Shell Oil Products US Newark Terminal (07734)

Date: 5/7/2024

New Jersey Department of Environmental Protection
Reason for Application

Permit Being Modified

Permit Class: BOP **Number:** 170001

Description of Modifications:

In response to NJDEP's request, this minor modification application requests the addition of a portable vapor combustion unit (VCU) to control emissions during tank degassing, cleaning and sludge removal during the ozone season. Shell is requesting to permit a portable VCU with maximum heat inputs ranging from 4.0 to 15.0 MMBtu/hr. A maximum of 5 tanks will utilize the portable VCU during the ozone season in a given year. The annual hours of operation will be dependent upon the size of the storage tank and heat input of the VCU.

Hourly and annual emissions due to combustion are included below:
NOx: 2.13 lb/hr; 0.13 tpy
CO: 1.23 lb/hr; 0.07 tpy
VOC: 0.16 lb/hr; 0.01 tpy
SO2: 0.25 lb/hr; 0.02 tpy
PM: 0.12 lb/hr; 0.01 tpy
PM10: 0.12 lb/hr; 0.01 tpy
PM2.5: 0.12 lb/hr; 0.01 tpy

All HAP emissions are below the reporting thresholds specific in NJAC 7:27-17. Detailed emission calculations are included as Attachment 1.

All existing internal floating roof tanks (permitted under U2) may be controlled with the portable VCU.

New Jersey Department of Environmental Protection
Facility Profile (General)

Facility Name (AIMS): Shell Oil Products US Newark Terminal **Facility ID (AIMS):** 07734

Street Address: 909 DELANCY ST
NEWARK, NJ 07105

Mailing Address: 909 DELANCY ST
NEWARK, NJ 07105

State Plane Coordinates:

X-Coordinate:	594,686
Y-Coordinate:	683,694
Units:	Feet
Datum:	NAD83
Source Org.:	DEP-GIS
Source Type:	DEP Program Database

County: Essex

Location Description:

Industry:

Primary SIC:	
Secondary SIC:	
NAICS:	424710

New Jersey Department of Environmental Protection
Facility Profile (General)

Contact Type: Air Permit Information Contact

Organization: Shell Oil Products US
Org. Type: Corporation
Name: Sarah Connell
NJ EIN: 78011021600
Title: Sr. Environmental Advisor
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Fax: ( ) - x
Other: ( ) - x
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Mailing Address: 909 Delancy Street
Newark, NJ 07105

Contact Type: Consultant

Organization: Civil & Environmental Consultants, Inc.
Org. Type: Corporation
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NJ EIN:
Title: Principal
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Langhorne, PA 19047

Contact Type: Fees/Billing Contact

Organization: Shell Oil Products US
Org. Type: Corporation
Name: Marcial Montalvo Jr. (Tito)
NJ EIN: 78011021600
Title: Terminal Manager
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Fax: (973) 344-3314 x
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Email: tito.montalvo@shell.com
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Newark, NJ 07105

New Jersey Department of Environmental Protection
Facility Profile (General)

Contact Type: Operator

Organization: Shell Oil Products US
Name:
Title:
Phone: ( ) - x
Fax: ( ) - x
Other: ( ) - x
Type:
Email:

Org. Type: Corporation
NJ EIN: 78011021600

Mailing Address: 909 Delancy Street
Newark, NJ 07105

Contact Type: Owner (Current Primary)

Organization: Triton Terminaling LLC
Name:
Title:
Phone: ( ) - x
Fax: ( ) - x
Other: ( ) - x
Type:
Email:

Org. Type: Corporation
NJ EIN: 78011021600

Mailing Address: 150 N. Dairy Ashford
Houston, TX 77079

Contact Type: Responsible Official

Organization: Shell Oil Products US
Name: Mario Berrios
Title: Facilities Manager
Phone: (732) 621-5727 x
Fax: ( ) - x
Other: ( ) - x
Type:
Email: mario.berrios@shell.com

Org. Type: Corporation
NJ EIN: 78011021600

Mailing Address: 909 Delancy Street
Newark, NJ 07105

Shell Oil Products US Newark Terminal (07734) Date: 5/7/2024

New Jersey Department of Environmental Protection
Facility Profile (Permitting)

1. Is this facility classified as a small business by the USEPA?	No
2. Is this facility subject to N.J.A.C. 7:27-22?	Yes
3. Are you voluntarily subjecting this facility to the requirements of Subchapter 22?	No
4. Has a copy of this application been sent to the USEPA?	No
5. If not, has the EPA waived the requirement?	No
6. Are you claiming any portion of this application to be confidential?	No
7. Is the facility an existing major facility?	Yes
8. Have you submitted a netting analysis?	No
9. Are emissions of any pollutant above the SOTA threshold?	No
10. Have you submitted a SOTA analysis?	No
11. If you answered "Yes" to Question 9 and "No" to Question 10, explain why a SOTA analysis was not required	
12. Have you provided, or are you planning to provide air contaminant modeling?	No

Shell Oil Products US Newark Terminal (07734) Date: 5/7/2024

New Jersey Department of Environmental Protection
Control Device Inventory

CD NJID	Facility's Designation	Description	CD Type	Install Date	Grand-Fathered	Last Mod. (Since 1968)	CD Set ID
CD999	Portable VCU	Portable VCU ranging in size from 4 to 15 MMBtu/hr	Oxidizer (Thermal)	5/1/2024	No		

000000 CD999 (Oxidizer (Thermal))
Print Date: 5/7/2024

Make:	EMTOS
Manufacturer:	
Model:	EMTOS 2000, 2500, 3500 or 4000
Minimum Chamber Temperature (°F):	1400.0
Minimum Residence Time (sec):	0.70
Fuel Type:	Liquid petroleum
Description:	
Maximum Rated Gross Heat Input (MMBtu/hr):	15.00
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	6
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	○ Yes ● No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	○ Yes ● No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	○ Yes ● No
Comments:	

VCU Criteria Pollutant Emissions - Propane Combustion
VCU Unit EMTOS 2000

Description	Value	Units
Heat Input	4.0	MMBtu/hr
Propane heating value[1]	0.092	MMBtu/gal
Maximum propane used	43.716	gal/hr
Tanks Cleaned Per Ozone Season	5.000	tanks
Degas Time	43.600	hr
Maximum propane used	9530.05	gal/yr

Description	Value	Units
Parameters[1]:		
NO_x Emission Rate	13.00	lb/1000 gal
CO Emission Rate	7.50	lb/1000 gal
VOC Emission Rate	1.00	lb/1000 gal
SO2 Emission Rate[2]	1.50	lb/1000 gal
PM Emission Rate[3]	0.70	lb/1000 gal

Parameter	NOx	CO	VOC	SO_2	PM_{10} / $PM_{2.5}$	TSP
lb/hr	0.568	0.328	0.044	0.066	0.031	0.031
tons/yr[4]	0.062	0.036	0.005	0.007	0.003	0.003

[1] Emission factors from AP-42, Table 1.5-1 (7/08).

[2] Per SBCSPCD Engineering Division, Propane sulfur content for commercial propane is 15 gr/100 scf.

[3] PM emissions include both filterable and condensable emissions.

[4] Annual emissions based on maximum ozone season propane usage.

VCU HAP Pollutant Emissions
VCU Unit EMTOS 2000

CAS #	HAP	NJDEP Reporting Threshold[1]	Emission Factors[2]		Potential HAP Emissions [4]
		(lbs/yr)	(lb/MMscf)	(lb/MMBtu)	(lb/yr)
83-32-9	Acenaphthene	2	1.80E-06	1.76E-09	1.54E-06
203-96-8	Acenaphthylene	2	1.80E-06	1.76E-09	1.54E-06
120-12-7	Anthracene	2	2.40E-06	2.35E-09	2.05E-06
56-55-3	Benzo(a)anthracene	0.4	1.80E-06	1.76E-09	1.54E-06
71-43-2	Benzene[3]	6	2.10E-03	2.06E-06	1.80E-03
50-32-8	Benzo(a)pyrene	0.04	1.20E-06	1.18E-09	1.03E-06
205-99-2	Benzo(b)fluoranthene	0.4	1.80E-06	1.76E-09	1.54E-06
191-24-2	Benzo(g,h,i)perylene	2	1.20E-06	1.18E-09	1.03E-06
205-82-3	Benzo(k)fluoranthene	2	1.80E-06	1.76E-09	1.54E-06
218-01-9	Chrysene	2	1.80E-06	1.76E-09	1.54E-06
53-70-3	Dibenzo(a,h)anthracene	0.04	1.20E-06	1.18E-09	1.03E-06
106-46-7	1,4 Dichlorobenzene	4	1.20E-03	1.18E-06	1.03E-03
57-97-6	7,12-Dimethylbenz(a)anthracene	0.0007	1.60E-05	1.57E-08	1.37E-05
206-44-0	Fluoranthene	2	3.00E-06	2.94E-09	2.56E-06
86-73-7	Fluorene	2	2.80E-06	2.75E-09	2.39E-06
50-00-0	Formaldehyde	3.5	7.50E-02	7.35E-05	6.41E-02
110-54-3	Hexane	2000	1.80E+00	1.76E-03	1.54E+00
193-39-5	Indeno(1,2,3-cd)pyrene	0.4	1.80E-06	1.76E-09	1.54E-06
56-49-5	3-Methylchloranthrene	2	1.80E-06	1.76E-09	1.54E-06
91-57-6	2-Methylnaphthalene	2	2.40E-05	2.35E-08	2.05E-05
91-20-3	Naphthalene	1.4	6.10E-04	5.98E-07	5.21E-04
85-01-8	Phenanathrene	2	1.70E-05	1.67E-08	1.45E-05
129-00-0	Pyrene	2	5.00E-06	4.90E-09	4.27E-06
108-88-3	Toluene	2000	3.40E-03	3.33E-06	2.91E-03
	Arsenic	0.01	2.00E-04	1.96E-07	1.71E-04
	Beryllium	0.02	1.20E-05	1.18E-08	1.03E-05
	Cadmium	0.01	1.10E-03	1.08E-06	9.40E-04
	Chromium	1000	1.40E-03	1.37E-06	1.20E-03
	Cobalt	0.005	8.40E-05	8.24E-08	7.18E-05
	Lead	2	5.00E-04	4.90E-07	4.27E-04
	Manganese	0.6	3.80E-04	3.73E-07	3.25E-04
	Mercury	2	2.60E-04	2.55E-07	2.22E-04
	Nickel	0.6	2.10E-03	2.06E-06	1.80E-03
	Selenium	925	2.40E-05	2.35E-08	2.05E-05

Notes:

[1] Obtained from N.J.A.C.7:27-17, Table 2

[2] HAP emission factors as per AP-42, Table 1.4-2, 1.4-3 & 1.4-4 for Natural Gas Combustion.
Per AP-42 1.5 LPG combustion processes are very similar to the natrual gas combustion process; therefore natural gas combustion emission factors for HAPs can be used.

[3] NJDEP Reporting threshold is also 0.01 lb/hr

VCU Criteria Pollutant Emissions - Propane Combustion
VCU Unit EMTOS 2500

Description	Value	Units
Heat Input	7.0	MMBtu/hr
Propane heating value[1]	0.092	MMBtu/gal
Maximum propane used	76.503	gal/hr
Tanks Cleaned Per Ozone Season	5.000	tanks
Degas Time	36.500	hr
Maximum propane used	13961.75	gal/yr

Description	Value	Units
Parameters[1]:		
NO_x Emission Rate	13.00	lb/1000 gal
CO Emission Rate	7.50	lb/1000 gal
VOC Emission Rate	1.00	lb/1000 gal
SO2 Emission Rate[2]	1.50	lb/1000 gal
PM Emission Rate[3]	0.70	lb/1000 gal

Parameter	NOx	CO	VOC	SO_2	PM_{10} / $PM_{2.5}$	TSP
lb/hr	0.995	0.574	0.077	0.115	0.054	0.054
tons/yr[4]	0.091	0.052	0.007	0.010	0.005	0.005

[1] Emission factors from AP-42, Table 1.5-1 (7/08).

[2] Per SBCSPCD Engineering Division, Propane sulfur content for commercial propane is 15 gr/100 scf.

[3] PM emissions include both filterable and condensable emissions.

[4] Annual emissions based on maximum ozone season propane usage.

VCU HAP Pollutant Emissions
VCU Unit EMTOS 2500

CAS #	HAP	NJDEP Reporting Threshold[1]	Emission Factors[2]		Potential HAP Emissions [4]
		(lbs/yr)	(lb/MMscf)	(lb/MMBtu)	(lb/yr)
83-32-9	Acenaphthene	2	1.80E-06	1.76E-09	2.25E-06
203-96-8	Acenaphthylene	2	1.80E-06	1.76E-09	2.25E-06
120-12-7	Anthracene	2	2.40E-06	2.35E-09	3.01E-06
56-55-3	Benzo(a)anthracene	0.4	1.80E-06	1.76E-09	2.25E-06
71-43-2	Benzene[3]	6	2.10E-03	2.06E-06	2.63E-03
50-32-8	Benzo(a)pyrene	0.04	1.20E-06	1.18E-09	1.50E-06
205-99-2	Benzo(b)fluoranthene	0.4	1.80E-06	1.76E-09	2.25E-06
191-24-2	Benzo(g,h,i)perylene	2	1.20E-06	1.18E-09	1.50E-06
205-82-3	Benzo(k)fluoranthene	2	1.80E-06	1.76E-09	2.25E-06
218-01-9	Chrysene	2	1.80E-06	1.76E-09	2.25E-06
53-70-3	Dibenzo(a,h)anthracene	0.04	1.20E-06	1.18E-09	1.50E-06
106-46-7	1,4 Dichlorobenzene	4	1.20E-03	1.18E-06	1.50E-03
57-97-6	7,12-Dimethylbenz(a)anthracene	0.0007	1.60E-05	1.57E-08	2.00E-05
206-44-0	Fluoranthene	2	3.00E-06	2.94E-09	3.76E-06
86-73-7	Fluorene	2	2.80E-06	2.75E-09	3.51E-06
50-00-0	Formaldehyde	3.5	7.50E-02	7.35E-05	9.39E-02
110-54-3	Hexane	2000	1.80E+00	1.76E-03	2.25E+00
193-39-5	Indeno(1,2,3-cd)pyrene	0.4	1.80E-06	1.76E-09	2.25E-06
56-49-5	3-Methylchloranthrene	2	1.80E-06	1.76E-09	2.25E-06
91-57-6	2-Methylnaphthalene	2	2.40E-05	2.35E-08	3.01E-05
91-20-3	Naphthalene	1.4	6.10E-04	5.98E-07	7.64E-04
85-01-8	Phenanathrene	2	1.70E-05	1.67E-08	2.13E-05
129-00-0	Pyrene	2	5.00E-06	4.90E-09	6.26E-06
108-88-3	Toluene	2000	3.40E-03	3.33E-06	4.26E-03
	Arsenic	0.01	2.00E-04	1.96E-07	2.50E-04
	Beryllium	0.02	1.20E-05	1.18E-08	1.50E-05
	Cadmium	0.01	1.10E-03	1.08E-06	1.38E-03
	Chromium	1000	1.40E-03	1.37E-06	1.75E-03
	Cobalt	0.005	8.40E-05	8.24E-08	1.05E-04
	Lead	2	5.00E-04	4.90E-07	6.26E-04
	Manganese	0.6	3.80E-04	3.73E-07	4.76E-04
	Mercury	2	2.60E-04	2.55E-07	3.26E-04
	Nickel	0.6	2.10E-03	2.06E-06	2.63E-03
	Selenium	925	2.40E-05	2.35E-08	3.01E-05

Notes:

[1] Obtained from N.J.A.C.7:27-17, Table 2

[2] HAP emission factors as per AP-42, Table 1.4-2, 1.4-3 & 1.4-4 for Natural Gas Combustion.
Per AP-42 1.5 LPG combustion processes are very similar to the natrual gas combustion process; therefore natural gas combustion emission factors for HAPs can be used.

[3] NJDEP Reporting threshold is also 0.01 lb/hr

VCU Criteria Pollutant Emissions - Propane Combustion
VCU Unit EMTOS 3500

Description	Value	Units
Heat Input	8.7	MMBtu/hr
Propane heating value[1]	0.092	MMBtu/gal
Maximum propane used	95.082	gal/hr
Tanks Cleaned Per Ozone Season	5.000	tanks
Degas Time	28.400	hr
Maximum propane used	13501.64	gal/yr

Description	Value	Units
Parameters[1]:		
NO_x Emission Rate	13.00	lb/1000 gal
CO Emission Rate	7.50	lb/1000 gal
VOC Emission Rate	1.00	lb/1000 gal
SO2 Emission Rate[2]	1.50	lb/1000 gal
PM Emission Rate[3]	0.70	lb/1000 gal

Parameter	NOx	CO	VOC	SO_2	PM_{10} / $PM_{2.5}$	TSP
lb/hr	1.236	0.713	0.095	0.143	0.067	0.067
tons/yr[4]	0.088	0.051	0.007	0.010	0.005	0.005

[1] Emission factors from AP-42, Table 1.5-1 (7/08).

[2] Per SBCSPCD Engineering Division, Propane sulfur content for commercial propane is 15 gr/100 scf.

[3] PM emissions include both filterable and condensable emissions.

[4] Annual emissions based on maximum ozone season propane usage.

VCU HAP Pollutant Emissions
VCU Unit EMTOS 3500

CAS #	HAP	NJDEP Reporting Threshold[1]	Emission Factors[2]		Potential HAP Emissions [4]
		(lbs/yr)	(lb/MMscf)	(lb/MMBtu)	(lb/yr)
83-32-9	Acenaphthene	2	1.80E-06	1.76E-09	2.18E-06
203-96-8	Acenaphthylene	2	1.80E-06	1.76E-09	2.18E-06
120-12-7	Anthracene	2	2.40E-06	2.35E-09	2.91E-06
56-55-3	Benzo(a)anthracene	0.4	1.80E-06	1.76E-09	2.18E-06
71-43-2	Benzene[3]	6	2.10E-03	2.06E-06	2.54E-03
50-32-8	Benzo(a)pyrene	0.04	1.20E-06	1.18E-09	1.45E-06
205-99-2	Benzo(b)fluoranthene	0.4	1.80E-06	1.76E-09	2.18E-06
191-24-2	Benzo(g,h,i)perylene	2	1.20E-06	1.18E-09	1.45E-06
205-82-3	Benzo(k)fluoranthene	2	1.80E-06	1.76E-09	2.18E-06
218-01-9	Chrysene	2	1.80E-06	1.76E-09	2.18E-06
53-70-3	Dibenzo(a,h)anthracene	0.04	1.20E-06	1.18E-09	1.45E-06
106-46-7	1,4 Dichlorobenzene	4	1.20E-03	1.18E-06	1.45E-03
57-97-6	7,12-Dimethylbenz(a)anthracene	0.0007	1.60E-05	1.57E-08	1.94E-05
206-44-0	Fluoranthene	2	3.00E-06	2.94E-09	3.63E-06
86-73-7	Fluorene	2	2.80E-06	2.75E-09	3.39E-06
50-00-0	Formaldehyde	3.5	7.50E-02	7.35E-05	9.08E-02
110-54-3	Hexane	2000	1.80E+00	1.76E-03	2.18E+00
193-39-5	Indeno(1,2,3-cd)pyrene	0.4	1.80E-06	1.76E-09	2.18E-06
56-49-5	3-Methylchloranthrene	2	1.80E-06	1.76E-09	2.18E-06
91-57-6	2-Methylnaphthalene	2	2.40E-05	2.35E-08	2.91E-05
91-20-3	Naphthalene	1.4	6.10E-04	5.98E-07	7.39E-04
85-01-8	Phenanathrene	2	1.70E-05	1.67E-08	2.06E-05
129-00-0	Pyrene	2	5.00E-06	4.90E-09	6.06E-06
108-88-3	Toluene	2000	3.40E-03	3.33E-06	4.12E-03
	Arsenic	0.01	2.00E-04	1.96E-07	2.42E-04
	Beryllium	0.02	1.20E-05	1.18E-08	1.45E-05
	Cadmium	0.01	1.10E-03	1.08E-06	1.33E-03
	Chromium	1000	1.40E-03	1.37E-06	1.70E-03
	Cobalt	0.005	8.40E-05	8.24E-08	1.02E-04
	Lead	2	5.00E-04	4.90E-07	6.06E-04
	Manganese	0.6	3.80E-04	3.73E-07	4.60E-04
	Mercury	2	2.60E-04	2.55E-07	3.15E-04
	Nickel	0.6	2.10E-03	2.06E-06	2.54E-03
	Selenium	925	2.40E-05	2.35E-08	2.91E-05

Notes:

[1] Obtained from N.J.A.C.7:27-17, Table 2

[2] HAP emission factors as per AP-42, Table 1.4-2, 1.4-3 & 1.4-4 for Natural Gas Combustion.
Per AP-42 1.5 LPG combustion processes are very similar to the natrual gas combustion process; therefore natural gas combustion emission factors for HAPs can be used.

[3] NJDEP Reporting threshold is also 0.01 lb/hr

VCU Criteria Pollutant Emissions - Propane Combustion
VCU Unit EMTOS 4500

Description	Value	Units
Heat Input	15.0	MMBtu/hr
Propane heating value[1]	0.092	MMBtu/gal
Maximum propane used	163.934	gal/hr
Tanks Cleaned Per Ozone Season	5.000	tanks
Degas Time	23.800	hr
Maximum propane used	19508.20	gal/yr

Description	Value	Units
Parameters[1]:		
NO_x Emission Rate	13.00	lb/1000 gal
CO Emission Rate	7.50	lb/1000 gal
VOC Emission Rate	1.00	lb/1000 gal
SO2 Emission Rate[2]	1.50	lb/1000 gal
PM Emission Rate[3]	0.70	lb/1000 gal

Parameter	NOx	CO	VOC	SO_2	PM_{10} / $PM_{2.5}$	TSP
lb/hr	2.131	1.230	0.164	0.246	0.115	0.115
tons/yr[4]	0.127	0.073	0.010	0.015	0.007	0.007

[1] Emission factors from AP-42, Table 1.5-1 (7/08).

[2] Per SBCSPCD Engineering Division, Propane sulfur content for commercial propane is 15 gr/100 scf.

[3] PM emissions include both filterable and condensable emissions.

[4] Annual emissions based on maximum ozone season propane usage.

VCU HAP Pollutant Emissions
VCU Unit EMTOS 4500

CAS #	HAP	NJDEP Reporting Threshold[1]	Emission Factors[2]		Potential HAP Emissions [4]
		(lbs/yr)	(lb/MMscf)	(lb/MMBtu)	(lb/yr)
83-32-9	Acenaphthene	2	1.80E-06	1.76E-09	3.15E-06
203-96-8	Acenaphthylene	2	1.80E-06	1.76E-09	3.15E-06
120-12-7	Anthracene	2	2.40E-06	2.35E-09	4.20E-06
56-55-3	Benzo(a)anthracene	0.4	1.80E-06	1.76E-09	3.15E-06
71-43-2	Benzene[3]	6	2.10E-03	2.06E-06	3.68E-03
50-32-8	Benzo(a)pyrene	0.04	1.20E-06	1.18E-09	2.10E-06
205-99-2	Benzo(b)fluoranthene	0.4	1.80E-06	1.76E-09	3.15E-06
191-24-2	Benzo(g,h,i)perylene	2	1.20E-06	1.18E-09	2.10E-06
205-82-3	Benzo(k)fluoranthene	2	1.80E-06	1.76E-09	3.15E-06
218-01-9	Chrysene	2	1.80E-06	1.76E-09	3.15E-06
53-70-3	Dibenzo(a,h)anthracene	0.04	1.20E-06	1.18E-09	2.10E-06
106-46-7	1,4 Dichlorobenzene	4	1.20E-03	1.18E-06	2.10E-03
57-97-6	7,12-Dimethylbenz(a)anthracene	0.0007	1.60E-05	1.57E-08	2.80E-05
206-44-0	Fluoranthene	2	3.00E-06	2.94E-09	5.25E-06
86-73-7	Fluorene	2	2.80E-06	2.75E-09	4.90E-06
50-00-0	Formaldehyde	3.5	7.50E-02	7.35E-05	1.31E-01
110-54-3	Hexane	2000	1.80E+00	1.76E-03	3.15E+00
193-39-5	Indeno(1,2,3-cd)pyrene	0.4	1.80E-06	1.76E-09	3.15E-06
56-49-5	3-Methylchloranthrene	2	1.80E-06	1.76E-09	3.15E-06
91-57-6	2-Methylnaphthalene	2	2.40E-05	2.35E-08	4.20E-05
91-20-3	Naphthalene	1.4	6.10E-04	5.98E-07	1.07E-03
85-01-8	Phenanathrene	2	1.70E-05	1.67E-08	2.98E-05
129-00-0	Pyrene	2	5.00E-06	4.90E-09	8.75E-06
108-88-3	Toluene	2000	3.40E-03	3.33E-06	5.95E-03
	Arsenic	0.01	2.00E-04	1.96E-07	3.50E-04
	Beryllium	0.02	1.20E-05	1.18E-08	2.10E-05
	Cadmium	0.01	1.10E-03	1.08E-06	1.93E-03
	Chromium	1000	1.40E-03	1.37E-06	2.45E-03
	Cobalt	0.005	8.40E-05	8.24E-08	1.47E-04
	Lead	2	5.00E-04	4.90E-07	8.75E-04
	Manganese	0.6	3.80E-04	3.73E-07	6.65E-04
	Mercury	2	2.60E-04	2.55E-07	4.55E-04
	Nickel	0.6	2.10E-03	2.06E-06	3.68E-03
	Selenium	925	2.40E-05	2.35E-08	4.20E-05

Notes:

[1] Obtained from N.J.A.C.7:27-17, Table 2

[2] HAP emission factors as per AP-42, Table 1.4-2, 1.4-3 & 1.4-4 for Natural Gas Combustion.
Per AP-42 1.5 LPG combustion processes are very similar to the natrual gas combustion process; therefore natural gas combustion emission factors for HAPs can be used.

[3] NJDEP Reporting threshold is also 0.01 lb/hr