2700-FM-AQ0023 Rev. 1/2008

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

INSPECTION REPORT

Commonwealth of Pennsylvania
Department of Environmental Protection
Air Quality Program

Date(s) of Inspection:	TV ☐ PA ☐ SM ☐ GP ☐ NM ☐ MEGA ☒	Permit #(s):	Expiration Date:	Case #:	PF ID #:
7/12/23		PA-04-00740A, B, C		04-00740	775836

Company Name:	Municipality:	County:
Shell Chemical Appalachia LLC	Potter Township	Beaver

Plant Name:	Physical Location:	Federal ID — Plant Code #:
SHELL CHEM APPALACHIA /PETROCHEMICALS COMPLEX	Route 18	46-1624986-1

Responsible Official:	Mailing Address:
William Watson	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:

☐	Full Compliance Evaluation (FCE)	☐	Plan Approval Inspection	☐	File Review (FR)
☐	Operating Permit Inspection (PI)	☐	Initial Permit Inspection (IPI)	☒	Complaint Inspection (CI)
☒	Routine/Partial (RTPT)	☐	Follow-Up Inspection (Ref. Date:_____)	☐	Sample Collection (SC)
☐	Minor Source(s) Inspection (RFD)	☐	Stack Test Observation	☐	Multi-Media Inspection (MM)
☐	Other:	☐	Announced		

Annual Compliance Certification Received: ☐ YES ☐ NO ☒ N/A	Date Received:
AIMS Report Received: ☐ YES ☐ NO ☒ N/A	Date Received:

Mark (X) All Activities That Apply:

☐	File Review	☐	Pre-Inspection Briefing	☐	Exit Interview/Briefing
☐	Pre-Inspection Observations	☐	Check For New/Unreported Sources	☐	Sample(s) Collected
☐	Visible Emissions Observations	☐	Verify Operation of CEMS	☐	Other

Compliance Status: ☒ **In** ☐ **Out** ☐ **Pending** ☐ **Awaiting Co. Report** **Needs a Follow-Up Inspection?** ☐ **Yes** ☒ **No**

SIC: 2821 NAICS: 221112

I inspected Vanport and Beaver downwind of the Shell Chemicals facility mid-day and did not observe any malodors.

I observed the Shell Chemicals facility today from 12:12 PM to 1:24 PM and from 2:02 PM to 3:08 PM I was located at Shell Chemical's Gate #3. I did operate the AQ FLIR camera and observed the Shell Facility. It appeared that six of the seven Ethane Cracking Furnaces were in operation. It appeared that the C205A Ground Flare was in operation today. I observed the lit pilot and steam plume from C205C, HP Elevated Flare. I observed the C204A, the LP Incinerator, in operation today. I did not observe any suspected VOC emissions from any sources today. I did not observe any visible, fugitive or malodor emissions. I also operated an ALTAIR 5X PID. It detected 0.0 ppm VOC at all times. The weather was partly sunny, with intermittent rain and 83 degrees F.

I inspected Potter and Center Townships this afternoon today and did not observe any malodors.

Company Representative:	Title:	Signature:	Date:
MEMO TO FILE	----------	----------	----------
DEP Representative:	Title:	Signature:	Date/Time:
Scott Beaudway	Air Quality Specialist	Scott Beaudway/SB	7/12/23

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.

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:
7/12/2023 12:12 PM to 3:08 PM Source and Controls Status

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

201 Ethylene Manufacturing Line – Not operating
202 Polyethylene Manufacturing Lines – PE1 restarting, PE2 down, 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 -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

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 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 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).

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
12-Jul-23 12:00:00	27.78	29.43	25.99	1.71	0.00	7.23	5.72	0.24	1.82	0.07	0.01	100.00
12-Jul-23 13:00:00	28.14	27.34	26.30	1.70	0.00	14.82	1.19	0.07	0.38	0.06	0.01	100.00
12-Jul-23 14:00:00	31.36	23.19	30.22	1.87	0.00	11.82	0.10	1.39	0.01	0.03	0.00	100.00
12-Jul-23 15:00:00	31.82	27.28	30.47	1.82	0.00	8.38	0.05	0.09	0.10	0.00	0.00	100.00

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
12-Jul-23 12:00:00	0.01	73.95	24.35	1.34	0.00	0.03	0.02	0.01	0.10	0.16	0.03	100
12-Jul-23 13:00:00	0.01	78.64	19.98	1.09	0.00	0.03	0.03	0.01	0.11	0.05	0.05	100
12-Jul-23 14:00:00	0.01	80.84	17.88	1.00	0.00	0.03	0.03	0.01	0.11	0.06	0.03	100
12-Jul-23 15:00:00	0.01	81.88	16.89	0.94	0.00	0.03	0.02	0.01	0.10	0.06	0.05	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
12-Jul-23 12:00:00	0.03	18.58	76.79	4.51	0.00	0.00	0.09	0.01	0.00	0.00	0.00	100
12-Jul-23 13:00:00	0.03	18.67	76.67	4.51	0.00	0.00	0.11	0.01	0.00	0.00	0.00	100
12-Jul-23 14:00:00	0.03	19.20	76.13	4.50	0.00	0.00	0.12	0.02	0.00	0.00	0.00	100
12-Jul-23 15:00:00	0.03	19.14	76.13	4.56	0.00	0.00	0.12	0.02	0.00	0.00	0.00	100

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