

STATEMENT OF BASIS

For the issuance of Air Permit # 0573-AOP-R13 AFIN: 70-00040

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

El Dorado Chemical Company
4500 North West Avenue
El Dorado, Arkansas 71730

3. PERMIT WRITER:

Joseph Hurt

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Nitrogenous Fertilizer Manufacturing
NAICS Code: 325311

5. SUBMITTALS:

1/27/2012

6. REVIEWER'S NOTES:

El Dorado Chemical Company (EDCC) owns and operates a chemical manufacturing facility located at 4500 North West Avenue in El Dorado, Arkansas. With this modification the facility requested to incorporate ADEQ's Continuous Emissions Monitoring Systems (CEMS) Conditions for the stack gas sampling system at the E2 Plant Chemical Steam Scrubber (SN-41). There are no permitted emission changes with this modification.

7. COMPLIANCE STATUS:

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

The last inspection, performed on July 5, 2011, indicated that the facility was in compliance at the time of inspection.

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8. PSD APPLICABILITY:

a. Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

b. Is the facility categorized as a major source for PSD? Y

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

If yes, explain why this permit modification not PSD?

This modification did not require a PSD review.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

| Source | Pollutant | Regulation (NSPS, NESHAP or PSD) |
|--------|---|-------------------------------------|
| SN-41 | PM ₁₀ | PSD |
| SN-13 | NO _x | 40 CFR Part 60, Subpart G |
| SN-07 | SO ₂ and sulfuric acid mist | 40 CFR Part 60, Subpart H |
| SN-25 | There are no specific emission limits or pollutants identified, but the rules generally regulate HAPs | 40 CFR Part 63, Subpart CCCCC |

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

| Pollutant | Emission Rate (lb/hr) | NAAQS Standard ($\mu\text{g}/\text{m}^3$) | Averaging Time | Highest Concentration ($\mu\text{g}/\text{m}^3$) | % of NAAQS |
|------------------|-----------------------|---|--|--|------------|
| PM ₁₀ | 161.6 | 50 | Annual | 40.23089* | 80.47 % |
| | | 150 | 24-Hour | 136.49246* | 91.00 % |
| SO ₂ | 600.2 | 80 | Annual | 13.29965 | 16.63 % |
| | | 1300 | 3-Hour | 555.91071 | 42.77 % |
| | | 365 | 24-Hour | 129.21823 | 35.41 % |
| VOC | 18.5 | 0.12 | 1-Hour (ppm) | N/A | N/A |
| CO | 24.0 | 10,000 | 8-Hour | 36.35510 | 0.37 % |
| | | 40,000 | 1-Hour | 89.98168 | 0.23 % |
| NO _x | 592.2 | 100 | Annual | 12.34876 | 12.35 % |
| Pb | -- | 0.15 | Rolling 3-month Period over 3 years (not to be exceeded in any 3 month period) | N/A | N/A |

* - Includes background (27 $\mu\text{g}/\text{m}^3$ for annual average, 53 $\mu\text{g}/\text{m}^3$ for 24-hour average). Also includes modeling PM₁₀ with startup and shutdown limits.

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/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? |
|------------------|--------------------------------|---|----------------|-------|
| Hexane | 176.2 | 19.3 | 0.6 | Yes |
| HNO ₃ | 5.1 | 0.567 | 16.8 | NO |

| Pollutant | TLV (mg/m ³) | PAER (lb/hr) = 0.11 × TLV | Proposed lb/hr | Pass? |
|--------------------------------|-----------------------------|------------------------------|----------------|-------|
| H ₂ SO ₄ | 0.2 | 0.022 | 2.89 | NO |
| NH ₃ | 17.4 | 1.9 | 168.8 | NO |
| SO ₃ | 1.0 ¹ | 0.11 | 0.05 | Yes |

1. Obtained from Texas' Effects Screening Level (ESL) document.

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 Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

| Pollutant | PAIL (μg/m ³) = 1/100 of Threshold Limit Value | Modeled Concentration (μg/m ³) | Pass? |
|--------------------------------|---|---|-------|
| HNO ₃ | 51.0 | 23.17783 | YES |
| H ₂ SO ₄ | 2.0 | 0.46782 | YES |
| NH ₃ | 174 | 113.24319 | YES |

Other Modeling:

Odor:

Odor modeling for sources emitting styrene.

| Pollutant | Threshold value 1-hour average | Modeled Concentration (μg/m ³) | Pass? |
|-----------|-----------------------------------|---|-------|
| Styrene | 1361 μg/m ³ | N/A | N/A |

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*) | 0.056 ppm (47.5 μg/m ³) | YES |
| | 80 parts per billion (8-hour average) residential area | 12.18 (17 μg/m ³) | YES |
| | 100 parts per billion (8-hour average) nonresidential area | 12.18 (17 μg/m ³) | YES |

*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

12. CALCULATIONS:

| SN | Emission Factor Source | Emission Factor | Control Equipment | Control Equipment Efficiency | Comments |
|----|------------------------|---|------------------------|------------------------------|--|
| 05 | Testing | $PM_{10} - 13.0$ lb/hr, 0.96 lb of PM_{10} per ton of ammonium nitrate produced. With SN-17's exhaust routed to SN-05 21.6 lb/hr x $(1-0.95) = 1.1$ lb/hr PM | Brinks Scrubber | - | 97% particulate control efficiency. 95% particulate control efficiency is used in calculations as Brinks scrubber control efficiencies for the exhaust from SN-17 passing thru Brinks scrubber. |
| | Engineering Estimate | $3.5 + 5.0 = 8.5$ lb/hr NH_3 | Brinks Scrubber | - | - |
| 06 | Testing | $PM_{10} - 67.0$ lb/hr, 0.96 lb of PM_{10} per ton of ammonium nitrate produced. | - | - | Uncontrolled. Maximum prill production rate is 54 tons/hour. |
| 07 | Testing | $SO_2 - 600$ lb/hr | Brinks Mist Eliminator | - | Remain the previous permitted limit |
| | Testing | $H_2SO_4 - 0.123$ lb/ton | Brinks Mist Eliminator | - | - |
| 08 | Testing | $NO_x - 200.1$ lb/hr Ammonia - 40.0 lb/hr | Refrigeration SCR | ~98.5% | 11.5 lb/ton x 17.4 ton/hr = 200.1 lb/hr |

| SN | Emission Factor Source | Emission Factor | Control Equipment | Control Equipment Efficiency | Comments |
|----|--|--|-------------------------|------------------------------|---|
| 09 | Testing | NO _x - 200.1 lb/hr Ammonia - 40.0 lb/hr | Refrigeration SCR | ~98.5% | 11.5 lb/ton x 17.4 ton/hr = 200.1 lb/hr |
| 10 | AP-42 | NO _x - 10.0 lb/ton | best operation | - | - |
| | Highest lb/hr from Stack Test results of 2001-2004 | HNO ₃ - 0.389 x 1.25 x 40/8.5 = 2.3 lb/hr +1.1 lb/hr from car barn NO _x - 3.3 x 1.25 x 40/8.5 = 19.5 lb/hr | - | - | Maximum nitric acid production rate is 8.5 tons/hr, and maximum nitric acid blend production is 40 tons/hr. Stack test + 25% safety factor. |
| 13 | NSPS | 3.0 lb/ton of acid | refrigerated absorption | - | - |
| 14 | Testing | PM ₁₀ - 44.2 lb/hr | none | - | Hourly emission rate increase as a result of a fail stack testing. 44.2 lb/hr is based on March 2, 2004 stack test data. Average + Std. Deviation = 36.18 + 8.0 38.5 tph of AN production maximum |
| 15 | Testing | PM ₁₀ - 17.0 lb/hr | none | - | 38.5 tph of AN production maximum |
| | Testing | NH ₃ - 18.0 lb/hr | none | - | 38.5 tph of AN production maximum |

| SN | Emission Factor Source | Emission Factor | Control Equipment | Control Equipment Efficiency | Comments |
|-----------|---|---|------------------------|------------------------------|-----------------------------------|
| 16A & 16B | AP-42 | PM ₁₀ – 7.6 lb/MMSCF SO ₂ – 0.6 lb/MMSCF VOC – 5.5 lb/MMSCF CO – 84 lb/MMSCF NO _x - 280 lb/MMSCF | none | - | - |
| 17 | Testing | PM ₁₀ – 21.6 lb/hr | Pease-Anthony Scrubber | - | Routed to SN-05 |
| | Testing | NH ₃ – 5.0 lb/hr | Pease-Anthony Scrubber | - | Routed to SN-05 |
| 18 | Process Knowledge | PM ₁₀ – 0.033 lb/ton | Baghouse | - | 38.5 tph of AN production maximum |
| 19 | PM – 50,556 scfm x 011677 lb/mmft ³ x 60 min/hr x 1.2 NH ₃ - 50,556 scfm x 25 ppm x 17.1 lb/lb-mol x lb-mol/385.2 ft ³ 60min/hr x 1.2 | - | - | - | |
| 21 | Testing | PM ₁₀ – 0.1 lb/ton | Brinks Scrubber | - | 38.5 tph of AN production maximum |
| | Testing | NH ₃ – 1.0 lb/ton | Brinks Scrubber | - | 38.5 tph of AN production maximum |

| SN | Emission Factor Source | Emission Factor | Control Equipment | Control Equipment Efficiency | Comments |
|----|------------------------|---|----------------------|------------------------------|---|
| 22 | CEM | NO _x - 3.0 lb/ton | cryogenic absorption | - | - |
| | Process Knowledge | HNO ₃ - 10.0 lb/hr | cryogenic absorption | - | - |
| 25 | TANKS3 | VOC | none | - | - |
| 26 | TANKS3 | NH ₃ | none | - | - |
| 27 | AP-42 | PM ₁₀ - 0.0001 lb/ton | none | - | - |
| 28 | AP-42 | PM ₁₀ - 0.0001 lb/ton | none | - | - |
| 29 | AP-42 | HNO ₃ - 0.53 lb/1000 gallons | none | - | - |
| 30 | AP-42 Section 5.2 | H ₂ SO ₄ - 0.0281 lb/1000 gallons | none | - | $L_L = 12.46 \times \text{SPM/T}$ $= 12.46 \times 1.45 \times 0.01 \times 98.06/630$ |
| 31 | SOCMI | NH ₃ - 0.5 lb/hr | none | - | - |
| 32 | SOCMI | NH ₃ - 1.3 lb/hr | none | - | - |
| 33 | Process Knowledge | NO _x - 1.9 lb/hr | none | - | - |
| | Process Knowledge | HNO ₃ - 1.8 lb/hr | none | - | - |
| 34 | Process Knowledge | PM ₁₀ - 0.7 lb/ton x 1.16 ton/hr | none | - | - |
| 35 | Process Knowledge | PM ₁₀ - 2.0 lb/hr | baghouse | 99% | - |

| SN | Emission Factor Source | Emission Factor | Control Equipment | Control Equipment Efficiency | Comments |
|----|--|---|-------------------------|---|--|
| 38 | $EF_{PM} = \text{Total liquid drift (lb/1000 gal)} \times \text{TDS Fraction (ppm)}$ $= 1.7 \text{ lb/1000 gal} \times 1,560 \text{ ppm}$ $PM_{10} = EF_{PM} \times \text{flowrate}$ $= 9,000 \text{ gpm} \times EF_{PM}$ | | | 0.17 lb/1000 gal is design drift loss percent provided by AP-42. Table 13.4-1 | |
| 39 | $EF_{PM} = \text{Total liquid drift (lb/1000 gal)} \times \text{TDS Fraction (ppm)}$ $= 1.7 \text{ lb/1000 gal} \times 1,560 \text{ ppm}$ $PM_{10} = EF_{PM} \times \text{flowrate}$ $= 14,000 \text{ gpm} \times EF_{PM}$ | | | 1.7 lb/1000 gal is design drift loss percent provided by AP-42. Table 13.4-1 | |
| 40 | Engineering estimate | NH ₃ – 1.6 lb/hr during loading | | | 1.6 lb/hr per truck x 2 trucks per day |
| 41 | Stack testing | NH ₃ – 10.0 lb/hr PM/PM10 – 3.3 lb/hr | Chemical steam scrubber | - | 24-hr BACT limit is 13.7 lb/hr 30-day rolling BACT limit is 3.3 lb/hr |

| SN | Emission Factor Source | Emission Factor | Control Equipment | Control Equipment Efficiency | Comments |
|----|--|-----------------|-------------------|--|----------|
| 42 | $EF_{PM} = \text{Total liquid drift (lb/1000 gal)} \times \text{TDS Fraction (ppm)}$ $= 0.17 \text{ lb/1000 gal} \times 1,560 \text{ ppm}$ $PM_{10} = EF_{PM} \times \text{flowrate}$ $= 16,000 \text{ gpm} \times EF_{PM}$ | - | - | 0.17 lb/1000 gal is design drift loss percent provided by manufacturer. | |
| 43 | $EF_{PM} = \text{Total liquid drift (lb/1000 gal)} \times \text{TDS Fraction (ppm)}$ $= 1.7 \text{ lb/1000 gal} \times 1,560 \text{ ppm}$ $PM_{10} = EF_{PM} \times \text{flowrate}$ $= 2,000 \text{ gpm} \times EF_{PM}$ | | | 1.7 lb/1000 gal is design drift loss percent provided by AP-42. Table 13.4-1 | |
| 44 | Mass Balance for sulfur oxides and sulfuric acid. Stack test from similar plant plus a safety factor of 25%. | Scrubber | - | - | |
| 46 | $3000 \text{ gpm} \times 0.000064 \times 1,560 \text{ ppm} = 0.2 \text{ lb/hr } PM_{10}$ | - | - | 0.0064% is design drift loss percent provided by manufacturer. | |

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

| SN | Pollutants | Test Method | Test Interval | Justification |
|--------------|--|---------------------------|---|--|
| 10 | NO _x | 7E | Every five years | Necessary for efficiency check on Venturi & Packed Tower Scrubber |
| 10 | HNO ₃ | Approved method | Every five years | Necessary for efficiency check on Venturi & Packed Tower Scrubber |
| 07 | SO ₂ | 6C | Initial performance test | NSPS Requirement |
| 05 | PM ₁₀ | Approved method | Every five years to do an analysis. See Specific Condition 64. | Necessary to prove that PSD has not been triggered. |
| 17 | NH ₃ | Approved Method | Every five years or upon failure, pass two consecutive stack testings to go back to the five years cycle. | Necessary to prove that PSD has not been triggered. |
| 14, 15, & 21 | PM ₁₀ | Method 5 or 201A, and 202 | Within 180 days of issuance of permit 0573-AOP-R12 and annually thereafter for SN-14 and SN-21. Annually for SN-15. | Necessary to prove that PSD has not been triggered. |
| 15 | NH ₃ | Approved method | Annually until 2 consecutive passes, then once every 5 years | Necessary to prove adherence to the non-criteria pollutant strategy. |
| 21 | NH ₃ | Approved method | Annually until 3 consecutive passes, then once every 3 years | Necessary to prove adherence to the non-criteria pollutant strategy. |
| 44 | SO ₂ NO _x H ₂ SO ₄ HNO ₃ | Approved method | Every five years | Necessary to prove adherence to the non-criteria pollutant strategy. |
| 08 & 09 | NH ₃ | CTM-027 | Every five years | Verify emissions |

14. 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 | Frequency | Report (Y/N) |
|---------|--|---|--------------|--------------|
| 13 & 22 | NO _x emission rate | CEM | Continuously | Y |
| 07 | SO ₂ emission rate | CEM | Continuously | Y |
| 08 & 09 | NO _x emission rate | CEM | Continuously | Y |
| 41 | Ammonia and particulate emission rates | Daily sampling consisting of two 12-hour composite sample | Continuously | Y |

15. 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) |
|--------------------|-------------------------------------|---------------------------------|-----------|--------------|
| 08 & 09 | weak nitric acid production | 304,775 tons/12 months | Monthly | Y |
| 13 | weak nitric acid production | 140,000 tons/12 months | Monthly | Y |
| 22, 10, & Facility | concentrated nitric acid production | SN-22 - 118,260 tons/12 months; | Monthly | Y |
| 10 | Scrubber parameter | hydrogen peroxide concentration | Daily | N |
| 29 | nitric acid shipped | 200,000 tons/12 months | Monthly | Y |
| 07 | Sulfuric acid production | 200,750 ton/12 months | Monthly | Y |
| 30 | Sulfuric acid shipped | 200,750 tons/12 months | Monthly | Y |
| All E2 Plant | Production | 473,040 tons/12 months | Monthly | Y |

| SN | Recorded Item | Permit Limit | Frequency | Report (Y/N) |
|--------------|--|--|-----------|--------------|
| 05 | Scrubber liquid flow rate for each scrubber Gas pressure drop across unit Scrubber liquid pH | 225 gal/min (minimum) 2.5 in. H ₂ O (minimum) 0.5 – 4.5 | Daily | N |
| 15 | Scrubber liquid flow rate pH Amperage | 80 gal/min (minimum) 0.5 – 4.5 290 amp (minimum) | Daily | N |
| 16A & 16B | Hours of Operation | Both boilers shall not operate at the same time for more than 240 hours per year | Monthly | Y |
| 17 | Scrubber liquid flow rate (dual scrubber) pH Amperage | 120 gal/min (minimum) 0.5 – 6.0 100 amp (minimum) | Daily | N |
| 18 | Baghouse Pressure Drop | 0.5 – 8.0 in H ₂ O | Daily | N |
| 21 | Liquid Gas Pressure to Top Spray Nozzles Gas Pressure Drop Across Unit pH | 80 – 100 psi _g 2.5 in H ₂ O (minimum) 0.5 – 4.5 | Daily | N |
| All KT plant | production | 252,000 tons/12 months | Monthly | Y |
| 25 | usage of gasoline | 40,000 gallons/12 months | Monthly | Y |

| SN | Recorded Item | Permit Limit | Frequency | Report (Y/N) |
|--|--|--|----------------------------|--------------|
| 37 | minimum gas pressure | 10 in. H ₂ O (minimum) | When scrubber in operation | N |
| 38 | Total Dissolve solid | 1,560 ppm | Weekly | N |
| 39 | Total Dissolve solid | 1,560 ppm | Weekly | N |
| 40 | Loading tonnage | no more than 468,660 tons | Monthly | N |
| 41 | BACT Limit | 24-hour Average 0.223 lb/ton (13.7 lb/hr) | Daily | Y |
| | | 30-day Average 0.054 lb/ton (3.3 lb/hr) | Monthly | Y |
| 42 | Total Dissolve solid | 1,560 ppm | Weekly | N |
| 43 | Total Dissolve solid | 1,560 ppm | Weekly | N |
| 46 | Total Dissolve solid | 1,560 ppm | Weekly | N |
| 44 | Amount of Oleum offload into the storage tank Percent strength of the Oleum Amount of mixed acid produced. | 394,000 tons 30% 219,000 tons | Monthly | N |
| | Scrubber liquid flow rate for each scrubber Gas pressure drop across unit Scrubber liquid pH | 5.0 gal/min (minimum) 10 – 35 in. H ₂ O 0.5 – 4.5 | Daily | N |
| 05, 06, 14, 15, 16A, 16B, 18, 19, & 21 | PM Emissions Inventory | 281.0 tpy | Monthly | Y |

16. OPACITY:

| SN | Opacity | Justification for limit | Compliance Mechanism |
|-------------------------|---------|--|----------------------|
| 12, 18, & 35 | 5% | Department Guidance | Daily Observation |
| 16A & 16B | 5% | Department Guidance | Inspection |
| 08 & 09 | 10% | Compliance assurance for SCR operation | Daily Observation |
| 07 & 13 | 10% | NSPS limit | Daily Observation |
| 21, 22, & 27 | 10% | Department Guidance | Daily Observation |
| 14, 19, & 41 | 15% | Department Guidance | Daily Observation |
| 05, 10, 11, 15, 34 & 44 | 20% | Previous permit | Daily Observation |
| 06 & 28 | 25% | Previous permit | Daily Observation |

17. DELETED CONDITIONS:

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

18. GROUP A INSIGNIFICANT ACTIVITIES

Criteria Pollutants and HAPs:

| Source Name | Group A Category | Emissions (tpy) | | | | | | |
|------------------------------------|------------------|---------------------|-----------------|-------|------|-----------------|--------|-------|
| | | PM/PM ₁₀ | SO ₂ | VOC | CO | NO _x | HAPs | |
| | | | | | | | Single | Total |
| Diesel Storage Tank (500 gal) | A-3 | | | 0.001 | | | 0.001 | 0.001 |
| Diesel Storage Tank (1,000 gal) | A-3 | | | 0.001 | | | 0.001 | 0.001 |
| Diesel Storage Tank (2,000 gal) | A-3 | | | 0.002 | | | 0.002 | 0.002 |
| Emergency Fire Pump Engine (80 Hp) | A-13 | 0.04 | 0.04 | 0.05 | 0.13 | 0.62 | 0.05 | 0.05 |
| Ammonia Flares | A-13 | 0.01 | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Sulfur Unloading/Storage | A-13 | | | | | | | |

| Source Name | Group A Category | Emissions (tpy) | | | | | | |
|---------------------------|------------------|---------------------|-----------------|-----|----|-----------------|--------|-------|
| | | PM/PM ₁₀ | SO ₂ | VOC | CO | NO _x | HAPs | |
| | | | | | | | Single | Total |
| Air Liquide Cooling Tower | A-13 | 1.0 | | | | | | |
| Ammonia Offloading | A-13 | | | | | | | |

Non-Criteria Pollutants:

| Source Name | Group A Category | Emissions (tpy) | | | | | | |
|--------------------------|------------------|------------------|-----------------|----------|--|--|--|--|
| | | H ₂ S | NH ₃ | Reserved | | | | |
| Ammonia Flares | A-13 | | 0.1 | | | | | |
| Sulfur Unloading/Storage | A-13 | 0.13 | | | | | | |
| Ammonia Offloading | A-13 | | 0.44 | | | | | |

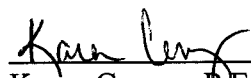
19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

| |
|--------------|
| Permit # |
| 0573-AOP-R12 |

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



 Karen Cerney, R/E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 08-30-11

Facility Name: El Dorado Chemical Company
 Permit Number: 0573-AOP-R13
 AFIN: 70-00040

| | | | |
|---------------|--------------|-----------------------------------|------|
| \$/ton factor | 22.65 | Annual Chargeable Emissions (tpy) | 3657 |
| Permit Type | Modification | Permit Fee \$ | 1000 |

| | |
|---|--------------------------|
| Minor Modification Fee \$ | 500 |
| Minimum Modification Fee \$ | 1000 |
| Renewal with Minor Modification \$ | 500 |
| Check if Facility Holds an Active Minor Source or Minor Source General Permit | <input type="checkbox"/> |
| If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$ | 0 |
| Total Permit Fee Chargeable Emissions (tpy) | 0 |
| Initial Title V Permit Fee Chargeable Emissions (tpy) | |

HAPs not included in VOC or PM: Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride

Air Contaminants: All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensable PM, H2S in TRS, etc.)

| Pollutant (tpy) | Check if Chargeable Emission | Old Permit | New Permit | Change in Emissions | Permit Fee Chargeable Emissions | Annual Chargeable Emissions |
|--------------------------------|-------------------------------------|------------|------------|---------------------|---------------------------------|-----------------------------|
| PM | <input checked="" type="checkbox"/> | 334.1 | 334.1 | 0 | 0 | 334.1 |
| PM ₁₀ | <input type="checkbox"/> | 334.1 | 334.1 | 0 | | |
| SO ₂ | <input checked="" type="checkbox"/> | 401.9 | 401.9 | 0 | 0 | 401.9 |
| VOC | <input checked="" type="checkbox"/> | 4.9 | 4.9 | 0 | 0 | 4.9 |
| CO | <input type="checkbox"/> | 52.3 | 52.3 | 0 | | |
| NO _x | <input checked="" type="checkbox"/> | 2410.3 | 2410.3 | 0 | 0 | 2410.3 |
| Hexane | <input type="checkbox"/> | 1.2 | 1.2 | 0 | | |
| HNO ₃ | <input checked="" type="checkbox"/> | 67.7 | 67.7 | 0 | 0 | 67.7 |
| H ₂ SO ₄ | <input type="checkbox"/> | 12.58 | 12.58 | 0 | | |
| NH ₃ | <input checked="" type="checkbox"/> | 438.1 | 438.1 | 0 | 0 | 438.1 |
| SO ₃ | <input type="checkbox"/> | 0.18 | 0.18 | 0 | | |