38	5.22	0.22	1.71	0.05	0.02	100
15-Aug-23 12:00:00	38.94	4.29	43.58	1.92	0.00	2.37	6.43	0.27	2.12	0.05	0.02	100
15-Aug-23 13:00:00	39.56	4.13	44.91	1.97	0.00	2.43	5.02	0.22	1.69	0.05	0.02	100
15-Aug-23 14:00:00	39.37	3.92	45.40	1.97	0.00	2.56	4.87	0.22	1.62	0.04	0.02	100
15-Aug-23 15:00:00	38.69	3.43	44.62	1.92	0.00	2.95	6.05	0.26	2.02	0.05	0.02	100
15-Aug-23 16:00:00	40.52	3.63	48.60	2.02	0.00	3.49	1.20	0.07	0.43	0.01	0.02	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
15-Aug-23 07:00:00	2.52	78.53	10.46	0.87	0.00	5.08	0.01	0.06	1.17	1.27	0.03	100
15-Aug-23 08:00:00	2.55	78.90	10.07	0.85	0.00	5.14	0.01	0.04	1.10	1.24	0.10	100
15-Aug-23 09:00:00	2.54	78.94	9.74	0.81	0.00	5.33	0.01	0.03	1.19	1.30	0.10	100
15-Aug-23 10:00:00	2.31	80.54	9.18	0.78	0.00	4.67	0.01	0.03	1.02	1.23	0.23	100
15-Aug-23 11:00:00	2.34	80.58	8.95	0.78	0.00	4.86	0.01	0.03	1.08	1.28	0.09	100
15-Aug-23 12:00:00	2.39	79.51	9.73	0.79	0.00	5.06	0.01	0.04	1.11	1.32	0.04	100
15-Aug-23 13:00:00	2.46	79.71	9.42	0.78	0.00	5.14	0.01	0.03	1.07	1.34	0.03	100
15-Aug-23 14:00:00	2.25	79.49	9.98	0.79	0.00	4.94	0.01	0.03	1.14	1.32	0.03	100
15-Aug-23 15:00:00	2.40	79.81	9.21	0.77	0.00	5.22	0.01	0.02	1.16	1.37	0.03	100
15-Aug-23 16:00:00	2.26	79.93	9.32	0.74	0.00	5.07	0.01	0.03	1.24	1.37	0.03	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
15-Aug-23 07:00:00	0.03	14.52	80.63	4.24	0.00	0.00	0.12	0.03	0.00	0.00	0.44	100
15-Aug-23 08:00:00	0.03	14.47	80.72	4.32	0.00	0.00	0.12	0.03	0.00	0.00	0.31	100
15-Aug-23 09:00:00	0.03	14.57	80.86	4.26	0.00	0.00	0.12	0.03	0.00	0.00	0.12	100
15-Aug-23 10:00:00	0.03	14.49	80.93	4.32	0.00	0.00	0.12	0.03	0.00	0.00	0.07	100
15-Aug-23 11:00:00	0.03	14.60	80.79	4.35	0.00	0.00	0.12	0.03	0.00	0.00	0.07	100
15-Aug-23 12:00:00	0.03	14.61	81.10	4.03	0.00	0.00	0.11	0.03	0.00	0.00	0.08	100
15-Aug-23 13:00:00	0.03	14.51	81.17	3.99	0.00	0.00	0.12	0.03	0.00	0.00	0.14	100
15-Aug-23 14:00:00	0.03	14.66	80.85	4.09	0.00	0.00	0.12	0.03	0.00	0.00	0.23	100
15-Aug-23 15:00:00	0.03	14.70	80.74	4.10	0.00	0.00	0.12	0.03	0.00	0.00	0.27	100
15-Aug-23 16:00:00	0.03	14.59	81.04	3.91	0.00	0.00	0.11	0.03	0.00	0.00	0.28	100

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