

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2381-AR-1 AFIN: 14-00812

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Delek Logistics Operating, LLC
Approximately 1.55 miles E of Buckner and 0.25 miles N of Highway 82
Buckner, Arkansas 71827

3. PERMIT WRITER:

Elliott Marshall

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Pipeline Transportation of Crude Oil
NAICS Code: 486110

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
8/25/2020	Modification	-Add H ₂ S and Single HAP emissions to SN-02. -Add Biocide usage as SN-06

6. REVIEWER'S NOTES:

Delek Logistics Operating, LLC (DKL)-Buckner Station is a crude oil storage facility. This permitting action is necessary to add hydrogen sulfide (H₂S) emission limits to the truck unloading operations (SN-02), add biocide usage (SN-06) and add usage of corrosion inhibitor to the permit's insignificant activities list as Group A-13 sources. Permitted emissions are increasing by 4.7 tpy VOC and 0.01 tpy H₂S.

Both Biocide and Corrosion Inhibitor usage were originally requested to be added as Insignificant Activities. Biocide usage has been added as SN-06 because concentration and usage limits were required to ensure potential emissions are not exceeded. The facility demonstrated corrosion Inhibitor usage is based on a maximum pump capacity (20 gpm) and that the VOC contents are constant, and was added as A-13 IA.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

All requirements have been met in accordance with Order and Agreement of LIS: 19-072, therefore, the CAO has been closed. This CAO was the result of a self-disclosure, where the facility indicated some NSPS Kb recordkeeping requirements were not being met. There are no active or pending enforcement actions.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N
If yes, were GHG emission increases significant? N

b) Is the facility categorized as a major source for PSD? N

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-03	VOC	NSPS Kb

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N
(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N
If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
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Source	Inapplicable Regulation	Reason
N/A		

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m³), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Only H₂S modeling was performed for this permit revision.

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Benzene	1.6	0.176	0.0132	Y
Ethylbenzene	86.8	9.552	0.0075	Y
n-Hexane	176.2	19.382	0.0911	Y
Toluene	75.4	8.294	0.0208	Y
Xylene	434.19	47.761	0.0296	Y

c) H₂S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H₂S Standards N
 If exempt, explain: _____

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	20 parts per million (5-minute average*)	0.0381 μg/m ³ = 0.0274 ppb (2.74E-05 ppm)	Y
	80 parts per billion (8-hour average) residential area	0.01177 μg/m ³ = 0.0085 ppb	Y
	100 parts per billion (8-hour average) nonresidential area	0.01177 μg/m ³ = 0.0085 ppb	Y

*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

C_p = 5-minute average concentration

C_m = 1-hour average concentration

t_m = 60 minutes

t_p = 5 minutes

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	TCEQ Guidance	<u>lb/hr/source</u> 40 Valves @0.0055 lb/hr/valve 3 Relief Valves @0.0165lb/hr/valve 80 Flanges @0.00024lb/hr/flange	None	N/A	--
02	Calculations	<u>Unloading Emissions</u> 0.6173 lb VOC/hr H ₂ S Content: 0.001%	None	N/A	Based on 7,665 trucks unloaded annually
03	AP-42 & API Equations	Total losses: 1049.08 lb/yr @ 1,460,000 bbl/yr	Seals as specified in 60.112b(a)(2)	Unknown	Internal Floating Roof
04	API Equations	Total losses: 64999.2 lb/yr @ 184,000 bbl/yr	Seals as specified in 60.112b(a)(2)	Unknown	Fixed Roof

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
05	Calculations	<u>Mass emission per year</u> Degassing: 1722.8 lb Refloating: 1722.8 lb	None	N/A	Based on 12 roof landings per year
	AP-42 Chapter 5.2 Chapter 7.1	Saturation factor: 0.60 Loading Loss: lb/1000 gallons True Vapor Pressure: 4.0 psia Molecular weight of vapor: 50 lb/lb-mole Total Losses: 2.6166 lb organic compound/hr	None	N/A	Annual operation time is 11.11 hr/yr
06	SDS	15 wt% VOC Specific Gravity: 1.0178	-	-	design capacity of pump is 20 gal/day

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

15. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

16. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
Facility	Crude Oil Throughput	1,644,000 barrels per consecutive	Monthly	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		12 month period		
SN-03	Inspection	-	As required by §60.113b (a)(1)	
	Design, dimensions and capacity	-	Initial	No
	VOL storage and period	Total should not exceed 1.46 MMBarrels per 12 consecutive months	Varies	No
	Maximum Vapor Pressure	As calculated by §60.116b(e)	Varies	No
SN-06	VOC Content	1.27 lb VOC/gal	-	No
	SDS	-	Up-to-date updated Annually	No

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
03	0%	§18.501	Observation

18. DELETED CONDITIONS:

Former SC	Justification for removal
	None

19. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Fugitive Emissions (Valves, connectors/flanges, pumps)	13			1.7913			0.0409	0.0728
Corrosion Inhibitor				0.5				0.13

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20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
2381-A

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

Facility Name: Delek Logistics
 Operating, LLC
 Permit Number: 2381-AR-1
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			Old Permit	New Permit
\$/ton factor	23.93	Permit Predominant Air Contaminant	12.5	17.2
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	4.7	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	400	
		Annual Chargeable Emissions (tpy)	17.2	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	0	0	0
PM ₁₀	0	0	0
PM _{2.5}	0	0	0
SO ₂	0	0	0
VOC	12.5	17.2	4.7
CO	0	0	0
NO _x	0	0	0
H ₂ S	0	0.01	0.01
Total HAP	0.45	0.45	0