

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.

Sources reported to be in operation during my site observation:

031 Ethane Cracking Furnace 1 - Not Operating (Pilots Only)
032 Ethane Cracking Furnace 2 - Not Operating (Pilots Only)
033 Ethane Cracking Furnace 3 - Not Operating (Pilots Only)
034 Ethane Cracking Furnace 4 - Not Operating (Pilots Only)
035 Ethane Cracking Furnace 5 - Not Operating (Pilots Only)
036 Ethane Cracking Furnace 6 - Not Operating (Pilots Only)
037 Ethane Cracking Furnace 7 - Not Operating (Pilots Only)

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, PE2, 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 - Not Operating - Isolated for Maintenance per RFD 10196
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 except the HP Flare System flares which are down and isolated for maintenance per RFD 10196

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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 (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).

HP Flare System GC Hourly Average Compositions

Date and Time	Elemental												Total
	Hydrogen % mol	Nitrogen % mol	Methane % mol	Ethane % mol	Acetylene % mol	Ethylene % mol	C3 % mol	C4 % mol	C4 Olefins % mol	C5 % mol	C6+ % mol		
02-May-23 09:00:00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
02-May-23 10:00:00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
02-May-23 11:00:00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
02-May-23 12:00:00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
04-May-23 09:00:00	0.03	11.18	84.77	3.73	0.00	0.02	0.23	0.03	0.00	0.00	0.00	0.00	100.00
04-May-23 10:00:00	0.03	8.80	87.05	3.82	0.00	0.03	0.23	0.02	0.01	0.00	0.00	0.00	100.00
04-May-23 11:00:00	0.03	8.95	86.67	3.95	0.00	0.15	0.22	0.02	0.00	0.00	0.00	0.00	100.00
04-May-23 12:00:00	0.03	8.91	86.82	3.82	0.00	0.18	0.22	0.02	0.00	0.00	0.00	0.00	100.00

HP Ground Flare A and HP Elevated Flare are down for maintenance per RFD 10196

LP System Thermal Oxidizer GC Hourly Average Compositions

Date and Time	Elemental	Nitrogen % mol	Methane % mol	Ethane % mol	Acetylene % mol	Ethylene % mol	C3 % mol	C4 % mol	C4 Olefins % mol	C5 % mol	C6+ % mol	Total % mol
	Hydrogen % mol											
02-May-23 09:00:00	0.03	26.87	69.59	3.35	0.00	0.09	0.05	0.00	0.00	0.00	0.02	100
02-May-23 10:00:00	0.03	32.50	64.32	2.93	0.00	0.14	0.05	0.00	0.00	0.00	0.02	100
02-May-23 11:00:00	0.03	35.29	61.88	2.57	0.00	0.15	0.05	0.00	0.00	0.00	0.03	100
02-May-23 12:00:00	0.03	33.33	63.75	2.71	0.00	0.11	0.04	0.00	0.00	0.00	0.03	100
04-May-23 09:00:00	0.03	23.23	73.35	3.21	0.00	0.00	0.13	0.02	0.00	0.02	0.02	100
04-May-23 10:00:00	0.03	23.57	73.00	3.22	0.00	0.00	0.13	0.02	0.00	0.01	0.02	100
04-May-23 11:00:00	0.03	22.36	74.19	3.24	0.00	0.00	0.13	0.02	0.00	0.01	0.02	100
04-May-23 12:00:00	0.03	23.04	73.58	3.18	0.00	0.00	0.13	0.02	0.00	0.01	0.02	100

