

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0640-AR-6 AFIN: 60-00579

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Delek Logistics Operating, LLC - North Little Rock Terminal
2724 Old Central Airport Rd
North Little Rock, Arkansas 72117

3. PERMIT WRITER:

Alexander Sudibjo

4. NAICS DESCRIPTION AND CODE:

NAICS Description: All Other Support Activities for Transportation
NAICS Code: 488999

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 |
|---------------------|---|---|
| 2/7/2023 | Deminimis | New VCU and increased throughput for all tanks |

6. REVIEWER'S NOTES:

With this de minimis modification, the facility is requesting the following changes:

- Replace the existing VCU (SN-10B) with a new VCU (SN-10C).
- Increase the throughput for all storage tanks.
- Update all tank emissions using calculation methodology of AP-42 Chapter 7, Organic Liquid Storage Tanks, June 2020.
- Separate the throughput limits for SN-10A and SN-10C.
- Update the emissions calculations for SN-01, SN-02, SN-03, and SN-04 using an average of RVP13 for gasoline.

- Update the emissions calculations for SN-01, SN-02, and SN-03 to include the paint absorptance factor for a white shell and shoe mounted secondary seal.
- Remove the annual tank emissions bubble for SN-14, SN-15, SN-16, SN-17, SN-18, SN-19, and SN-21 and add individual annual emission limits for each source.

The facility’s permitted annual emissions are increasing by 2.0 tpy PM/PM₁₀, 1.7 tpy SO₂, 3.3 tpy NO_x, 0.01 tpy benzene, 0.14 tpy cumene, 0.67 tpy isooctane, 0.66 tpy toluene, and 0.68 tpy xylene. The facility’s permitted annual emissions are decreasing by 9.0 tpy VOC, 1.4 tpy CO, and 0.04 tpy hexane.

7. COMPLIANCE STATUS:

As of February 7, 2023, there are no compliance issues with the facility. ECHO (<https://echo.epa.gov/detailed-facility-report?fid=110025042200>) shows no air violation identified as of August 31, 2020.

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?

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) |
|-------------|-----------|--------------------------------------|
| 10A and 10C | VOC | NSPS 40 CFR Part 60 Subpart XX |
| Facility | HAPs | NESHAP 40 CFR Part 63 Subpart BBBBBB |

10. UNCONSTRUCTED SOURCES:

| Unconstructed Source | Permit Approval Date | Extension Requested Date | Extension Approval Date | If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit |
|----------------------|------------------------|--------------------------|-------------------------|---|
| SN-10C | Issuance of #0640-AR-6 | N/A | N/A | N/A |

11. 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 Rule 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit?
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 |
|--------|-------------------------|--------|
| N/A | | |

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

| Source | Pollutant Controlled | Cite Exemption or CAM Plan Monitoring and Frequency |
|--------|----------------------|---|
| N/A | | |

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. 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 DEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Division of Environmental Quality has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

| Pollutant | TLV (mg/m^3) | PAER (lb/hr) = $0.11 \times \text{TLV}$ | Proposed lb/hr | Pass? |
|-----------------------|--------------------------------|---|----------------|-------|
| Benzene | 1.60 | 0.176 | 1.54 | No |
| Ethyl Benzene | 434.19 | 47.76 | 0.31 | Yes |
| Hexane | 176.23 | 19.39 | 1.26 | Yes |
| 2,2,4-TMP (Isooctane) | 1401.47 | 154.16 | 2.01 | Yes |
| Toluene | 75.36 | 8.2896 | 2.46 | Yes |
| Xylene | 434.2 | 47.76 | 1.38 | Yes |

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Division of Environmental Quality to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

| Pollutant | PAIL ($\mu\text{g}/\text{m}^3$) = $1/100$ of Threshold Limit Value | Modeled Concentration ($\mu\text{g}/\text{m}^3$) | Pass? |
|-----------|--|--|-------|
| Benzene | 16.0 | 14.985 | YES |

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

Y

If exempt, explain: the facility does not have H₂S emissions.

15. CALCULATIONS:

| SN | Emission Factor Source (AP-42, testing, etc.) | Emission Factor (lb/ton, lb/hr, etc.) | Control Equipment | Control Equipment Efficiency | Comments |
|--------------------------|---|--|-------------------------------|--|--|
| 01 & 02 Gasoline Tanks | Mitchell Scientific's Emission Master Tanks program | Gasoline (RVP13) VOC: 4,210.23 lb/yr | DEFER | N/A | 500,000,000 gal/yr 8,000 bbl/hr loading rate |
| | EPA Gasoline Speciation | HAPs: 288.64 lb/yr | | | |
| 03 Gasoline Tank | Mitchell Scientific's Emission Master Tanks program | Gasoline (RVP13) VOC: 3,821,86 lb/yr | DEFER | N/A | 500,000,000 gal/yr 8,000 bbl/hr loading rate |
| | EPA Gasoline Speciation | HAPs: 374.43 lb/yr | | | |
| 04 Transmix Storage Tank | Mitchell Scientific's Emission Master Tanks program | Transmix & Ethanol VOC: 5,827.81 lb/yr | IFR | N/A | 43,629,600 gal/yr 8,000 bbl/hr loading rate |
| | EPA Gasoline Speciation | HAPs: 186.59 lb/yr | | | |
| 08 & 09 Tanks | Mitchell Scientific's Emission Master Tanks program | Ethanol & Fuel Additives VOC: 487.02 lb/yr | None | N/A | 840,000 gal/yr 500 gpm loading rate |
| | EPA Gasoline Speciation | HAPs: 138.37 lb/yr | | | |
| 10A Loading Racks & VRU | AP-42 Section 5.2 Draft Eq. 5.2-6 and 5.2-7 | Hourly Based on Gasoline @48,000 gal/hr (worst case) Annual Based on 377,360 M gal * 98.7% = <u>372,454 M gal/yr</u> (less 1.3% loss) EF - <u>24 mg/L</u> = <u>0.20 lb/M gal</u> *48 M gal/hr *0.20 lb/M gal = 9.6 lb/hr 0.20 lb/M gal *372,454 M gal /yr = 74,490.8 lb/yr / 2000 = 37.3 tpy HAPs – ratio SN-04 VOC & HAP Spreadsheet 6000579-D2-Calculations.xls | Carbon Adsorption Bed and VRU | 98.7% vapor capture eff & based on 24 mg/L not % destruction | Assume worst case for hourly vapors sent to the VRU @ <u>gasoline RVP 13.5</u> @8760 hrs/yr 1 lb = 453.6 grams 1 gal = 3.78 liters (L) EF – Emission Factor 24 mg/l * 0.001 mg/g = .024 g / |

| SN | Emission Factor Source (AP-42, testing, etc.) | Emission Factor (lb/ton, lb/hr, etc.) | Control Equipment | Control Equipment Efficiency | Comments |
|---|--|---|-------------------|--|--|
| | | | | | 453.6 g/lb *3.78 L/gal *1000 gal = 0.20 lb/M gal |
| 10B VCU | AP-42, 3.3-1 & 3.3-2 | <u>In lb/MMBtu</u> PM/PM ₁₀ : 0.1 SO ₂ : 0.08 Benzene: 9.33E-04 Toluene: 4.09E-04 Xylene: 2.85E-04 | VCU | - | 48,000 gal/hr 377,360,000 gal/yr Pilot gas 150,000 Btu/hr 515,294 scf |
| | Manufacturer's Spec | VOC: 10.0 mg/L CO: 10.0 mg/L NOx: 4.0 mg/L | | | |
| 11 Loading Rack Fugitive Losses | AP-42 5.2-4 Eq 1 (6/08) Table 5.2-1 ^A & Table 7.1-2 ^B | $L_L = 12.46 * S * P * M / T$ <u>75% Gasoline RVP 11</u> TVP = 6.2 psia @62°F M = Mol Wt = 65 lbs/lb mol S = 0.6 and T = 522°R Uncontrolled Em Rate = 5.77 lbs/M gal of Gasoline <u>25% Diesel</u> TVP = 0.008 psia @62°F M = 130 lbs/lb mol S = 0.6 and T = 522°R Uncontrolled Em Rate = 0.015 lbs/M gal of Diesel <u>Summary Annual tpy</u> .75(5.77) + .25(0.015) = 4.3275 + 0.0038 = 4.3788 lb loss/M gal x 377,360 M gal/yr = (1,652,384 lbs/yr) x 1/2000 = 826.2 tpy x 0.013 loss = 10.74 tpy HAPs – ratio SN-04 VOC & HAP Spreadsheet 6000579-D2- Calculations.xls | None | 1.3% loss Vapors not captured and not routed to control devices (1 - .987 = 0.013) | 98.7% of vapors collected – 1.3% vapor LOSS Based on 75% gasoline & 25% diesel @8760 hrs/yr & Ave LR Temp = 62°F L _L – Loading Loss, Lb/M* gal ^A S – Saturation Factor ^B P – True Vapor Pressure ^B M – Molecular Wt. T – Temp, °R (°+460) *M gallons = 1000 gallons |
| 12 Facility- wide Fugitive (Component Inventory) | Ref: “Emission Factors for Gasoline Marketing”, Feb 1995, EPA- 453.R-93-026, Table 2-3 | <u>lb/hr/source</u> 1,000 Valves @0.000095 lb/hr/valve 2,500 Flanges @0.000017 lb/hr/flange 40 Pump Seals @0.0012 lb/hr/seal HAPs – ratio SN-04 VOC | None | N/A | Component Inventory from permit #0640-AR-2 application, dated 12/04/2009 |

| SN | Emission Factor Source (AP-42, testing, etc.) | Emission Factor (lb/ton, lb/hr, etc.) | Control Equipment | Control Equipment Efficiency | Comments |
|----------------------------|--|--|-------------------|------------------------------|--|
| | | & HAP Spreadsheet 6000579-D2- Calculations.xls | | | |
| 13 Landing Losses | Mitchell Scientific's Emission Master Tanks program | Gasoline (RVP11.5) VOC: 634.87 lb/yr | None | N/A | 6 landings/yr based on SN- 01 capacity 8,000 bbl/hr loading rate |
| | TANKS 4.09d | HAPs: 16.30 lb/yr | | | |
| 14, 15, 16, 21 Tanks | Mitchell Scientific's Emission Master Tanks program | Ethanol <u>VOC in lb/yr</u> SN-14: 4,540.14 SN-15: 4,540.14 SN-16: 4,540.14 SN-21: 3,839.04 | None | N/A | 23,058,000 gal/yr each 500 gpm loading rate |
| 17, 18, 19 Tanks | Mitchell Scientific's Emission Master Tanks program | Biodiesel <u>VOC in lb/yr</u> SN-17: 159.88 SN-17: 159.88 SN-18: 159.88 | None | N/A | 30,713,256 gal/yr each 8,000 bbl/hr loading rate |
| 20 Tank | Mitchell Scientific's Emission Master Tanks program | Diesel VOC: 781.34 lb/yr | None | N/A | 307,440,000 gal/yr 8,000 bbl/hr loading rate |

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

| SN | Pollutants | Test Method | Test Interval | Justification |
|-------|------------|---|---|---|
| 10A/C | VOC | Method 25A – Compliance Testing | 90 days prior to 1/16/13 and once every 5 years thereafter | §19.702, A.C.A., §60.503(a-c), §63.11088 & §63.11092(a)(4) |
| 10A/C | VOC | Method 21 – Vapor Leakage must repair leaks that exceed 10,000 ppm or greater AND that exceed 500 ppm or greater | Monthly | §60.502(b) and (h) and §63.11092(a)(1)(i) |

| SN | Pollutants | Test Method | Test Interval | Justification |
|----------|--|---|---|--|
| Facility | VOC Fugitive Leaks | Detection methods incorporating sight, sound, or smell are acceptable for all fittings | Monthly | §60.502(j), ' 60.505(c) and option 1(d) table 2 of 6B part 63 |
| 10A/B | VOC | Pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), capable of measuring up to 500 mm of water gauge pressure w/ √2.5 mm of water precision | Every tank truck | §60.502(h), §60.503(d) and §63.11095(a)(2) |
| 10A/C | VOC | Training drivers in the proper hookup procedures and posting visible reminder signs | Every tank truck Driver - At least once per year per driver | ' 60.502(g) for terminal=s and the tank truck=s vapor collection systems are connected properly during each loading of a gasoline tank truck |
| 12 | Component Inventory & replacement or additions | None | Keep for Life of Facility, Update as changes occur | §19.705 |

17. 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) |
|----------|---|--|----------------------------|--------------|
| Facility | Pressure in the Delivery Tank Trucks | Pressure Measurement Device (liquid manometer, magnehelic gauge, or equivalent instrument) capable of measuring up to 500 mm of water gauge pressure ±2.5 mm | On-going Every Delivery | N |
| 10A/C | To measure organic compound concentration in the exhaust air stream mg VOC /L of gasoline. Maximum op parameter is 24 mg/l (eq 1.53% propane) based on a rolling 6-hour average | CEMS unit is installed on VRU/VCU. Unit converts HC concentration (mg/L) using conversion factor of 1% propane = 15.7 mg/L CEMS records emission data | On-going | N |

| SN | Parameter or Pollutant to be Monitored | Method (CEM, Pressure Gauge, etc.) | Frequency | Report (Y/N) |
|----|--|---|-----------|--------------|
| | | every 6 seconds, compute 1-minute average. A rolling 6-hour average is computed using the last six 1-hour rolling average blocks. | | |

18. 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) |
|---------------------|---|--|--|--------------|
| 01, 02, and 03 each | Gasoline, Ethanol, Jet Fuel, and Diesel Combined | 500,000,000 gal/ consec. 12-mos | Monthly | No |
| 04 | Mixture of Fuel Types (either Transmix or Ethanol) | 43,629,600 gal/ consec. 12-mos | Monthly | No |
| 08 and 09 each | Gasoline, Ethanol, Jet Fuel, Diesel, and Additives Combined | 840,000 gal/ consec. 12-mos | Monthly | No |
| All Tanks | Landing Events | 6 events/ consec. 12-mos | Monthly | No |
| 10A | Gasoline, Ethanol, Jet Fuel, and Diesel Combined | 51,877,000 gal/ consec. 12-mos 51,877,000 gal/mo 48,000 gal/hr | Daily & Monthly | No |
| 10C | Gasoline, Ethanol, Jet Fuel, and Diesel Combined | 630,720,000 gal/ consec. 12-mos 34,560,000 gal/mo 72,000 gal/hr | Daily & Monthly | No |
| 10A/C | Performance Tests | VOC nte 24 mg/L (permit limit) VOC nte 35 mg/L (NSPS XX limit) VOC nte 80 mg/L (NESHAP BBBB) | 90 days prior to 1/16/13 (last test) and Once every 5 years thereafter Keep for Life of VRU/VCU | Yes |
| Facility | Gasoline Cargo Tank Vapor Tightness §63.11094(c)(2) | Must have documentation – Facility has | On-going Every tank truck must have | N |

| SN | Recorded Item | Permit Limit | Frequency | Report (Y/N) |
|-----------------|---|---|---|--------------|
| | | Terminal Automation System | documentation | |
| Facility | Driver training in the hookup procedures and posting visible reminder signs at the loading racks | Assure proper connection during each loading of a gasoline tank truck | On-going | N |
| Facility | Gauge pressure in the delivery tank | Nte 4,500 pascals (450 mm of water) during product loading | On-going | N |
| Facility | Detection of Leak that exceeds 10,000 ppm or greater AND that exceeds 500 ppm or greater Record: date, findings, determination method, corrective action & inspector name & sig | Fix leak within 15 calendar days | Monthly and immediately prior to performance test of VRU/VCU, keep for 2 years, report semiannually | N |
| 13 | Facility Inventory of system components and replacement or additions, i.e., number of flanges, fittings, connectors, etc. | None | Keep for Life of Facility, Update as changes occur | N |
| Facility | Tank Truck Vapor Tightness | Do not fill tank trucks w/o vapor tightness documentation | Documentation kept up-to-date On-going | N |
| Facility | Non-vapor-tight gasoline tank Truck §60.502(e)(4) | None allowed – if tank truck w/o doc filled must report semi-annually | Semi-annually if this occurs | Yes |
| Facility | Alternatives to keeping paper records on site | (1) electronic copy of each record is instantly available at the terminal (2) terminal automation system | The facility has notified Department in writing that terminal is using terminal automation system. On-going | |
| 14, 15, 16, and | Ethanol | 23,058,000 gal/ | Monthly | No |

| SN | Recorded Item | Permit Limit | Frequency | Report (Y/N) |
|---------------------|---------------|------------------------------------|-----------|--------------|
| 21 each | | consec. 12-mos | | |
| 17, 18, and 19 each | Biodiesel | 30,713,256 gal/ consec. 12-mos | Monthly | No |
| 20 | Diesel | 307,440,000 gal/ consec. 12-mos | Monthly | No |

19. OPACITY:

| SN | Opacity | Justification for limit | Compliance Mechanism |
|-----|---------|-------------------------|-----------------------|
| 10C | 0% | Reg.18.501 | Inspector Observation |

20. DELETED CONDITIONS:

| Former SC | Justification for removal |
|-----------|---------------------------|
| | N/A |

21. 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 |
| 550 gallon Tote storing Diesel fuel additive | A-13 | | | 0.0003 | | | | |
| Underground Tank Sump #1 | A-3 | | | 0.278 | | | | |

22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

| Permit # |
|-----------|
| 0640-AR-5 |

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

