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ENGINEERING EVALUATION

BACKGROUND INFORMATION

Application No.: R13-2334T
Plant ID No.: 029-00008
Applicant: Ergon Corporation - West Virginia, Inc.(EWVI)
Facility Name: Newell (Congo Plant)
Location: Newell, Hancock County
SIC Code: 2911 (Petroleum refining and related industries - petroleum refining); 2992 (Petroleum refining and related industries - lubricating oils and greases)

Application Type: Modification
Received Date: October 22, 2012
Engineer Assigned: Laura Jennings
Fee Amount: \$1,000.00
Date Received: October 23, 2012
Complete Date: December 10, 2012
Due Date: March 10, 2013
Applicant Ad Date: October 26, 2012
Newspaper: *The Weirton Daily Times*
UTM's: Easting: 531.0 km Northing: 4495.1 km Zone: 17
Description: The facility is a petroleum refinery that is revamping the Unifiner to increase the capacity and replace the current H-501 heater. The increase in Unifiner capacity will lead to an increase in throughput for Tanks 4004, 4006, 4014, 4015, and 4050. This will also lead to an increase in throughput to the truck loading [TLOAD and OXIDIZER]. In addition to the modifications, PM emissions were updated for the process heaters H-101R and H-102R and for the flare F1 to correct previous emission calculations. The total increase in emissions associated with this permit revision are as follows: PM 2.28 tpy, PM₁₀ 3.72 tpy, PM_{2.5} 4.12 tpy, CO 21.66 tpy, NO_x 5.33 tpy, SO₂ 39.29 tpy, VOC 10.27 tpy, Benzene 0.05 tpy, and Total HAPs 1.10 tpy.

DESCRIPTION OF PROCESS

Summary as taken from the application:

EWVI owns and operates a petroleum refinery in Newell, WV. This application is for the revamping of the Unifiner/Platformer [Unifiner]. The revamp includes the replacement of heater H-501, the replacement of reactor R-501, and an increase in the overall throughput capacity of the Unifiner. The increase will cause a change in emissions for Tanks 4004, 4006, 4014, 4015, and 4050 as well as the truck loading operations [TLOAD] and the truck loading thermal oxidizer [OXIDIZER]. The application also includes a modification to the flare calculations to correct an error in previous calculation methodology and a modification to the PM emissions of H-101R and H-102R to correct the emission factor used.

The replacement heater [H-501R] will increase the reliability of the Unifiner and will reduce energy consumption at the facility. The new heater will be the same basic design as the existing heaters, and they will be equipped with Ultra Low NO_x burners. Previously H-501 was included in the H-500S emission point, but it will become an independent emission source with this modification [H-501R]. The heat rating of the H-500S heater series will decrease to 59.6 MMBtu/hr as a result of removing H-501 from the group.

The replacement reactor is fully contained within the Unifiner and will not be an additional emissions point. The throughput to the Unifiner will increase to 219,000 barrels per month (6,000 bpd).

There will be an increase of finished gasoline sent through the tanks and loading operations as a result of the Unifiner increase. This will increase emissions for TK 4004, TK 4006, TK 4014, TK 4015, and TK 4050 and for TLOAD and OXIDIZER. The annual throughput of gasoline to the OXIDIZER is proposed to be 96,960,000 gallons per year.

The EWVI Refinery is in an area that is designated as an attainment area for all criteria pollutants, except for PM₁₀ and PM_{2.5}. The EWVI refinery is a major source of criteria pollutants for purposes of New Source Review (NSR). The proposed emission increases represent a minor modification at a major source, emission increases from the latest modification application have been included for completeness. The proposed construction and associated emission increases do not trigger prevention of significant deterioration (PSD) review. Therefore, the proposed project is subject to minor NSR construction permitting requirements.

Process Description:

EWVI will modify the Unifiner (naptha hydrotreater) and associated heater [H-501R] in order to increase the current throughput of the Unifiner to 6,000 bpd.

The heater will be the same design as the existing heater, and it will be equipped with Ultra Low NOX burners. Previously, the heater emissions were based upon a maximum firing rate of 7.5 MMBtu/hr. This will increase to 11.5 MMBtu/hr as a result of this modification.

The modification of the Unifiner will increase the capacity of the unit. The Unifiner treats naptha from the Crude Distillation Unit [CDU] in preparation for conversion to gasoline

blends. The Unifiner includes a reactor that removes sulfur and contaminants from the stream. The other equipment housed within the Unifiner includes a hydrogen compressor, gas/liquid reactor effluent separator vessels, and heat exchange systems.

The modification to the tanks [TK 4004, TK 4006, TK 4014, TK 4015, and TK 4050] and the truck loading operations are due to the increased throughput to the Unifiner. The increased Unifiner capacity leads to the increased production of gasoline, which is stored in the tanks until it is loaded into trucks to be shipped off-site.

The emissions section includes corrections to previous calculations made for the flare. They are included only as corrections to the calculation; the flare is not being modified as part of this application.

Table 1: Emission Units Table

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed / Modified	Design Capacity	Type and Date of Change	Control Device
004-02	H-501R	Unifiner Charge Heater	2013	11.5 MMBtu/hr	Install 2013	N/A
004-01	H-500S	H500 Series Heaters Unifiner/Platformer Unit; refinery fuel gas/natural gas blend	1972/2013	59.6 MMBtu/hr	Modification 2013	N/A
009-01	TLOAD	Truck Loading (Product loading increase to be made in 2013)	Install - 1972 Modify - 2013	418,344 Mgal/yr	Modification 2013	OXIDIZER
00A-02	OXIDIZER	Thermal Oxidizer (Load increase to be made in 2013)	Install - 1994 Modify - 2013	96,960 Mgal/yr 98.7% efficiency	Modification 2013	N/A
4004	TK-4004	External Floating Roof; mechanical shoe	Install - 1971 Modify - 2013	1,050,000 gallons	Modification 2013	N/A
4006	TK-4006	External Floating Roof; mechanical shoe	Install - 1971 Modify - 2013	1,050,000 gallons	Modification 2013	N/A

4014	TK-4014	External Floating Roof; mechanical shoe	Install - 1971 Modify - 2013	315,000 gallons	Modification 2013	N/A
4015	TK-4015	External Floating Roof; mechanical shoe	Install - 1971 Modify - 2013	315,000 gallons	Modification 2013	N/A
4050	TK-4050	Internal Floating Roof; mechanical shoe	Install - 1993 Modify - 2013	630,000 gallons	Modification 2013	N/A

Throughput changes requested in this modification are summarized in Table 1.

Table 2 - Throughput increases

Emission Unit ID	Emission Point ID	Existing permitted throughput	Requested permitted throughput	Throughput Increase
009-01	TLOAD	404.8 MMgal/yr	418.34 MMgal/yr	13.6 MM gal/yr
4004	TK-4004	267,840,300 gallons/yr (all gasoline or ethanol tanks)	45 MMgal/yr	14.480 Mmgal/yr (282,320,300 gallons (all gasoline or ethanol tanks))
4006	TK-4006		45 MMgal/yr	
4014	TK-4014		20.5 MMgal/yr	
4015	TK-4015		20.5 MMgal/yr	
4050	TK-4050		9 MMgal/yr	

The emissions unit table below represents the physical changes that were requested in the permit modification application.

The schedule of installation provided in the application provided the following information:

Begin Foundation Work	November 2012
Installation	March 2013
Start-up	May 2013

SITE INSPECTION

WVDAQ is familiar with the Ergon, WV, Newell facility located in Hancock County, WV. The last full on site inspection was conducted by Steven Sobotka of the Compliance and Enforcement Section on May 1, 2012. They were found to be out of compliance at the time of the inspection for exceedance of monthly and annual permit limits for the main

flare. A notice of violation was issued June 12, 2012. The out of compliance issue is not related to any of the emission units associated with this permit modification application.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The emission calculations provided in this section were reviewed and verified by the writer.

Heater Emissions Calculations:

Heater H-501R emission calculations for the changes associated with the Unifiner (Naptha Hydrotreater) modification are based on emission factors from AP-42, Chapter 1.4 for natural gas combustion unless noted otherwise. Emissions for SO₂ were calculated using 160 ppm of H₂S from the fuel gas composition since there was no guarantee from the manufacturer. PM_{2.5} emissions are calculated using percentages taken from CEIDARS PM_{2.5} Emission Factor Table. CO₂e emissions are calculated from AP-42, Table 1.4-2 as the summation of CO₂, N₂O (Controlled Low-NOx Burner), and CH₄. CO is guaranteed at 50 ppm. The NO_x emission factor is based on the special conditions of EWVI's permit.

Emissions from the H-500S heater series after the removal of H-501 were calculated by subtracting the permitted levels of H-501 (at 7.5 MMBTU/hr) from the currently permitted H-500S heater series. The maximum heat rating for the H-500S series will be reduced to 59.6 MMBtu/hr after the removal of H-501.

H-101R and H-102R PM emissions were revised to correct the emission factor that was used in the calculations. The emission factor (0.0075 lb/MMBTU) for the revised emissions were taken from AP42, Chapter 1.4 for Natural Gas Combustion.

The greenhouse gas calculations are based on the AP-42 emission factors from Chapter 1.4 External Natural Gas Combustion Sources.

Storage Tanks Emissions Calculations:

Calculations for tanks 4004, 4006, 4014, 4015, and 4050 were done using EPA's calculation model TANKS 4.0.9d. EWVI's current air permit limits are based on monthly emission rates that are calculated by dividing the annual emissions rate by 10 to provide operational flexibility. The TANKS 4.09d reports were reviewed and verified by the writer.

Flare [F1]:

The flare emission calculations are included to correct a miscalculation in previous applications. The flare is not undergoing modification. Emission factors for NO_x, CO, VOC, SO₂, and PM were obtained from EPA AP-42, Section 1.4 for natural gas combustion for the pilot light emissions. The pilot emissions are based on 8,760 hours/year. For the non-pilot emissions, the emission factors for NO_x, CO, and VOC were obtained from EPA AP-42, Chapter 13.5 for flare operations. The emission factor for SO₂ for the non-pilot emissions was obtained from the maximum H₂S concentration expected to reach the flare 3,800 ppm. The non-pilot flare emissions are based on 250 hours of operation annually. Emission factors for PM_{2.5} were obtained from percentages take from CEIDARS PM_{2.5} Emission Factor Table for both the pilot and the non-pilot emissions.

Table 3 - Emissions Table:

Emission Point ID	Emission Unit ID	Control Device ID	Regulated Pollutant	Maximum Potential Uncontrolled Emissions		Maximum Potential Controlled Emissions	
				lb/hr	tpy	lb/hr	tpy
H-501R	004-03	N/A	CO	0.34	1.50	N/A	N/A
			NO _x	0.75	3.27	N/A	N/A
			PM	0.09	0.38	N/A	N/A
			PM ₁₀	0.08	0.35	N/A	N/A
			PM _{2.5}	0.08	0.35	N/A	N/A
			SO ₂	0.25	1.12	N/A	N/A
			VOC	0.06	0.25	N/A	N/A
			CO ₂ e	1,356	5,938	N/A	N/A
H-500S	004-01	N/A	CO	5.30	21.49	N/A	N/A
			NO _x	7.41	32.44	N/A	N/A
			PM	0.45	1.95	N/A	N/A
			PM ₁₀	0.42	1.85	N/A	N/A
			PM _{2.5}	0.41	1.81	N/A	N/A
			SO ₂	1.61	7.06	N/A	N/A
			VOC	0.32	1.42	N/A	N/A
			CO ₂ e	7,026	30,775	N/A	N/A
TLOAD (gasoline)	009-01	00A-02	VOC	2.84	3.05	N/A	N/A
			Benzene	0.05	0.06	N/A	N/A
			Hexane	0.05	0.06	N/A	N/A
			Isooctane	0.11	0.13	N/A	N/A
			Toluene	0.20	0.21	N/A	N/A
			Ethylbenzene	0.04	0.04	N/A	N/A
			Xylene	0.20	0.22	N/A	N/A
			Isopropyl Benzene	0.01	0.02	N/A	N/A
			Total HAP	0.66	0.69	N/A	N/A
OXIDIZER	00A-02	Thermal Oxidizer	CO	N/A	N/A	0.11	0.48
			NO _x	N/A	N/A	0.02	0.09
			PM	N/A	N/A	0.002	0.01

			PM ₁₀	N/A	N/A	0.002	0.01
			PM _{2.5}	N/A	N/A	0.002	0.01
			SO ₂	N/A	N/A	0.01	0.06
			VOC	N/A	N/A	10.76	11.59
			Benzene	N/A	N/A	0.19	0.21
			Hexane	N/A	N/A	0.11	0.12
			Isooctane	N/A	N/A	0.43	0.46
			Toluene	N/A	N/A	0.75	0.81
			Ethylbenzene	N/A	N/A	0.15	0.16
			Xylene	N/A	N/A	0.75	0.81
			Isopropyl Benzene	N/A	N/A	0.05	0.06
			Total HAP	N/A	N/A	2.43	2.63
			CO ₂ e	N/A	N/A	52.76	154.18
TK 4004	4004	N/A	VOC	N/A	1.58	N/A	N/A
			Hexane	N/A	0.02	N/A	N/A
			Benzene	N/A	0.03	N/A	N/A
			Isooctane	N/A	0.06	N/A	N/A
			Toluene	N/A	0.11	N/A	N/A
			Ethylbenzene	N/A	0.02	N/A	N/A
			Xylene	N/A	0.11	N/A	N/A
			Isopropyl Benzene	N/A	0.01	N/A	N/A
			Total HAP	N/A	0.36	N/A	N/A
TK 4006	4006	N/A	VOC	N/A	1.72	N/A	N/A
			Hexane	N/A	0.02	N/A	N/A
			Benzene	N/A	0.03	N/A	N/A
			Isooctane	N/A	0.07	N/A	N/A
			Toluene	N/A	0.12	N/A	N/A
			Ethylbenzene	N/A	0.02	N/A	N/A
			Xylene	N/A	0.12	N/A	N/A
			Isopropyl Benzene	N/A	0.01	N/A	N/A
			Total HAP	N/A	0.39	N/A	N/A
TK 4014	4014	N/A	VOC	N/A	1.20	N/A	N/A
			Hexane	N/A	0.01	N/A	N/A
			Benzene	N/A	0.02	N/A	N/A

			Isooctane	N/A	0.05	N/A	N/A
			Toluene	N/A	0.08	N/A	N/A
			Ethylbenzene	N/A	0.02	N/A	N/A
			Xylene	N/A	0.08	N/A	N/A
			Isopropyl Benzene	N/A	0.01	N/A	N/A
			Total HAP	N/A	0.27	N/A	N/A
TK 4015	4015	N/A	VOC	N/A	1.12	N/A	N/A
			Hexane	N/A	0.01	N/A	N/A
			Benzene	N/A	0.02	N/A	N/A
			Isooctane	N/A	0.04	N/A	N/A
			Toluene	N/A	0.08	N/A	N/A
			Ethylbenzene	N/A	0.02	N/A	N/A
			Xylene	N/A	0.08	N/A	N/A
			Isopropyl Benzene	N/A	0.01	N/A	N/A
			Total HAP	N/A	0.26	N/A	N/A
TK 4050	4050	N/A	VOC	N/A	0.72	N/A	N/A
			Hexane	N/A	0.01	N/A	N/A
			Benzene	N/A	0.01	N/A	N/A
			Isooctane	N/A	0.03	N/A	N/A
			Toluene	N/A	0.05	N/A	N/A
			Ethylbenzene	N/A	0.01	N/A	N/A
			Xylene	N/A	0.05	N/A	N/A
			Isopropyl Benzene	N/A	0.00	N/A	N/A
			Total HAP	N/A	0.16	N/A	N/A
H-101R	001-01	N/A	PM	0.41	1.79	N/A	N/A
			PM ₁₀	0.39	1.70	N/A	N/A
			PM _{2.5}	0.38	1.67	N/A	N/A
H-102R	001-02	N/A	PM	0.22	0.97	N/A	N/A
			PM ₁₀	0.21	0.92	N/A	N/A
			PM _{2.5}	0.21	0.90	N/A	N/A
F1*	00A-01	Flare	NO _x	34.70	4.42	N/A	N/A
			CO	188.72	23.66	N/A	N/A
			VOC	71.40	8.93	N/A	N/A
			SO ₂	320.84	40.11	N/A	N/A

			PM	3.80	0.48	N/A	N/A
			PM ₁₀	3.80	0.48	N/A	N/A
			PM _{2.5}	3.80	0.48	N/A	N/A

* The flare [F1] was not modified. The emissions were corrected from a previous permit revision.

As a result of the increased throughput, the emissions from these storage tanks increased as shown in Table 4.

Table 4 - Increase in storage tank emissions:

Tank ID No.	Regulated Pollutant	R13-2334S EmissionRate	R13-2334T Emission Rate	Emissions Increase (TPY)
4004	Total VOC	1.46	1.58	0.12
4006	Total VOC	1.59	1.72	0.13
4014	Total VOC	1.16	1.20	0.04
4015	Total VOC	1.09	1.12	0.03
4050	Total VOC	0.55	0.72	0.17
Total from tanks	Total VOC	5.85	6.34	0.49

Loading Area Emissions Calculations:

The OXIDIZER controls the emissions for gasoline at the truck loading rack. CO, NO_x, PM, PM₁₀, PM_{2.5}, and SO₂ are emitted as a byproduct of combustion of the thermal oxidizer. All other products (diesel, No. 6 fuel oil, kerosene, and lube oil/heavy products) are uncontrolled loadings associated with the TLOAD emission point. The trucks that are loaded are vapor tightness tested annually, therefore a capture efficiency rating of 98.7% is used. Gasoline emissions from TLOAD are the 1.3% that is not captured by OXIDIZER. The control efficiency of the OXIDIZER is 95%.

Calculations for the loading emissions were performed using equations taken from AP-42, Chapter 5.2, *Transportation and Marketing of Petroleum Liquids*. Equation (1) was used to calculate the emissions from the truck loading operation and from the barge loading of diesel, kerosene, and lube oil/heavy products. Loading loss factors for OXIDIZER include the control efficiencies of the thermal oxidizers.

The maximum loading rate for the truck loading operation [TLOAD] is 0.75 Mgal/min for all products. The maximum loading rate is used to calculate the hourly emissions. The annual emissions are based on the annual throughput.

The writer verified the loading loss factors and the VOC emissions and HAP emissions. It should be noted that although hourly emission rates are included in the evaluation, the permit emission limits have annual and monthly emission limits.

Table 5 - Summary of VOC Loading Emissions

Location	Product	Quantity	Loading Losses	VOC Emissions	
		Mgal/yr	lb/Mgal	lb/hr	tpy
OXIDIZER	Gasoline	96,960	2.42E-01	10.76	11.59
TLOAD	Diesel	134,904	1.30E-02	0.59	0.88
	Gasoline	96,960	4.85E+0.0	2.84	3.05
	No. 6 Fuel Oil	13,650	1.23E-03	.06	0.01
	Kerosene	15,330	1.23E-02	.56	0.10
	Lube Oil/Heavy Products	157,500	2.23E-03	0.10	0.18

Criteria pollutant emissions and Greenhouse Gas emissions were calculated for the thermal oxidizer at the truck loading area [OXIDIZER]. The applicant provided the following information that was used in the calculations: (1) The TO pilots are rated at 0.15 MMBtu/hr and fired with purchased natural gas. Enriching gas was estimated at 0.1 MMBtu/hr; (2) The total product combusted in OXIDIZER is 131,246 lbs/yr; (3) Heating values were taken from the Hydrogen Analysis Resource Center; (4) PM_{2.5} is 100% of PM₁₀ emissions, from CEIDARS PM2.5 emission factor table; and (5) emission factors for NO_x, CO, SO₂, and VOC were obtained from EPA AP-42, Chapter 13.5 Flares and for PM and GHG from EPA AP-42, Chapter 1.4.

The change in permitted emission limits is summarized in Table 6 below. The emission changes are both the result of modifications to equipment and of updating emission calculations as discussed previously in this section.

Table 6 - Changes to permit emission limits:

Emission Point ID	Regulated Pollutant	Emission Change (tpy)
H-101R H-102R	PM	1.66
	PM10	1.52
	PM2.5	1.48
H501R H500S	CO	-1.21
	NOX	1.13
	SO2	0.39
	VOC	0.09
	PM	0.14
	PM10	2.20
	PM2.5	2.16

TK-4004, TK 4006 TK-4014, TK-4015, TK-4050	VOC	0.49
	Benzene	0.02
	Total HAP	0.08
TLOAD OXIDIZER	VOC	1.04
	Benzene	0.03
	Total HAP	1.02
	CO	0.01
	SO2	0.01
F1*	CO	22.86
	NOX	4.20
	SO2	38.89
	VOC	8.65
	PM	0.48
	PM2.5	0.48
Total	CO	21.66
	NOX	5.33
	SO2	39.29
	PM	2.28
	PM10	3.72
	PM2.5	4.12
	VOC	10.27
	Benzene	0.05
	Total HAP	1.10

* The flare [F1] was not modified. The emissions were corrected from a previous permit revision.

REGULATORY APPLICABILITY

This section includes the review of the regulations specifically related to the permit application for R13-2334, revision T.

STATE REGULATIONS:

45CSR2 TO PREVENT AND CONTROL PARTICULATE AIR POLLUTION FROM COMBUSTION OF FUEL IN INDIRECT HEAT EXCHANGERS

The replacement process heater H-501R is subject to 45CSR2.

EWVI is subject to 45CSR2 for the process heaters in the H-500S series.

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Ergon Corporation - West Virginia, Inc.
Newell (Congo Plant)

H-501 is being removed from the H-500S series of heaters and the process heater is being replaced by H501-R. The existing process heaters in the H-500S series have existing permit requirements for the following sections of the rule: 45CSR2-3.1, -2.4-1.b, -2-9.1, -2-9.2, -2.9.3, -2-10.1, and -2-10.2. The replacement process heaters H-501R will be subject to the same requirements.

EWVI has demonstrated compliance with the weight emission standard 45CSR2-4.1.b for the replacement heaters. H-501R has a total design heat input of 11.5 MMBtu/hr and a corresponding weight emission limit of 4.91 lbs/hr with a maximum PTE of 0.09 lb/hr for particulate matter. The replacement unit is well below the standard.

EWVI will demonstrate compliance with the remaining requirements by maintaining compliance with the permit requirements.

45CSR10 TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF SULFUR OXIDES

EWVI is subject to 45CSR10 for the process heater H-501R that is replacing the existing process heaters H-501 in the H-500s series. There are existing permit requirements for the following sections of the rule: 45CSR10-3.1.e, -3.8, -8.2a,-8.2c, -8.3a, -8.3.b, and 8.3c that will also be required of the replacement heater.

EWVI has demonstrated compliance with the weight emission standard 45CSR10-3.1.e for the replacement heaters. H-501R has a total design heat input of 11.5 MMBtu/hr and a corresponding weight emission limit of 35.65 lbs/hr with a maximum PTE of 0.25 lb/hr for particulate matter. The replacement unit is well below the standard.

EWVI will demonstrate compliance with the remaining requirements by maintaining compliance with the permit requirements.

45CSR13 PERMITS FOR CONSTRUCTION, MODIFICATION, RELOCATION AND OPERATION OF STATIONARY SOURCES OF AIR POLLUTANTS, NOTIFICATION REQUIREMENTS, ADMINISTRATIVE UPDATES, TEMPORARY PERMITS, GENERAL PERMITS, PERMISSION TO COMMENCE CONSTRUCTION, AND PROCEDURES FOR EVALUATION

EWVI is subject to 45CSR13 and meets the definition of a “modification” permit because the changes result in an emissions increase of six (6) lb/hr and ten (10) tons per year.

The facility has met the applicable requirements of this rule by publishing a Class I Legal Advertisement, paid the \$1,000.00 application fee for a

modification permit for a major stationary source, and submitted a complete permit application.

45CSR14 PERMITS FOR CONSTRUCTION AND MAJOR MODIFICATION OF MAJOR STATIONARY SOURCES OF AIR POLLUTION FOR THE PREVENTION OF SIGNIFICANT DETERIORATION

EWVI is located in Newell, Hancock County, WV that is an area that is designated as an attainment area for all criteria pollutants except for PM_{2.5}. Hancock County is a PM_{2.5} nonattainment area for both the 1997 annual and the 2006 24-hour standards by the EPA in 2009. NO_x and SO₂ have been designated by the EPA as precursors to PM_{2.5} and therefore, the major source status of the source for PM_{2.5}, NO_x, and SO₂ is determined under 45CSR19.

Hancock County is in attainment with the National Ambient Air Quality Standards (NAAQS) for all other regulated pollutants. The major source status of the source for PM, PM₁₀, ozone (VOCs), and CO is therefore determined under 45CSR14.

Determination of Major Source Status:

The EWVI petroleum refinery is an existing major source of criteria pollutants for purposes of New Source Review according to the definition provided in 45 CSR §14-2.43.a and 45CSR19-2.35.a. Petroleum refineries are one of the identified source categories where the “major source” threshold is one hundred tons per year (100 tpy) of any regulated NSR pollutant and EWVI has the potential to emit 100 tpy or more of at least one of the regulated NSR pollutants on a facility-wide basis.

Determination of Major Modification:

EWVI is proposing a “physical change in or change in the method of operation of a major stationary source” and therefore a determination must be made regarding whether or not the proposed changes described in the permit application meet the definition of a major modification.

A “major modification” is defined under section 2.40 of 45CSR14 as a:

. . . physical change in or change in the method of operation of a major stationary source which results in: a significant emissions increase (as defined in subsection 2.75) of any regulated NSR pollutant (as defined in subsection 2.66); and a significant net emissions increase of that pollutant from the major stationary source. [. . .]

Section 3.4 of 45CSR14 provides guidance on the process of determining if proposed changes are a major modification. §45-14-3.4(a) states that:

. . . consistent with the definition of major modification contained in subsection 2.40, a project is a major modification for a regulated NSR pollutant if it causes two types of emissions increases -- a significant emissions increase (as defined in subsection 2.75), and a significant net emissions increase (as defined in subsections 2.46 and 2.74). The proposed project is not a major modification if it does not cause a significant emissions increase. [. . .]

Therefore, for the proposed changes to meet the definition of a major modification, the changes themselves must result in a significant emissions increase. The methodology for calculating the emissions increase under the first step is given under Sections 3.4(b), 3.4(c), 3.4(d) and 3.4(f). The substantive language of each is given below:

[§45-14-3.4(b)]

The procedure for calculating (before beginning actual construction) whether a significant emissions increase (i.e., the first step of the process) will occur depends upon the type of emissions units being modified, according to subdivisions 3.4.c through 3.4.f.

[§45-14-3.4(c)]

Actual-to-projected-actual applicability test for projects that only involve existing emissions units. -- A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in subsection 2.63) and the baseline actual emissions (as defined in subdivisions 2.8.a and 2.8.b), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in subsection 2.74).

[§45-14-3.4(d)]

Actual-to-potential test for projects that only involve construction of a new emissions unit(s). -- A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit (as defined in subsection 2.58) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in subdivision 2.8.c) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in subsection 2.74).

[§45-14-3.4(f)]

Hybrid test for projects that involve multiple types of emissions units. -- A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the method specified in

subdivisions 3.4.c through 3.4.d as applicable with respect to each emissions unit, for each type of emissions unit equals or exceeds the significant amount for that pollutant (as defined in subsection 2.74).

Further, under the definition of “projected actual emissions” - Section 2.63(a)(4), the applicant may use an emission unit’s PTE in lieu of projecting actual emissions. Ergon has elected to provide PTE after construction in lieu of projected actual emissions.

It is important to note that when any emissions decrease is claimed (including those associated with the proposed modification), the second step of the test is triggered - a determination if the project results in a “significant net emissions increase.” This determination is defined under the definition of “net emissions increase” [§45-14-2.46] and must include “any other increases and decreases in actual emissions at the major source that are contemporaneous with the particular change and are otherwise creditable.” A change is contemporaneous if it “occurs not more than five (5) years prior to the date on which construction on the particular change commences nor later than the date on which the increase from the particular change occurs.” This determination will not include any decreases in emissions and will stay within the first step of the test.

The determination of major modification will be conducted in accordance with §45CSR14-3.4(f) which is the hybrid test because the change involves both the addition of new emission units that will use the “actual-to-potential” method in accordance with §45CSR14-3.4(d) and the “actual-to-projected-actual” method for existing units in accordance with §45CSR14-3.4(c).

PSD Applicability Analysis:

The modifications associated with the PSD demonstration are related to upgrading various process units at the facility. To avoid circumvention concerns, the revamp of the Unifiner includes the upgrades to the ISOM unit, the CDU reliability project and the naptha splitter project emissions, even though they are not tied directly to this project.

The list of affected equipment for this project includes all sources upstream and downstream of the Unifiner that are affected by the increase in throughput. All emission increases from the recently permitted ISOM project are also included for completeness. The only sources upstream of the Unifiner and the ISOM Unit are the CDU, crude oil storage tanks that feed the CDU [TK-4000, TK-4001, TK-4062, and TK-4063], and the naptha splitter. The downstream sources affected by both projects include the truck loading rack and its associated control device, and the tanks TK-4002, TK-4004, TK-4006, TK-4014, TK-4015, TK-4060,

TK-4061, and TK-4050. All of these sources are included in the PSD demonstration. No additional sources were debottlenecked as a part of this project.

Tables 7 through 9 show the PSD determination for the units described in the previous paragraph that have been defined as the scope for the PSD analysis for this project. The baseline years shown are 2009 and 2010. It is EWVI's belief that the 2009 and 2010 baseline emissions are the most representative years for the project sources.

The Main/Sour Gas Flare [F1] was not modified; however, revised emission calculations were provided to correct an error in previous calculation methodology. Table 3 and Table 6 in the emissions calculations section of the evaluation include revised permit emission limits for the flare that was installed in 1972. This flare is not part of this project and the emissions therefore do not appear in Tables 7 through 9 and are not included in the PSD determination.

The permit revision "P" issued in 2010 for the loading of light crude oil from the barge dock is not considered to be a part of this project. This was simply related to a new raw material that was mainly transferred over the dock with a small amount being processed through the crude unit without any equipment modification.

Step 1 - Determination of Emission increase is provided in Table 9. The baseline emissions for the Naptha Splitter, ISOM, TK 4063, and MLDOX are zero because they are defined as new units. The new replacement heaters H-101R, H-102R, and H-501R will use the baseline actual emissions from heaters H-101, H-102, and H-501 that are being replaced.

Table 7 - Baseline Emissions:

Emission Units	Baseline Emissions (Average of 2009 and 2010)						
	NO _x	CO	VOC	CO ₂ e	SO ₂	PM/PM ₁₀	PM _{2.5}
TK-4000	0.00	0.00	1.41	0.00	0.00	0.00	0.00
TK-4001	0.00	0.00	1.13	0.00	0.00	0.00	0.00
TK-4002	0.00	0.00	0.34	0.00	0.00	0.00	0.00
TK-4004	0.00	0.00	1.58	0.00	0.00	0.00	0.00
TK-4006	0.00	0.00	1.69	0.00	0.00	0.00	0.00
TK-4014	0.00	0.00	1.21	0.00	0.00	0.00	0.00
TK- 4015	0.00	0.00	1.12	0.00	0.00	0.00	0.00
TK-4050	0.00	0.00	0.71	0.00	0.00	0.00	0.00
TK-4060	0.00	0.00	0.91	0.00	0.00	0.00	0.00

TK-4061	0.00	0.00	0.91	0.00	0.00	0.00	0.00
TK-4062	0.00	0.00	7.14	0.00	0.00	0.00	0.00
TK-4063	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Naptha Splitter	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ISOM Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H-501	4.03	2.82	0.18	3,873	0.91	0.25	0.24
H-101 and H-102	12.20	9.57	2.39	22,123	4.90	1.78	1.74
Barge Loading [MLD]	0.00	0.00	19.51	0.00	0.00	0.00	0.00
Barge Loading Oxidizer [MLDOX]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck Loading [TLoad]	0.00	0.00	0.38	0.00	0.00	0.00	0.00
OXIDIZER	0.27	1.44	7.19	145	0.12	0.03	0.03

Table 8 - Potential to Emit After Construction:

Emission Units	Potential to emit after construction						
	NO _x	CO	VOC	CO ₂ e	SO ₂	PM/PM ₁₀	PM _{2.5}
TK-4000	0.00	0.00	1.47	0.00	0.00	0.00	0.00
TK-4001	0.00	0.00	1.47	0.00	0.00	0.00	0.00
TK-4002	0.00	0.00	0.14	0.00	0.00	0.00	0.00
TK-4004	0.00	0.00	1.58	0.00	0.00	0.00	0.00
TK-4006	0.00	0.00	1.71	0.00	0.00	0.00	0.00
TK-4014	0.00	0.00	1.20	0.00	0.00	0.00	0.00
TK- 4015	0.00	0.00	1.12	0.00	0.00	0.00	0.00
TK-4050	0.00	0.00	0.72	0.00	0.00	0.00	0.00
TK-4060	0.00	0.00	2.21	0.00	0.00	0.00	0.00
TK-4061	0.00	0.00	2.21	0.00	0.00	0.00	0.00
TK-4062	0.00	0.00	12.27	0.00	0.00	0.00	0.00
TK-4063	0.00	0.00	12.27	0.00	0.00	0.00	0.00
Naptha Splitter	0.00	0.00	0.79	0.00	0.00	0.00	0.00
ISOM Unit	0.00	0.00	3.72	0.00	0.00	0.00	0.00
H-501R	3.27	1.50	0.25	5,938	1.12	0.38	0.35
H-101R and H-102R	23.89	11.02	1.84	43,323	7.43	2.76	2.57

Barge Loading [MLD]	0.00	0.00	4.65	0.00	0.00	0.00	0.00
Barge Loading Oxidizer [MLDOX]	0.25	1.38	6.18	440	0.72	0.03	0.03
Truck Loading [TLoad]	0.00	0.00	4.22	0.00	0.00	0.00	0.00
OXIDIZER	0.09	0.48	11.59	154	0.06	0.01	0.01

Table 9 - Difference Between Future Potential and Past Actual Emissions:

Emission Units	Potential to Emit After the Baseline 2009 and 2010 Average Emissions Have Been Subtracted						
	NO _x	CO	VOC	CO ₂ e	SO ₂	PM/PM ₁₀	PM _{2.5}
TK-4000	0.00	0.00	0.06	0.00	0.00	0.00	0.00
TK-4001	0.00	0.00	0.34	0.00	0.00	0.00	0.00
TK-4002	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TK-4004	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TK-4006	0.00	0.00	0.02	0.00	0.00	0.00	0.00
TK-4014	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TK- 4015	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TK-4050	0.00	0.00	0.01	0.00	0.00	0.00	0.00
TK-4060	0.00	0.00	1.30	0.00	0.00	0.00	0.00
TK-4061	0.00	0.00	1.30	0.00	0.00	0.00	0.00
TK-4062	0.00	0.00	5.13	0.00	0.00	0.00	0.00
TK-4063	0.00	0.00	12.27	0.00	0.00	0.00	0.00
Naptha Splitter	0.00	0.00	0.79	0.00	0.00	0.00	0.00
ISOM Unit	0.00	0.00	3.72	0.00	0.00	0.00	0.00
H-501R	0.00	0.00	0.07	2,065	0.21	0.13	0.11
H-101R and H-102R	11.69	1.46	0.00	21,195	2.53	0.98	0.83
Barge Loading [MLD]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barge Loading Oxidizer [MLDOX]	0.25	1.38	6.18	440	0.72	0.03	0.03
Truck Loading [TLoad]	0.00	0.00	3.84	0.00	0.00	0.00	0.00
OXIDIZER	0.00	0.00	4.41	8.71	0.00	0.00	0.00

Total	11.94	2.84	39.44	23,709	3.46	1.14	0.97
PSD/NSR Significant Limit	40	100	40	75,000	40	15	10

The proposed changes described in this engineering evaluation do not meet the definition of a major modification of an existing major stationary source because there is not a “significant emissions increase” per the definitions provided in 45CSR14-2.40, 2.74 and 2.75. These proposed changes are not a major modification if they do not cause a significant emissions increase as stated in the applicability criteria provided in section 45CSR14-3.4. No additional analysis is required.

The proposed replacement heaters H-501R is *not subject to regulation* as defined in 40 CFR §51.166(b)(48) to PSD rule 45CSR14 because it falls below 75,000 TPY for existing sources that are not otherwise subject to PSD.

45CSR19 PERMITS FOR CONSTRUCTION AND MAJOR MODIFICATION OF MAJOR STATIONARY SOURCES OF AIR POLLUTION WHICH CAUSE OR CONTRIBUTE TO NONATTAINMENT

EWVI is located in Newell, Hancock County, WV that is an area designated as an attainment area for all criteria pollutants except for PM_{2.5}. Hancock County is a PM_{2.5} nonattainment area for both the 1997 annual and the 2006 24-hour standards by the EPA in 2009. NO_x and SO₂ have been designated by the EPA as precursors to PM_{2.5} and therefore, the major source status of the source for PM_{2.5}, NO_x, and SO₂ is determined under 45CSR19.

The determination of significant emissions increase is provided in Tables 6 through 8 in the 45CSR14 section using the threshold limit for 45CSR19 for the criteria pollutant PM_{2.5} and the PM_{2.5} precursors NO_x and SO₂.

The preconstruction permit program requirements apply to the construction of any new major stationary source or major modification that is major for the pollutant for which the area is designated nonattainment under 40 CFR Part 81, Subpart C. The proposed project is not a major modification because it does not cause a “significant emissions increase” per the applicability criteria in section 3.4.a. This proposed project is not a major modification and no additional analysis is required.

45CSR16 STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES PURSUANT TO 40 CFR PART 60

EWVI is subject to 45CSR16 because they are subject to Federal NSPS requirements that are defined further in the Federal Regulations section.

45CSR21 REGULATION TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF VOLATILE ORGANIC COMPOUNDS

EWVI is not subject to 45CSR21 because they are located in Hancock County. Hancock County is not included in the scope of applicability.

45CSR30 REQUIREMENTS FOR OPERATING PERMITS

EWVI is subject to 45CSR30 and currently operates under permit R30-02900008-2010 (MM03). The applicant submitted a combined application for NSR permit and Title V permit revision.

FEDERAL REGULATIONS:

40 CFR Part 60 NEW SOURCE PERFORMANCE STANDARDS (NSPS):

Subpart Ja STANDARDS OF PERFORMANCE FOR PETROLEUM REFINERIES FOR WHICH CONSTRUCTION, RECONSTRUCTION, OR MODIFICATION COMMENCED AFTER MAY 14, 2007

EPA amended the new source performance standards for process heaters and flares at petroleum refineries and published the amendments in the Federal Register September 12, 2012. With these final amendments, EPA lifted the stay of effectiveness of the process heater and flare requirements in these standards.

It should be noted that only the emission units associated with this permit modification have been reviewed against the final amendments to this subpart.

Process heater H-501R is subject to the requirements of NSPS, Subpart Ja because it meets the applicability requirements in §60.100a and §60.100b.

Process heater H-501R meets the definition of a “fuel gas combustion device”. The final amendments include four subcategories of process heaters. H-501R meets the definition of a “natural draft process heater” which is any process heater in which the combustion air is supplied under ambient or negative pressure without the use of an inlet air

(forced draft) fan. The manufacturer's data sheet provided in the application indicates that the draft type is natural.

EWVI proposed their Monitoring, Recordkeeping, Reporting, and Testing Plan for process heater H-501R in the permit application:

Monitoring	The permittee shall monitor H-501R in accordance with the applicable requirements of 40 CFR60, Subpart Ja.
Recordkeeping	The permittee shall keep a record of the method of determination, the application for, and the approval of any exemption for a fuel gas stream combusted by H-501R. They shall keep a records of discharges treater than 500 lb/day of SO ₂ , and the permittee shall comply with all applicable conditions of 40 CFR 60.7.
Reporting	The permittee shall submit an excess emissions report in conjunction with an applicable event and shall conform to the applicable requirements of 40 CFR 60.107.
Compliance Determination	EWVI will comply with the applicable compliance determination requirements of 40 CFR, Subpart Ja.
Testing	The permittee shall conduct the appropriate performance test to demonstrate compliance to the emission limits according to the requirements of 40 CFR 60.102a, and shall comply with the 40 CFR 60.104a for all requirements applicable to fuel gas combustion devices.

OXIDIZER was modified with the increased throughput in this permit application; therefore OXIDIZER is also subject to NSPS, Subpart Ja.

EWVI proposed their Monitoring, Recordkeeping, Reporting, and Testing Plan for OXIDIZER in the permit application:

Monitoring	The permittee will monitor the PM emissions by conducting visible emissions checks in accordance with 40 CFR 60 Appendix A, Method 9. The permittee shall use a CPMS capable of measuring temperature in the firebox or immediately downstream of the firebox.
Recordkeeping	The permittee will keep a monthly record of the volume and type of each product/product type loaded at each truck loading station and whether or not the VOC emissions were controlled using the loading rack thermal oxidizer. AP-42 emission factors for transportation and marketing of petroleum liquids (Chapter 5.2, 1/95) may be used to estimate emissions. A combined capture and control efficiency of 96.7% may be used for emissions estimations from loading. The permittee will estimate annual benzene emissions using a material balance calculation and the vapor weight of benzene.
Reporting	n/a

Compliance Determination	To determine compliance with the monthly emission rate limits, the permittee will keep monthly records of products loaded and use emission factors from AP-42, Chapter 5.1 (1/95). Compliance with the yearly limit shall be based on a 12-month rolling total. The permittee shall keep a monthly record of the volume and type of each product loaded at each truck loading station and whether or not the VOC emissions were controlled using the loading rack thermal oxidizer. To determine compliance with the annual benzene emission limit ⁶ , the permittee shall estimate the emissions using a material balance calculation.
Testing	The permittee will conduct performance tests on the vapor processing system, per 40 CFR 60.503. The permittee will determine a monitored operating parameter value for the vapor processing system. The permittee shall document the reasons for change in the operating parameter since the previous performance test.

EWVI will demonstrate compliance with this Subpart Ja by demonstrating compliance with the permit requirements.

Subpart Kb

STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS (INCLUDING PETROLEUM LIQUID STORAGE VESSELS) FOR WHICH CONSTRUCTION, RECONSTRUCTION, OR MODIFICATION COMMENCED AFTER JULY 23, 1984

Tanks 4004, 4006, 4014, 4015, and 4050 will be subject to this Subpart as a result of the changes associated with this permit application because it meets the definition of “modification” per §60.2. Demonstration of compliance will be determined by compliance with permit requirements.

Subpart VVa

STANDARDS OF PERFORMANCE FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY FOR WHICH CONSTRUCTION, RECONSTRUCTION, OR MODIFICATION COMMENCED AFTER NOVEMBER 7, 2006

EWVI is currently subject to and permitted for the requirements of this Subpart VVa. The proposed changes submitted in this permit modification do not affect the applicability of this subpart.

EWVI stated in the application that the revamp of the Unifiner process is the replacement of H-501 and that the equipment leak emissions will not change; therefore there was no update of information provided for equipment leaks on the fugitive emissions summary.

Demonstration of compliance will be determined by compliance with permit requirements.

40 CFR 63

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (HAPS) FOR SOURCE CATEGORIES

EWVI is not a major source for HAPs. They are a major source for criteria pollutants. The subparts in this section are those that have area source requirements.

Unless otherwise stated, the writer did not determine whether the applicant is subject to an area source air toxics standard requiring Generally Achievable Control Technology (GACT) promulgated after January 1, 2007 pursuant to 40 CFR 63, including the area source air toxics provisions of 40 CFR 63, Subpart BBBBBB.

Subpart BBBBBB

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORY: GASOLINE DISTRIBUTION BULK TERMINALS, BULK PLANTS, AND PIPELINE FACILITIES

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from area source gasoline distribution bulk terminals, bulk plants, and pipeline facilities. This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

WV DAQ does not have delegation of this Subpart. It therefore, has not been reviewed for applicability for the 45CSR13 permit.

Subpart JJJJJJ

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AREA SOURCES

EWVI is not subject to this subpart because the process heater H-501R meets the "gas-fired boiler" exemption in §63.11195(e). A "gas-fired boiler" includes any boiler that burn gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. The fuel-gas for H-501R is process gas supplemented as needed with natural gas.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

There are no new non-criteria regulated pollutants associated with this permit modification.

AIR QUALITY IMPACT ANALYSIS

The proposed project does not meet the definition of a major modification according to the definitions in 45CSR14 and 45CSR19; therefore, modeling is not required for this permit application.

MONITORING OF OPERATIONS

H-501R:

Added H-501R to existing monitoring requirements established for other process heaters >10 MMBTU/hr to demonstrate compliance with 45CSR2 and 45CSR10. Monitoring, recordkeeping, testing, and reporting requirements per NSPS, Subpart Ja.

Unifiner Platform:

Added monitoring requirement for NSPS, Subpart VVa specifically for affected facilities that were constructed, reconstructed, or modified after November 7, 2006. The current version of the permit has requirements for Subpart VV.

Tanks 4004, 4006, 4014, 4015, and 4050:

Are now subject to NSPS, Subpart Kb including the monitoring requirements per 40 CFR 60.113b and per 40 CFR 60.116b, and the recordkeeping and reporting requirements per 40 CFR 60.115b.

CHANGES TO PERMIT R13-2334S

- General changes to the permit including references to the permit revision, description of change, table of contents, and effective dates.
- Updated Table of Contents to address the changes described in this section.
- Section 1.0 - (1) updated the Emissions Unit table as described in the process description section of the evaluation
- Section 3.5.3 - corrected US EPA address
- Section 4.0 - Revised the cross reference table to include H-501R.
- Section 4.1 - (1) 4.1.6 - revised 45CSR2 PM emission limit for H-500s series heaters and added limit for H-501R; (2) added H501-R to applicability for 4.1.10 and 4.1.11; (3) added H501-R emission limits to 4.1.16 and corrected PM emission rates for PM, PM10, and PM2.5 for H-101R and H-102R process heaters in 4.1.16; (4) added H-501R to applicability for NSPS, Subpart Ja requirements in sections 4.1.17, 18, and 19; (5) 4.1.19 updated

- language to match NSPS, Subpart Ja language from the Federal Register; and (6) 4.1.22 revised H-500S emissions to reflect removal of H-501.
- Section 4.2.7 - added H-501R to the applicability.
 - Section 4.3.1 - added H-501R to the applicability.
 - Section 4.4 - (1) Added H-501R to the applicability of 4.4.7, 4.4.8, 4.4.11, and 4.4.18; (2) added reference to H-501R emission limits to 4.4.11; and (3) 4.4.18 updated the language to match NSPS, Subpart Ja language from the Federal Register.
 - Section 4.5 - (1) added H501-R to the applicability of sections 4.5.1, 4.5.2, and 4.5.5; and (2) updated language to match NSPS, Subpart Ja language since added to the Federal Register.
 - Section 5.0 - (1) Add OXIDIZER to applicability of sections 5.1.8, 5.1.10, 5.1.11, 5.1.12, 5.2.5, 5.3.3, 5.4.4, 5.5.2, and 5.5.3; (2) remove OXIDIZER reference from requirement 5.1.9 because OXIDIZER is now subject to NSPS, Subpart Ja and not Subpart J; and (3) update language to match NSPS, Subpart Ja language since added to the Federal Register in sections 5.1.12, 5.4.4, and 5.5.2.
 - Section 5.1.1 - updated the emission limits for [TLOAD], [OXIDIZER], and [F1] as described in the emissions section of this evaluation.
 - Section 5.1.2 - (1) Revised throughput quantity of gasoline for truck loading and (2) Added 250 hour limit for non-pilot emissions to the main/sour gas flare [F1] in requirement 5.1.2.
 - Inserted 5.4.3 to establish recordkeeping requirements for the operational limitation established for the main/sour gas flare [F1]. Renumbered the remaining requirements in this section accordingly.
 - Section 6.0 - (1) Adding Unifiner/Platformer Unit to applicability; and (2) added 6.1.6 to reference Section 8 of the permit.
 - Requirement 7.1.1 - updated annual tank throughput for gasoline or ethanol from 267,840,300 to 282,320,300.
 - Requirement 7.1.2 - updated the emission rates as follows: Total VOC from 5.31 TPM to 5.35 TPM and from 53.03 TPY to 53.52 TPY; Benzene from 0.79 TPY to 0.81 TPY; and Total HAP from 6.45 TPY to 6.53 TPY.
 - Combined tanks from 7.2.3 into 7.2.2 and deleted 7.2.3 for the NSPS, Subpart Kb requirements. These sections were identical except 7.2.2 applied only to Tank 4050 and 7.2.3 applied to all other tanks subject to NSPS, Subpart Kb. Added tanks 4004, 4006, 4014, 4015, and 4050 to the NSPS, Subpart Kb requirements in sections 7.1.7, 7.2.2, 7.3.4, and 7.3.5 .
 - Added rest of language from §60.115b to 7.3.4 and added reference.
 - Section 8.0 - added 8.1.6, 8.3.1, 8.4.5, and 8.5.4 to address NSPS, Subpart VVa.

RECOMMENDATION TO DIRECTOR

Based on the information provided in the application including all supplemental information provided, Ergon - West Virginia, Inc. will be in compliance with all applicable state and federal air quality regulations if they demonstrate compliance with the permit requirements. It is therefore the recommendation of the writer that permit modification R13-2334T be granted to Ergon, Newell Facility located in Hancock County, WV.

Laura M. Jennings
Permit Engineer

Date