ENERGY TRANSFER

Via Electronic and Certified Mail: 7015 1520 0002 2193 2323

March 20, 2020

Mr. George Eckert
Air Pollution Control Engineer 3
Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401

Re: Application for Minor Modification
TVOP No. 23-00119 – Source ID: 106

Dear Mr. Eckert:

Enclosed please find an application for Minor Modification for the Sunoco Partners Marketing and Terminals, L.P. (SPMT), Marcus Hook Industrial Complex. In September of 2019, SPMT converted Source ID: 106 from a "Deethanizer" to a "Demethanizer." The only changes to the unit are the feedstock and some updates to the piping and fugitive components resulting in an overall increase in fugitive VOC emissions of 0.11 TPY as the Facility LDAR Program will no longer be applicable to a larger portion of the components.

In a letter dated February 27, 2020, SPMT stated that the conversion of Source ID: 106 from a "Deethanizer" to a "Demethanizer" resulted in an overall reduction in fugitive VOC emissions associated with the process unit because the feedstock changed from being in VOC service (e.g., > 10% regulated VOCs) to not being in VOC service (e.g., < 10% regulated VOCs). However, the potential to emit (PTE) calculated in the attached minor modification indicates an emissions increase from 3.04 tons of VOCs to 3.15 tons of VOC. An explanation for this nominal increase is provided below.

SPMT's emissions calculations utilized in the February 27th letter accounted for control efficiencies achieved through the facility's LDAR Program. SPMT continued to conduct Method 21 monitoring on all existing components that were previously in VOC service prior to the conversion, which resulted in a decrease in actual VOC emissions. Since monitoring of the components that are not in VOC service is not an enforceable permit requirement, SPMT could not take credit for the control efficiencies achieved through the LDAR Program when calculating the PTE for this minor modification. Therefore, the PTE calculated in the attached minor permit modification are greater than the actual emissions previously calculated.

This application includes the following attachments.

- **Attachment A:** Minor Operating Permit Modification Application Forms
- **Attachment B:** Detailed Emissions Calculations
- **Attachment C:** Municipal, State, and EPA Notifications
- **Attachment D:** $750 Application Fee

If you have any questions or concerns, do not hesitate to contact me at (610) 859-1279.

Sincerely,

Kevin W. Smith,
Environmental Specialist
Energy Transfer

Enclosures: 3 copies of Source ID: 106 Minor Modification Application

Attachment A:

PADEP Minor Modification Application Forms

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

MINOR OPERATING PERMIT MODIFICATION APPLICATION

Section 1: General Information

FOR OFFICIAL USE ONLY

Operating Permit No: _____
Reviewed by: _____
Date: _____

1.1 Plant Information

Tax Id: 23-3102655 Firm Name: Sunoco Partners Marketing & Terminals L.P.

Plant Code: 270459 Plant Name: Marcus Hook Industrial Complex

NAICS Code: 493190 Description of NAICS Code: Other Warehousing and Storage

County: Delaware Municipality: Marcus Hook

1.2 Contact Information

Name: Kevin W. Smith Title: Specialist - Environmental Compliance

Address: 100 Green Street, Marcus Hook PA, 19061-0426

Telephone Number: (610) 859-1279

1.3 Certification of Truth, Accuracy and Completeness

Note: This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.

Subject to the penalties of Title 18 Pa. C.S. Section 4904 and 35 P.S. Section 4009 (b) (2), I certify under the penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate, and complete. I further certify that the proposed modification meets the criteria for use of the minor permit modification procedures contained in 25 Pa. Code Section 127.462.

(Signed): _____ Date: 3 / 20 / 2020

Named (typed): Edward G. Human Title: Senior Director of MHIC Operations

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

MINOR OPERATING PERMIT MODIFICATION APPLICATION
(Please read instructions carefully before completing this application)

Section 2: Facility Inventory List

Indicate all sources that are affected by the proposed modification by completing the following table. Duplicate this page as necessary.

Number	Company Designation	Unit Type (Boilers, Incinerators, etc.)
106	Demethanizer	Demethanizing Distillation Column

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

MINOR OPERATING PERMIT MODIFICATION APPLICATION
(Please read instructions carefully before completing this application)

Section 3: Facility Information

Complete this section ONLY if the changes are for the entire facility. If changes are for a source or sources, skip this Section and complete Section 4 for each Source in which a change is proposed.

A) Briefly describe all changes to this facility: Not Applicable

B) If changes involve an increase in actual emissions, please complete the following table:

Pollutant Name	CAS Number	Change in Actual Emissions (+ or -)

C) Date on which proposed change is scheduled to occur: _____

D) List the proposed language for revising the operating permit condition proposed to be changed:

Existing Operating Permit Condition or Condition Number	Proposed Language for Permit Condition

MINOR OPERATING PERMIT MODIFICATION APPLICATION
(Please read instructions carefully before completing this application)

Section 4: Source Information

Complete this section for each source on which a change is to occur in this facility. Duplicate this Section as needed.

4.1 General Source Information

Source ID 106 Plan Approval or Operating Permit No: TVOP No.: 23-00119

Name or Type of source: Distillation Column Rated Input: Not Applicable

Manufacturer: Field Errected Model Number: Not Applicable

Installation Date: Summer 2013

4.2 Proposed Changes to Source

A) Briefly describe all changes to this facility: The raw material processed by the Source 106 distillation column is being changed in order to process a feed stream of ethane to remove methane. The source previously was operated to remove ethane from a propane stream. Updates to the piping and fugitive components counts are detailed in this application which reflect the as-built status of the unit and proposed changes to materials processed.

B) If changes involve an increase in actual emissions, please complete the following table:

Pollutant Name	CAS Number	Change in Actual Emissions (+ or -)
VOC	Not Applicable	+0.11 Tons per Year

C) Date on which proposed change is scheduled to occur: September 2019

MINOR OPERATING PERMIT MODIFICATION APPLICATION
(Please read instructions carefully before completing this application)

4.2 Proposed Changes to Source (Continued)

C) List the proposed language for revising the operating permit condition proposed to be changed:

Existing Operating Permit Condition or Condition Number	**Proposed Language for Permit Condition**
No changes	Some of the components within this Source ID: 106 will remain in VOC service and therefore part of the LDAR Program.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

MINOR OPERATING PERMIT MODIFICATION APPLICATION
(Please read instructions carefully before completing this application)

Section 5. Citation and Listing of Applicable Requirements

Complete this Section only if the facility is a TITLE V facility. Cite and list any applicable requirements that will apply if the proposed change(s) occur.

Source ID	Citation Number	Citation Limitation
No additional requirements.		

Section 6. Certification of Compliance With All Applicable Requirements

Note: This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.

Subject to the penalties of Title 18 Pa. C.S.A. Section 4904 and 35 P.S. Section 4009 (b)(2), I certify that I have the authority to submit this Minor Permit Modification Application on behalf of the applicant herein and that based on information and belief formed after reasonable inquiry, the facility is currently in compliance with all applicable requirements.

(Signed): _____ Date: 3 /20 /2020

Name (typed): Edward G. Human Title: Senior Director of MHIC Operations

Attachment B:
Detailed Emissions Calculations

Summary of Emissions from Fugitive Source Systems

Source	Emissions (TPY)		Calculation Method[1]
	VOC	CO_2e	
Propane Refrigeration System	0.18	0.00	Screening Method[2]
WEG System	0.19	0.00	
Existing Components	1.78	0.00	
Flare	0.00	232.80	Average Emission Factor Method[3]
Ethane Feed	0.08	0.27	
Methane System	0.00	376.91	
From E/P Mix to Ethane Service	0.92	3.21	
Total Fugitive Emissions	**3.15**	**613**	

Deethanizer Plan Approval 23-0119A PTE - March 2013	3.04	13.29
2019 Actual Emissions	2.54	--
Increase in Potential Emissions	**0.11**	**TPY**

[1]All fugitive emissions were estimated using methodologies presented in United States Environmental Protection Agency's (USEPA) Protocol for Equipment Leak Emission Estimates, EPA 453/R-95-017. For components that are not in VOC service, potential fugitive emissions are based on the average emission factor approach (emission factors from Table 2-1 of the USEPA Protocol) in conjunction with component counts for the as-built unit. No control efficiency was applied for fugitive emissions for components that are not in VOC service, as they will not be inspected as part of the facility's LDAR program. For those components in VOC service, screening methodology was used, which utilizes an average leak concentration for each component type, a Screening Value Emission Factor (Tables 2-10, 2-12, and 2-14 of the USEPA Protocol), and component count to determine VOC and CO2e emissions. Over two-years of leak concentration data from the facility's LDAR program were used to determine the average leak concentrations per component type. As this method uses data pertaining to facility-specific leak rates, the methodology is more refined and accurate as stated in Section 2.2.1 of the referenced USEPA protocol (EPA 453/R-95-017).

[2]The Screening Method detailed calculations are on pages 3 and 4 of this document.

[3]The Average Emission Factor Method detailed calculations are on page 2 of this document.

Detailed Fugitive Component Emissions

Area	Equipment Type	Service	Emission Factor (kg/hr/source)[a]	Component Counts	Total VOC (weight %)	Total GHG (weight %)	VOC Emissions (tons/year)	CO_2e Emissions (tons/year)[e]
Methane System	Valves	Gas[b]	0.00597	186	0%	99%	0.00	265.38
	Connectors	All	0.00183	255	0%	99%	0.00	111.53
Ethane System	Valves	Light Liquid[c]	0.00403	33	4%	0.5%	0.05	0.16
	Connectors	All	0.00183	51	4%	0.5%	0.03	0.11
Flare Gas System	Valves	Gas[b]	0.00597	30	0%	90%	0.00	38.91
	Relief	Gas[b]	0.104	8	0%	90%	0.00	180.76
	Connectors	All	0.00183	33	0%	90%	0.00	13.12
From E/P Mix to Ethane Service	Valves	Light Liquid[c]	0.00403	517	4%	0.5%	0.72	2.51
	Connectors	All	0.00183	293	4%	0.5%	0.19	0.65
	Pump Seal	Light Liquid[c]	0.0199	2	4%	0.5%	0.01	0.05
						TOTALS	**1.00**	**613**

Stream Speciation for Fugitive Source Systems

Speciation[d]	Methane System - Weight %	Ethane System - Weight %	Flare Gas
Methane	99.0%	0.5%	90.0%
Ethane	1.0%	95.9%	10.0%
Propane		3.6%	
i-Butane			
Diethanolamine (DEA)			
Water			
CO2			
Total VOC	**0.0%**	**3.6%**	**0.0%**
Total GHG	**99.0%**	**0.5%**	**90.0%**

[a] Emission Factors from EPA's *Procotol for Equipment Leak Emission Estimates,* EPA-453/R-95-017, Table 2-1.

[b] Gas/vapor - material in a gaseous state at operating conditions.

[c] Light liquid - material in a liquid state in which the sum of the concentration of individual constituents with a vapor pressure over 0.3 kilopascals (kPa) at 20 degree C is greater than or equal to 20 weight percent.

[d] The composition (weight %) is an engineering estimate only and should not be considered a permit representation.

[e] The global warming potential of methane is 25 from 40 CFR Part 98, Table A-1.

New Fugitive Equipment Component Counts (total for each)

Component Category	Component	New Component Counts in VOC service and in LDAR Program		Existing Components
		Propane Refrigeration System	WEG System	
Valves	Valves	103	193	983
Reliefs	Pressure Relief Valves	0	4	40
Connectors	Connectors	56	214	674
- - -	Compressor Seals	0	0	2
- - -	Pump Seals	0	3	3

LDAR Screening Values					
	Default 0	0-500	500-1000	1,001-10,000	>10000
Assumed Leak Concentration		18	751	1393	61483
Assumed Leak Rate - Valves	0.02%	97.40%	0.79%	1.58%	0.21%
Assumed Leak Rate - Pump Seals	0.44%	94.36%	0.77%	3.76%	0.66%
Assumed Leak Rate - Connectors	0.01%	98.95%	0.24%	0.67%	0.12%
Assumed Leak Rate - Others	0.06%	98.51%	0.46%	0.97%	0.00%

Screening Value Emission Factors					
Leak Rate (kg/hr)					
Component Type					
Valves	7.80E-06	2.000E-05	3.201E-04	5.074E-04	6.400E-02
Pump Seals	2.40E-05	2.959E-04	2.857E-03	4.164E-03	7.400E-02
Connectors	7.50E-06	1.294E-05	1.988E-04	3.130E-04	2.800E-02
Others	4.00E-06	7.527E-05	6.721E-04	9.670E-04	7.300E-02
	Table 2-12	Table 2-10	Table 2-10	Table 2-10	Table 2-14

(Source: "Protocol for Equipment Leak Emission Estimates", EPA-453/R-95-017)

Total Material Emissions Due to Fugitive Equipment (lbs)								
Component	Leak Rate (lb/yr)					Total (lbs/day)	Total (lbs/year)	Total (tons/year)
	Default 0	0-500	500-1000	1,001-10,000	>10000			
Valves	0	481	62	197	3356	**11.22**	**4096.56**	**2.05**
Pump Seals	0	32	3	18	57	**0.30**	**109.99**	**0.05**
Connectors	0	233	9	38	619	**2.46**	**899.70**	**0.45**
Others	0	66	3	8	0	**0.21**	**76.99**	**0.04**
Total (all components)	**0**	**812.80**	**76.28**	**262.37**	**4031.69**	**14.20**	**5183.22**	**2.59**

Percent (%) of Total Components per Unit			
	Propane Refrigeration System	WEG System	Existing Components
Valves	8.1%	15.1%	76.9%
Pump Seals	0.0%	0.3%	3.1%
Connectors	4.4%	16.7%	52.7%
July 2019	0.0%	0.0%	0.2%
Total (all components)	0.0%	0.2%	0.2%

Gas Speciation for New Fugitive Equipment

Speciation	Propane Refrigeration System - Weight %	WEG System - Weight %	Existing Components
Methane			
Ethane	2%		2.0%
Propane	97%		97.0%
i-Butane	1%		1.0%
Ethylene Glycol		50%	
Water		90%	
CO2			
Total VOC	**98%**	**50%**	**98%**
Total GHG	**0%**	**0%**	**0%**

Emissions Summary by Component Type

Components	Total (tons/year)	Propane Refrigeration System (TPY)	WEG System (TPY)	Existing Components
Valves	2.05	0.16	0.31	1.57
Pump Seals	0.05	0.00	0.00	0.00
Connectors	0.45	0.02	0.08	0.24
Others	0.04	0.00	0.00	0.00
Total (all components)	**2.59**	**0.18**	**0.38**	**1.81**

Total VOC Percentage By Unit Stream (%)	98%	50%	98%
Total VOC Emissions By Unit Stream (TPY)	0.18	0.19	1.78

Total CO_2e Percentage By Unit Stream (%)	0%	0%	0%
Total CO_2e Emissions By Unit Stream (TPY)	0.00	0.00	0.00

Total VOC Emissions (TPY)	**2.15**
Total CO_2e Emissions (TPY)	**0.00**

Attachment C:
Notification Letters

ENERGY TRANSFER

Certified Mail:7015 1520 0002 2193 2279

March 19, 2020

Josephine M. Laird
President
Borough Council
Borough of Marcus Hook
10th and Green Street
Marcus Hook, Pennsylvania, 19061

RE: Sunoco Partners Marketing & Terminals L.P. – Marcus Hook Municipal Notification

Dear Ms. Laird:

In accordance with the Commonwealth of Pennsylvania's Administrative Code, please be advised that Sunoco Partners Marketing & Terminals, L.P., located in the Borough of Marcus Hook, Delaware County, Pennsylvania, has submitted an Application for Minor Modification in order to convert the deethanizing distillation column into a demethanizing distillation column at its Marcus Hook Industrial Complex.

This letter serves to satisfy the requirements in 25 Pa. Code 127.462(c) for municipal and county notification upon application for a Minor Modification Application. A 21 day comment period begins upon receipt of this notice.

Please contact me at 610-859-1279 if you require any additional information on this matter.

Sincerely,

Kevin W. Smith,
Environmental Specialist
Energy Transfer

ENERGY TRANSFER

Certified Mail: 7015 1520 0002 2193 2316

March 19, 2020

John P. McBlain, Chairman
Delaware County Council
201 West Front Street
Media, PA 19063

RE: Sunoco Partners Marketing & Terminals L.P. – Marcus Hook County Notification

Dear Mr. McBlain,

In accordance with the Commonwealth of Pennsylvania's Administrative Code, please be advised that Sunoco Partners Marketing & Terminals, L.P., located in the Borough of Marcus Hook, Delaware County, Pennsylvania, has submitted an Application for Minor Modification in order to convert the deethanizing distillation column into a demethanizing distillation column at its Marcus Hook Industrial Complex.

This letter serves to satisfy the requirements in 25 Pa. Code 127.462(c) for municipal and county notification upon application for a Minor Modification Application. A 21 day comment period begins upon receipt of this notice.

Please contact me at 610-859-1279 if you require any additional information on this matter.

Sincerely,

Kevin W. Smith,
Environmental Specialist
Energy Transfer

ENERGY TRANSFER

Certified Mail: 7015 1520 0002 2193 2309

March 19, 2020

Mary Toogood, Manager
Bureau of Air Compliance & Enforcement-Southern
New Jersey Department of Environmental Protection
2 Riverside Drive, Suite 201
Camden, NJ 08103

RE: Sunoco Partners Marketing & Terminals L.P. – Marcus Hook
New Jersey Notification

Dear Ms. Toogood,

In accordance with the Commonwealth of Pennsylvania's Administrative Code, please be advised that Sunoco Partners Marketing & Terminals, L.P., located in the Borough of Marcus Hook, Delaware County, Pennsylvania, has submitted an Application for Minor Modification in order to convert the deethanizing distillation column into a demethanizing distillation column at its Marcus Hook Industrial Complex.

This letter serves to satisfy the requirements in 25 Pa. Code 127.462(c) for municipal and county notification upon application for a Minor Modification Application. A 21 day comment period begins upon receipt of this notice. Comments should be forwarded to:

Pennsylvania Department of Environmental Protection
Southeast Regional Office (Air Quality)
2 East Main St.
Norristown, PA 19401
(484) 250-5920

Please contact me at 610-859-1279 if you require any additional information on this matter.

Sincerely,

Kevin W. Smith,
Environmental Specialist
Energy Transfer

ENERGY TRANSFER

Certified Mail: 7015 1520 0002 2193 2293

March 19, 2020

Mr. Randy Mosier, Chief
Air and Radiation Management Administration
Maryland Dept. of the Environment
1800 Washington Blvd., Suite 730
Baltimore, MD 21230-1720

RE: Sunoco Partners Marketing & Terminals L.P. – Marcus Hook
Maryland Notification

Dear Mr. Fees,

In accordance with the Commonwealth of Pennsylvania's Administrative Code, please be advised that Sunoco Partners Marketing & Terminals, L.P., located in the Borough of Marcus Hook, Delaware County, Pennsylvania, has submitted an Application for Minor Modification in order to convert the deethanizing distillation column into a demethanizing distillation column at its Marcus Hook Industrial Complex.

This letter serves to satisfy the requirements in 25 Pa. Code 127.462(c) for municipal and county notification upon application for a Minor Modification Application. A 21 day comment period begins upon receipt of this notice. Comments should be forwarded to:

Pennsylvania Department of Environmental Protection
Southeast Regional Office (Air Quality)
2 East Main St.
Norristown, PA 19401
(484) 250-5920

Please contact me at 610-859-1279 if you require any additional information on this matter.

Sincerely,

Kevin W. Smith,
Environmental Specialist
Energy Transfer

ENERGY TRANSFER

Certified Mail: 7015 1520 0002 2193 2286

March 19, 2020

Mr. David F. Fees
Director: Div. of Air & Waste Mgmt.
Dept. of Natural Resources & Env. Control
100 W. Water Street, Suite 6A.
Dover, De 19904

RE: Sunoco Partners Marketing & Terminals L.P. – Marcus Hook Delaware Notification

Dear Mr. Fees,

In accordance with the Commonwealth of Pennsylvania's Administrative Code, please be advised that Sunoco Partners Marketing & Terminals, L.P., located in the Borough of Marcus Hook, Delaware County, Pennsylvania, has submitted an Application for Minor Modification in order to convert the deethanizing distillation column into a demethanizing distillation column at its Marcus Hook Industrial Complex.

This letter serves to satisfy the requirements in 25 Pa. Code 127.462(c) for municipal and county notification upon application for a Minor Modification Application. A 21 day comment period begins upon receipt of this notice. Comments should be forwarded to:

Pennsylvania Department of Environmental Protection
Southeast Regional Office (Air Quality)
2 East Main St.
Norristown, PA 19401
(484) 250-5920

Please contact me at 610-859-1279 if you require any additional information on this matter.

Sincerely,

Kevin W. Smith,
Environmental Specialist
Energy Transfer

Attachment D:
$750 Application Fee

THE RED THERMO SECURED "SP" LOGO IN THE LOWER CORNER OF THIS CHECK MUST FADE TEMPORARILY WHEN WARMED BY TOUCH OR FRICTION. SEE BACK FOR ADDITIONAL FEATURES.

SUNOCO PIPELINE LP
ROW ACCOUNT
8111 WESTCHESTER DRIVE, STE 600
DALLAS, TX 75225

WELLS FARGO Wells Fargo Bank, N.A.

364066
11-24/1210

DATE MARCH 18, 2020

PAY SEVEN HUNDRED FIFTY AND 00/100 DOLLARS $ 750 00/xx

TO THE ORDER OF
COMMONWEALTH OF PENNSYLVANIA
CLEAN AIR FUND

Ronald J. Furman

THERMOSECURED

⑈364066⑈ ⑆121000248⑆ 2000014832819⑈

SUNOCO PIPELINE LP

DETACH AND RETAIN THIS STATEMENT
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.
IF NOT CORRECT PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

364066

DATE	DESCRIPTION	AMOUNT
3/18/20	CLEAN AIR FUND MHIC	$750 00/xx