

# ADEQ

ARKANSAS  
Department of Environmental Quality

**JUN 18 2012**

Kyle Wimsett, Environmental, Health, and Safety Manager  
El Dorado Chemical Company  
P.O. Box 231  
El Dorado, AR 71730

Dear Mr. Wimsett:

The enclosed Permit No. 0573-AOP-R13 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 1/27/2012.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 0573-AOP-R13 for the construction, operation and maintenance of an air pollution control system for El Dorado Chemical Company to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as provided under Chapter Six of Regulation No. 8, Administrative Procedures, Arkansas Pollution Control and Ecology Commission. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,



Mike Bates  
Chief, Air Division

# ADEQ OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 0573-AOP-R13

IS ISSUED TO:

El Dorado Chemical Company  
4500 North West Avenue  
El Dorado, AR 71730  
Union County  
AFIN: 70-00040

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

November 24, 2010 AND November 23, 2015

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:



Mike Bates  
Chief, Air Division

JUN 18 2012

Date

Table of Contents

SECTION I: FACILITY INFORMATION ..... 5

SECTION II: INTRODUCTION..... 6

    Summary of Permit Activity..... 6

    Process Description..... 6

*East and West Nitric Acid Plants*..... 6

*DM Weatherly Nitric Acid Plant (DMW Plant)*..... 7

*Nitric Acid Vent Collection System*..... 8

*Hoechst-UHDE Direct Strong Synthesis Nitric Acid Plant (DSN Plant)* ..... 8

*Sulfuric Acid Plant*..... 9

*E2 Ammonium Nitrate Plant* ..... 11

*KT Ammonium Nitrate Plant* ..... 11

*Mixed Acid Plant*..... 12

*Natural Gas Fired Boilers* ..... 12

    Regulations ..... 13

    Emission Summary ..... 14

SECTION III: PERMIT HISTORY..... 18

SECTION IV: SPECIFIC CONDITIONS..... 24

East and West Regular Nitric Acid Plants ..... 24

    SN-08 and SN-09 East and West Nitric Acid Plant..... 24

    SN-29 Nitric Acid Loading..... 27

    SN-33 Production Fugitive Emissions..... 28

    SN-42 East and West Nitric Acid Plant Cooling Tower..... 29

DM Weatherly Nitric Acid Plant ..... 30

    SN-13 DMW Nitric Acid Plant..... 30

    SN-38 DMW Nitric Acid Plant Cooling Tower ..... 32

Nitric Acid Vent Collection System ..... 33

    SN-10 Nitric Acid Vent Collection System..... 33

Hoescht-UHDE Direct Strong Nitric Acid Plant..... 35

    SN-22 UHDE Direct Strong Nitric Acid Plant ..... 35

    SN-39 DSN Plant Cooling Tower..... 38

Sulfuric Acid Plant..... 39

    SN-07 Sulfuric Acid Plant ..... 39

    SN-30 Sulfuric Acid Loading ..... 43

    SN-46 Sulfuric Acid Plant Cooling Tower..... 44

E2 Ammonium Nitrate Plant ..... 45

    SN-05, SN-17, and SN-41 Scrubbers ..... 45

    SN-06 Ammonium Nitrate Prill Tower Fans..... 52

    SN-19 E2 Plant Barometric Tower ..... 53

    SN-28 E2 Plant HDAN/LDAN Loading ..... 54

    SN-34 E2 Plant Solution Reactor ..... 55

KT Ammonium Nitrate Plant..... 56

    SN-14 LDAN Prill Tower..... 56

    SN-15, SN-18, and SN-21 KT Plant Dryer/Cooler, Baghouse, and Scrubber..... 58

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-27 KT Plant LDAN Loading .....	63
SN-43 KT Plant Cooling Tower .....	64
Mixed Acid Plant .....	65
SN-44 Mixed Acid Plant Scrubber .....	65
Natural Gas Fired Boilers .....	68
SN-16A and SN-16B Natural Gas Fired Boilers .....	68
Miscellaneous Operations .....	70
SN-25 Gasoline Storage Tank .....	70
SN-26 Ammonium Nitrate (90% Solution) Storage Tanks .....	72
SN-31 Frick Ammonia Compressors .....	73
SN-32 Ammonia Storage/Distribution Losses .....	74
SN-35 Magnesium Oxide Silo Baghouse .....	75
SN-40 Ammonium Nitrate Solution Loading .....	76
SECTION V: COMPLIANCE PLAN AND SCHEDULE .....	77
SECTION VI: PLANTWIDE CONDITIONS .....	78
Title VI Provisions .....	80
SECTION VII: INSIGNIFICANT ACTIVITIES .....	82
SECTION VIII: GENERAL PROVISIONS .....	83
Appendix A – 40 CFR Part 60, Subpart G	
Appendix B – ADEQ CEMS Conditions	
Appendix C – 40 CFR Part 60, Subpart H	
Appendix D – Compliance Assurance Monitoring (CAM) Plans	
Appendix E – 40 CFR Part 63, Subpart CCCCCC	

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

#### List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO <sub>x</sub>	Nitrogen Oxide
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO <sub>2</sub>	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SECTION I: FACILITY INFORMATION

PERMITTEE: El Dorado Chemical Company

AFIN: 70-00040

PERMIT NUMBER: 0573-AOP-R13

FACILITY ADDRESS: 4500 North West Avenue  
El Dorado, AR 71730

MAILING ADDRESS: P.O. Box 231  
El Dorado, AR 71730

COUNTY: Union County

CONTACT NAME: Kyle Wimsett

CONTACT POSITION: Environmental, Health, and Safety Manager

TELEPHONE NUMBER: 870-863-1484

REVIEWING ENGINEER: Joseph Hurt

UTM North South (Y): Zone 15: 3680583.92 m

UTM East West (X): Zone 15: 529356.41 m

## SECTION II: INTRODUCTION

### Summary of Permit Activity

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.

### Process Description

EDCC manufactures nitric acid (various strengths ranging from 48% to 98.5%), sulfuric acid (93.0% and 98.0% strengths), high density grade ammonium nitrate (nitrogen fertilizer for agricultural use) and low density grade ammonium nitrate (Class C explosive for mining and construction industries when slurried with diesel fuel at off-site service centers).

#### *East and West Nitric Acid Plants*

The East and West Nitric Acid Plants produce weak nitric acid at concentrations ranging from 52% to 58%. These nitric acid plants employ the DuPont single (high) pressure process designed and built in 1962 by C&I Girdler. Therefore, the East and West Nitric Acid Plants are not subject to NSPS 40 CFR 60, Subpart G – New Source Performance Standard for Nitric Acid Plants since they were constructed prior to August 17, 1971.

Liquid ammonia is received through a pipeline or by truck from intermediate storage and enters a surge tank, where the liquid ammonia level is controlled. The surge tank aids in maintaining a steady flow and controls the ammonia pressure. Purge valves remove oil, water, and inert gases from the ammonia before it exits the bottom of the surge tank through two lines. The ammonia is then delivered through a level control valve to a vaporizer, where the ammonia is vaporized. The ammonia vapor is transferred to the mixer pipe, where it is mixed with preheated air through a series of nozzles. The mixture is maintained at approximately 10% (by volume) ammonia gas. The air and ammonia mixture enters into the top of a converter, where combustion occurs on a platinum catalyst gauze. The temperature of the gas leaving the platinum catalyst is between 1,660 and 1,750° F. At this point, the ammonia is being oxidized to nitrogen oxide(s) and water vapor.

The process gas is then cooled prior to the absorption process. The process gas passes through absorption columns at the East and West Nitric Acid Plants. Product acid (52% to 58% nitric acid) is retrieved from the bottom of each absorption column and pumped to two 250 ton capacity stainless steel tanks. The tanks share a common vent stack with a water seal at the bottom.

The unabsorbed tail gas, which consists of nitrogen oxides, exits the top of the absorption columns and is passed through Selective Catalytic Reduction (SCR) Units before being vented to the atmosphere through a stack (SN-08 for the West Nitric Acid Plant and SN-09 for the East

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

Nitric Acid Plant). The SCR Units reduce nitrogen oxide emissions by reacting ammonia with nitrogen oxide to form nitrogen gas and water vapor.

Fugitive nitrogen oxide emissions (SN-33) from the production, handling, mixing, blending, decoloration, and storage of nitric acid are generated through leaks in flanges, valve packing, etc. Also, nitric acid mist emissions (SN-29) occur due to the loading of nitric acid into rail cars and trucks.

#### *DM Weatherly Nitric Acid Plant (DMW Plant)*

The DM Weatherly Nitric Acid Plant (SN-13) produces weak nitric acid at a concentration of about 61% - 67% by the oxidization of ammonia in the presence of a catalyst in a similar process to the East and West Nitric Acid Plants. This nitric acid plant was originally installed at the American Cyanamid Company facility at Hannibal, Missouri and was relocated to the El Dorado Chemical in 1990. Therefore, this plant is subject to NSPS 40 CFR 60 Subpart G (New Source Performance Standard for Nitric Acid Plants) since it was constructed or modified after August 17, 1971 and produces weak nitric acid (between 30% and 70 % strength).

Liquid ammonia from the intermediate storage is passed through a set of filters into the ammonia feed vaporizer. Any particulates in the vapor are removed in the ammonia filter. A magnetic filter removes iron residue from the ammonia vapor. The clean ammonia vapor is directed to an ammonia super heater and heated to approximately 330° F. The hot/clean ammonia is conveyed into a Koch ammonia/air mixer, where the process of converting and oxidizing ammonia to nitric acid is initiated. The oxidation of the ammonia is completed as gases pass through a converter elbow. From the converter, the process gas is passed through a series of heat recovery units and then to the absorption column.

The absorption column is divided into three zones. Zone I is the lower part of the column, where the majority of the absorption of nitrogen dioxide to produce the largest amount of nitric acid occurs. Zone II contains a low nitrogen oxide concentration and oxidizes nitric oxide to nitrogen dioxide. Zone III, the upper zone (accounts for approximately 100 feet of the 154 foot column height) of the column, absorbs in condensate low concentrations of nitrogen dioxide, which lowers the nitrogen oxide emissions and allows the plant to produce a consistent 61% - 67% strength nitric acid stream.

The reaction gas stream exiting the top of the absorption tower ("tail/expander gas") is directed through a mist separator and tail gas preheater. The tail gas is routed through a series of heaters/preheaters before being routed to the No. 1 and No. 2 economizers. The economizer's exit stream (consisting of nitrogen, excess oxygen, and unabsorbed nitrogen oxides) is released to the atmosphere through a 50 foot stack (SN-13). The stack is equipped with a nitrogen oxide continuous emission monitoring system (CEMS) as required by 40 CFR Part 60, Subpart G.

Fugitive nitrogen oxide emissions (SN-33) from the production, handling, mixing, blending, decoloration, and storage of nitric acid are generated through leaks in flanges, valve packing, etc.



El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

Also, nitric acid mist emissions (SN-29) occur due to the loading of nitric acid into rail cars and trucks.

#### *Nitric Acid Vent Collection System*

In October of 1997, a packed tower hydrogen peroxide scrubber was installed to control nitrogen oxide emissions. The top portion of the packed tower treats nitrogen oxide emissions from the weak nitric acid storage vents (Tanks 49, 50, and 51). The bottom section of the packed tower treats the nitrogen oxide emissions present in the blend acid tanks (Tanks 43, 44, 45, and 46) bleaching air stream. The overheads from the packed tower are routed through a Venturi Scrubber for additional treatment before being vented to the atmosphere (SN-10). The strong nitric acid storage tank vents (Tanks 47, 48, 66, 67, 68, 69, 70 and 71) are still directed to the Venturi Scrubber (i.e. the vents bypass the new scrubber).

#### *Hoechst-UHDE Direct Strong Synthesis Nitric Acid Plant (DSN Plant)*

The DSN Plant produces strong nitric acid ( $\geq 98\%$  strength) directly from ammonia oxidation utilizing technology developed by Hoescht-UHDE in the 1970's. This process is unique in that concentrated nitric acid is produced from the dehydration of weak (56% - 65%) nitric acid. The UHDE Plant takes advantage of low and high pressures and low temperatures at appropriate points in the process for optimum efficiency. The DSN Plant is more technically complicated than traditional nitric acid plants. However, this process produces concentrated nitric acid without the dehydration step; thus, eliminating a major air emissions source.

Anhydrous ammonia is vaporized using waste process heat mixed with atmospheric air. An induced draft carries the ammonia/air mixture across a catalyst. The ammonia reacts with the oxygen in the air to produce nitric oxides while releasing a large amount of heat.

A waste heat boiler and cooler condenser remove most of the heat and water generated during the ammonia oxidation reaction. Very little nitric acid is produced during this step, because it occurs at a very low pressure. The resulting condensed steam contains approximately 3% nitric acid. Portions of this stream are used in the UHDE process to provide the necessary amount of water for the formation of nitric acid. The excess weak acid is fed to the existing Weak Nitric Acid Plant absorbers.

Upon exiting the cooler condenser, the process gas stream is compressed before being fed to the primary oxidation tower. This tower provides further gas cooling and residence time for the oxidation of nitric oxide to nitrogen dioxide. Some weak acid is formed in the process and is fed to the UHDE reactors. Nitric oxide gas that remains is oxidized in the next stage of the process through the use of concentrated acid. This reaction occurs quickly and converts nearly all of the remaining nitric oxide to nitrogen dioxide.

In the first step, the process gas is chilled and the nitrogen dioxide dimerizes to nitrogen tetroxide. The process gas passes through an absorption column, where the nitrogen tetroxide

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

readily dissolves in concentrated nitric acid. Over 99.3% of the nitrogen oxides generated during ammonia oxidation are removed from the process gas at this stage.

The spent process gas is directed to a final absorption column, which relies on the conventional absorption process. Some of the weak acid formed in the cooled condenser is used in this column. The process gas exiting the absorber has approximately 99.88% of the nitrogen oxides removed. At this state, the process gas containing nitrogen oxides is vented to the atmosphere (SN-22). This stack is equipped with a CEMS to monitor nitrogen oxide emissions.

The second stage of this process involves the separation of nitrogen tetroxide from the concentrated acid, so that it can be fed to the reactor. This step is conducted in a steam-heated bleacher and condensers. The concentrated acid is heated with steam from the waste heat boilers in the bleach reboilers. The nitrogen tetroxide dissociates back to the nitrogen dioxide, which is not as readily soluble in concentrated nitric acid. The evolved nitrogen dioxide goes from the bleacher to the condensers, where it again dimerizes and liquefies into pure nitrogen tetroxide.

The liquid nitrogen tetroxide is directed to a mix tank along with weak nitric acid produced in the DSN Plant. The two components are mixed in exact proportions to accomplish the desired reaction. The mix tank provides the necessary concentrations of nitrogen tetroxide and water. The oxygen is provided from an air separation plant. Excess oxygen, vaporized nitrogen oxides, and inerts are returned back into the process with secondary air. The resulting concentrated acid product is bleached with any nitrogen dioxide given off returning to the condenser. The concentrated nitric acid product is cooled and directed to existing storage tanks.

Fugitive nitrogen oxide emissions (SN-33) from the production, handling, mixing, blending, decoloration, and storage of nitric acid are generated through leaks in flanges, valve packing, etc. Also, nitric acid mist emissions (SN-29) occur due to the loading of nitric acid into rail cars and trucks.

### *Sulfuric Acid Plant*

The Sulfuric Acid Plant (SN-07), originally constructed in 1949 when Lion Oil Company operated the facility, is a single absorption contact process of the Chemco design. The plant was later modified by Monsanto (Leonard). The plant has been upgraded over the years to include emissions control systems, updated acid cooling technology, and process control equipment. The principal steps in the manufacturing of sulfuric acid are as follows.

The raw material used to initiate the sulfuric acid manufacturing process is elemental (Bright) molten sulfur. The elemental sulfur is delivered to EDCC by rail car or tank truck. The sulfur is unloaded into a heated pit and pumped to a 2,000 ton heated sulfur storage tank (SN-23). The sulfur storage tank is equipped with a control valve, which allows molten sulfur to back flow into the pump pit.

The molten sulfur is pumped from the heated pit to the Sulfuric Acid Plant for the combustion step. While the sulfur is being pumped from the heated pit, atmospheric air is passed through an

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

electric drive blower and sent to a packed tower, where ambient moisture is removed by a recirculating 98% sulfuric acid stream. The predried air is preheated to 420° F in a heat exchanger by waste heat from the first stage of the converter. The air enters the sulfur burner, where sulfur is sprayed into the air and is burned forming sulfur dioxide.

In the conversion step of the process, the sulfur dioxide in the gas stream is combined with some of the remaining oxygen to form sulfur trioxide. A waste heat reboiler located at the exit of the sulfur burner cools the gas exiting the sulfur burner. The sulfur dioxide is converted to sulfur trioxide in the converter, which consists of four layers of catalyst. The gas temperature increases as additional heat is evolved during the conversion process. The sulfur dioxide has the possibility of only partially converting to sulfur trioxide if the gas temperature increases. Therefore, the gases are cooled in three different places in the converter. The gases are cooled in a heat exchanger (which preheats the combustion air) after passing through the first layer of catalyst. Dry air from the 98% drying tower cools the gases as they pass through the second, third, and fourth catalyst layers before exiting the converter.

An economizer (i.e., heat exchanger) cools the gas leaving the converter. The cooling fluid is the incoming water used in the waste heat boiler. The sulfur trioxide made in the converter will not combine directly with water but must be combined indirectly through absorption with 93% sulfuric acid. Under this condition, the sulfur trioxide readily unites with water in the sulfuric acid. This operation is carried out in the absorption tower, where the sulfur trioxide is scrubbed out of the gas stream with 93% sulfuric acid. The gas stream exiting the absorption tower contains inert atmospheric nitrogen, excess oxygen, unreacted sulfur dioxide, and entrained sulfuric acid mist that is routed to the Brinks' Mist Eliminator, which captures sulfuric acid mist prior to the gases being exhausted to the atmosphere through a stack (SN-07).

The 93% sulfuric acid leaves the drying tower, where 98% sulfuric acid is weakened by water vapor removed from atmospheric air. The 93% sulfuric acid is strengthened by sulfur trioxide absorption. There is not enough atmospheric moisture in the air to supply all of the water required for combination with sulfur trioxide to form sulfuric acid. Before it is again pumped to the top of the towers, the absorbing acid is diluted with condensate to the desired strength for efficient sulfur trioxide absorption. This diluted acid is fed at the inlet of the cooler.

Stronger acid from the absorbing tower fortifies the acid from the drying tower, with the makeup being drawn off as product. All dilution condensate is added to the 93% sulfuric acid system. Due to the continuous formation of the greater than 98% sulfuric acid, the volume of acid in the circulation system is proportional to the amount of acid produced. A constant level is maintained by continuously removing 98% sulfuric acid from the pump tank. The removed acid is the production of the plant.

A portion of the sulfuric acid product is loaded into rail cars or trucks. Loading losses (SN-30) (occurring as sulfuric acid vapors) are displaced to the atmosphere by the liquid being loaded into rail cars or trucks.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

### *E2 Ammonium Nitrate Plant*

The E2 Ammonium Nitrate Plant has been in operation at El Dorado Chemical Company since the 1950s. It was modified in the early 1980s to allow for the production of either high density ammonium nitrate (HDAN, fertilizer grade) or low density ammonium nitrate (LDAN, explosive grade). However, when the KT Ammonium Nitrate Plant was built in 1989, the production of LDAN at the E2 Plant was discontinued.

HDAN production requires the reaction of weak nitric acid with ammonia to produce an ammonium nitrate solution. The ammonium nitrate is concentrated to a strength greater than 99% for high density prills.

Weak nitric acid from one of the weak nitric acid plants (East and West Nitric Acid Plants and the DMW Plant) and ammonia are reacted in three ammonium nitrate neutralizers (reactors) piped in parallel. After the neutralization reaction, the ammonium nitrate solution (approximately 90% concentration) is fed to a sealed tank, where a pH analyzer adds enough ammonia to complete the reaction with the excess nitric acid. The emissions from the neutralizer overheads, E2 lower concentrator exhaust, and the auxiliary concentrator exhaust are routed to the E2 Plant Chemical Steam Scrubber (SN-41), while the emissions from the E2 prill tower shrouds are routed to the E2 Plant Brinks Scrubber (SN-05).

The ammonium nitrate solution passes through 2 concentration steps (emissions controlled by SN-41). The concentrated ammonium nitrate solution then flows to storage or to the E2 plant prill towers. At each of the prill towers, the concentrated ammonium nitrate solution is broken into droplets by the prill plate and falls countercurrent to cooling air forming prills. The air is pulled through the towers by the E2 ammonium nitrate prill tower fans (SN-06). The prills are further cooled and screened when they exit the prill towers. The air from the cooling process is vented to the Pease-Anthony (Venturi) Scrubber, which is then routed to SN-05 for additional control. The cooled prills are loaded directly onto rail cars or trucks through a common conveyor system (SN-28).

### *KT Ammonium Nitrate Plant*

The Kaltenbach Thuring Ammonium Nitrate Plant manufactures low-density ammonium nitrate for industrial blasting customers. This plant was originally installed at American Cyanamid Corporation in Hannibal, Missouri and was purchased and relocated to El Dorado Chemical Company in 1989.

Weak Nitric Acid from one of the weak nitric acid plants (East and West Nitric Acid Plant and the DM Weatherly Plant) and anhydrous ammonia are heated and fed to the neutralizer (reaction vessel). The highly exothermic reaction of these two chemicals forms ammonium nitrate and steam. The ammonium nitrate solution exits the neutralizer to a pump tank, and the steam condensate is used in the nitric acid plants as an absorption medium. The ammonium nitrate solution is concentrated in the dehydrator to 97% concentration by blowing heated air through the solution. The concentrated ammonium nitrate solution is then pumped to the KT Plant

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

Prilling Tower (SN-14). The overheads dehydrator stream is directed to the Brink's Scrubber (SN-21) prior to being vented to the atmosphere.

The Brink's Scrubber (SN-21) has 32 polypropylene elements, which have an absorption medium continuously sprayed on them to increase their effectiveness for removing both solids and vapors.

The KT Plant Prilling Tower (SN-14) allows droplets of concentrated ammonium nitrate solution to flow for 150 feet countercurrent to ambient air. The droplets crystallize forming solid prills. Air and entrained particulates exit the top of the tower.

The solid prills are removed from the prilling tower and are sent to the predryer and dryer, where heated air is used to remove the remaining moisture. The exhaust air streams from the predryer and dryer are processed through a Ducon type wet scrubber (SN-15) equipped with a mist eliminator.

The prills are cooled (SN-21) and coated with a wax and talc coating to improve flow ability. The cooler air is fed to the Brinks Scrubber for particulate removal. The talc is stored in an enclosed silo, which pneumatically feed in the bulk talc hopper. The silo and hopper are equipped with a baghouse (SN-18) to control particulate matter emissions.

The finished product ammonium nitrate prill stream exits the coater by a discharge elevator into product loading bins. The product is unloaded into either rail cars or trucks (SN-27).

#### *Mixed Acid Plant*

The Mixed Acid Plant consists of mix tanks and storage tanks. The mix tanks and the storage tanks utilize a continuously operated scrubber that has 99.5% efficiency for controlling hexavalent sulfur. Periodically, the scrubber is used to bring product into specification, being replaced with fresh scrubber solution during scrubber operation.

EDCC manufactures mixed acid by mixing  $\leq 30\%$  oleum (concentrated sulfuric acid) and/or 98% sulfuric acid with 98% nitric acid. The  $\leq 30\%$  oleum is purchased from a vendor and delivered to EDCC by railcar or tanker truck, while the 98% sulfuric acid will come from EDCC's Sulfuric Acid Plant, and the 98% nitric acid will come from EDCC's Nitric Acid Plant. The manufactured mixed acid is stored in the product storage tank or the mixing tank until it is loaded into a railcar or tanker truck. Air emissions from the tanks, the unloading of oleum, and the loading/unloading of the mixed acid into tank cars and/or trucks will be routed to the scrubber (SN-44) prior to being released to the atmosphere.

#### *Natural Gas Fired Boilers*

Boilers No. 2 (SN-16A) and No. 4 (SN-16B) are used to supply steam throughout the nitric acid plants, the ammonium nitrate plants, and the sulfuric acid plant. Both boilers are natural gas fired units with identical design heat inputs of 145 million Btu per hour. Emissions from the

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

boilers occur due to the combustion of natural gas. Due to 1990 PSD permitting issues, only one of the steam generating units is allowed to be operated at any one time. However, both steam-generating units will be in operation when the active boiler (for example, Boiler No. 2) is being taken off-line and the other boiler (for example, Boiler No. 4) is being brought on-line. It takes approximately 24 hours for the inactive boiler to warm up and for the unit transition to effectively occur.

### Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective June 18, 2010
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective July 18, 2009
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective January 25, 2009
EDCC is classified as a PSD major stationary source pursuant to 40 CFR 52.21
The DM Weatherly Nitric Acid Plant (SN-13) is subject to New Source Performance Standards 40 CFR 60 Subpart G, 60.70 through 60.74 ( <i>Standards of Performance for Nitric Acid Plants</i> )
The Sulfuric Acid Plant (SN-07) is subject to 40 CFR 60 Subpart H ( <i>Standards of Performance for Sulfuric Acid Plants</i> ).
40 CFR Part 63, Subpart CCCCCC – <i>National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Dispensing Facilities</i>
40 CFR Part 64, Compliance Assurance Monitoring

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

Emission Summary

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	172.0	334.1
		PM <sub>10</sub>	172.0	334.1
		SO <sub>2</sub>	600.2	401.9
		VOC	18.5	4.9
		CO	24.0	52.3
		NO <sub>x</sub>	592.3	2410.3
HAPs		Hexane*	0.60	1.20
Air Contaminants **		HNO <sub>3</sub>	16.90	67.70
		H <sub>2</sub> SO <sub>4</sub>	2.90	12.58
		NH <sub>3</sub>	157.80	438.10
		SO <sub>3</sub>	0.05	0.18
SN-02	Emissions routed to SN-41			
SN-03	Emissions routed to SN-41			
SN-04	Emissions routed to SN-41			
SN-05	Ammonium Nitrate E2 Brinks Scrubber	PM	14.1	281.0 <sup>1</sup>
		PM <sub>10</sub>	14.1	281.0 <sup>1</sup>
		NH <sub>3</sub> **	8.50	37.30
SN-06	E2 Ammonium Nitrate Prill Tower Fans	PM	67.0	281.0 <sup>1</sup>
		PM <sub>10</sub>	67.0	281.0 <sup>1</sup>
SN-07	Sulfuric Acid Plant	SO <sub>2</sub>	600.0	401.5
		H <sub>2</sub> SO <sub>4</sub> **	2.82	12.35
SN-08	West (Weak) Nitric Acid Plant	NO <sub>x</sub>	200.1	876.5
		NH <sub>3</sub> **	40.00	62.20
SN-09	East (Weak) Nitric Acid Plant	NO <sub>x</sub>	200.1	876.5
		NH <sub>3</sub> **	40.00	62.20

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-10	Nitric Acid Concentrator Vents	NO <sub>x</sub>	19.5	85.5
		HNO <sub>3</sub> **	3.40	10.80
SN-13	DM Weatherly Nitric Acid Plant	NO <sub>x</sub>	50.1	210.0
SN-14	KT LDAN Prill Tower	PM	44.2	281.0 <sup>1</sup>
		PM <sub>10</sub>	44.2	281.0 <sup>1</sup>
SN-15	KT Plant Dryer/Cooler	PM	17.0	281.0 <sup>1</sup>
		PM <sub>10</sub>	17.0	281.0 <sup>1</sup>
		NH <sub>3</sub> **	18.00	75.60
SN-16A	Boiler No. 2	PM	1.1	281.0 <sup>1</sup>
		PM <sub>10</sub>	1.1	281.0 <sup>1</sup>
		SO <sub>2</sub>	0.1	0.4
		VOC	0.8	3.5
		CO	12.0	52.3
		NO <sub>x</sub>	39.8	174.2
SN-16B	Boiler No. 4	Hexane*	0.30	1.20
		PM	1.1	
		PM <sub>10</sub>	1.1	
		SO <sub>2</sub>	0.1	
		VOC	0.8	
		CO	12.0	
SN-17	E2 HDAN Plant Cooling Train	NO <sub>x</sub>	39.8	
		Hexane*	0.3	
		PM	1.1	
		PM <sub>10</sub>	1.1	
		SO <sub>2</sub>	0.1	
		VOC	0.8	
SN-18	KT Plant Clay Baghouse	CO	12.0	
		NO <sub>x</sub>	39.8	
		Hexane*	0.3	
SN-19	E2 Plant Barometric Tower	PM	1.0	281.0 <sup>1</sup>
		PM <sub>10</sub>	1.0	281.0 <sup>1</sup>
		NH <sub>3</sub> **	4.10	17.70
SN-20	Emissions routed to SN-41			
SN-21	KT Plant Brinks Scrubber	PM	0.5	281.0 <sup>1</sup>
		PM <sub>10</sub>	0.5	281.0 <sup>1</sup>
		NH <sub>3</sub> **	4.10	17.70
SN-22	UHDE Direct (Strong) Nitric Acid Plant	PM	3.0	281.0 <sup>1</sup>
		PM <sub>10</sub>	3.0	281.0 <sup>1</sup>
		NH <sub>3</sub> **	30.00	126.00
SN-22	UHDE Direct (Strong) Nitric Acid Plant	NO <sub>x</sub>	40.5	177.4
		HNO <sub>3</sub> **	10.00	42.00



El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-25	Gasoline Storage Tank (2000 Gallon)	VOC	16.9	1.4
SN-26	Ammonium Nitrate (90% Solution) Storage	NH <sub>3</sub> **	1.60	0.90
SN-27	KT Plant LDAN Loading	PM	0.6	2.6
		PM <sub>10</sub>	0.6	2.6
SN-28	E2 Plant HDAN/LDAN Loading	PM	1.1	4.8
		PM <sub>10</sub>	1.1	4.8
SN-29	Nitric Acid Loading	HNO <sub>3</sub> **	1.30	5.50
SN-30	Sulfuric Acid Loading	H <sub>2</sub> SO <sub>4</sub> **	0.03	0.05
SN-31	Frick Ammonia Compressors	NH <sub>3</sub> **	0.50	2.00
SN-32	Ammonia Storage/Distribution	NH <sub>3</sub> **	1.30	5.70
SN-33	Nitric Acid Production Fugitives	NO <sub>x</sub>	2.0	8.5
		HNO <sub>3</sub> **	2.00	8.50
SN-34	E2 Plant Solution Reactor	PM	0.9	3.0
		PM <sub>10</sub>	0.9	3.0
SN-35	Magnesium Oxide Silo Baghouse	PM	2.0	8.8
		PM <sub>10</sub>	2.0	8.8
SN-37	Car Barn Scrubber	Source removed in 2008, emissions now routed to SN-10		
SN-38	DM Weatherly Nitric Acid Plant Cooling Tower	PM	1.5	6.3
		PM <sub>10</sub>	1.5	6.3
SN-39	DSN Plant Cooling Tower	PM	2.3	9.8
		PM <sub>10</sub>	2.3	9.8
SN-40	Ammonium Nitrate Solution Loading	NH <sub>3</sub> **	3.80	4.70
SN-41	E2 Plant Chemical Steam Scrubber (30-day rolling average)	PM	3.3	14.5
		PM <sub>10</sub>	3.3	14.5
		NH <sub>3</sub> **	10.00	43.80
SN-41	E2 Plant Chemical Steam Scrubber (daily 24-hr average)	PM	13.7	--
		PM <sub>10</sub>	13.7	--
		NH <sub>3</sub> **	10.00	--

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-42	East and West Nitric Acid Plant Cooling Tower	PM	0.3	1.2
		PM <sub>10</sub>	0.3	1.2
SN-43	KT Plant Cooling Tower	PM	0.4	1.4
		PM <sub>10</sub>	0.4	1.4
SN-44	Mixed Acid Plant Scrubber	NO <sub>x</sub>	0.4	1.7
		SO <sub>3</sub> **	0.05	0.18
		H <sub>2</sub> SO <sub>4</sub> **	0.05	0.18
		HNO <sub>3</sub> **	0.20	0.90
SN-46	Sulfuric Acid Plant Cooling Tower	PM	0.2	0.7
		PM <sub>10</sub>	0.2	0.7

1 - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition No. 7.

\* - HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.

\*\* - Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

### SECTION III: PERMIT HISTORY

The chemical plant located at 4500 North West Avenue in El Dorado, Arkansas and currently owned and operated by El Dorado Chemical Company has equipment that dates back to 1944 to the initial facility built by the U.S. Army Corps of Engineers and operated for the U.S. Government by Lion Oil Company.

Permit No. 122-A was issued July 13, 1972 to Monsanto Company for additional absorption trays and refrigeration to reduce the opacity from the East and West regular nitric acid plants (SN-08 and SN-09). Existing plants at that time and their date of installations were: Boilers (1944), Sulfuric Acid Plant (1949), the E2 Ammonium Nitrate Plant (1950), and East and West Nitric Acid Plants (1962).

Permit No. 123-A was issued July 13, 1972 to Monsanto Company to tie the Nitric Acid Concentrators exhausts into an existing fume scrubber to reduce opacity.

Permit No. 124-A was issued July 13, 1972 to Monsanto Company to install mist eliminators on the Ammonia Nitrate neutralizers and concentrators to reduce particulate matter emissions.

Permit No. 168-A was issued June 22, 1973 to Monsanto Company to install a wet scrubber to reduce the particulate matter emission from the ammonium nitrate prilling towers.

Permit No. 0573-A was issued to Monsanto Agricultural Products Company on August 8, 1979 for the installation of a mist eliminator for the emissions of the sulfuric acid plant to lower the emission factor from this equipment below 0.5 lb acid mist / ton of 100 percent acid produced, as required by Section 111(d) of the Clean Air Act.

Permit No. 0573-AR-1 was issued on September 23, 1983 when El Dorado Chemical, Inc. purchased the facility from Monsanto Company. All previous permits for this facility were rescinded. Permit Limits for SN-1 thru SN-10 were established in pounds per hour (not tpy) and the opacity limits for all sources except SN-8 and SN-9 (nitric acid plants) were established at 40%.

Permit No. 0573-AR-2 was issued on March 23, 1984 for the conversion of the E2 ammonium nitrate plant to allow some of its production to be low density product in addition to the high density product it was already producing.

Permit No. 0573-AR-3 was issued on September 11, 1989 for the expansion of the facility by adding the DM Weatherly nitric acid plant (subject to NSPS 40 CFR Part 60 Subpart G) and the KT ammonium nitrate plant and its associated prill tower. Emissions netting occurred with the issuance of this permit to avoid PSD review. The PSD trigger limits were established in this permit for particulate matter (203 tpy) and NO<sub>x</sub> (8076 tpy).

Permit No. 0573-AR-4 was issued on June 6, 1991 reflecting the stack testing results required by the previous permit. Additionally, comprehensive inventories on production and air

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

emissions record keeping were started on particulate matter and NO<sub>x</sub> to insure that the annual emission limits due to PSD offsetting were not exceeded. The 1988/1989 (two years prior to 0573-AR-3) average actual emissions were recalculated and the PSD trigger limits were re-established at 281 tpy for particulate matter and 8202 tpy for NO<sub>x</sub>.

Permit No. 0573-AR-5 was issued on November 7, 1991 to further incorporate stack testing results obtained since the previous permit was issued.

Permit No. 0573-AR-6 was issued on March 15, 1993 to install a scrubber on the KT Prill Plant and a secondary ammonium nitrate concentrator in the Low Density Ammonium Nitrate Plant. This lowered the ammonia and particulate matter emissions from the KT Ammonium Nitrate Plant.

Permit No. 0573-AR-7 was issued on September 6, 1994 for a facility expansion to install the UHDE Concentrated Nitric Acid Plant with an increase in NO<sub>x</sub> emissions of 149.9 tpy. This Plant was incorrectly listed as being subject to NSPS 40 CFR Part 60 Subpart G when the permit was issued. The operation of the sulfuric acid concentrators (SN-01A and SN-01B) and the nitric acid concentrator (SN-10) with 288.1 tpy average actual NO<sub>x</sub> emissions over the previous 5 years (314.5 tpy permitted NO<sub>x</sub> emissions) were scheduled to cease six months after the plant start-up.

The UHDE Concentrated Nitric Acid Plant did not have a smooth startup when operation started in July, 1995. The permittee applied for a variance October 5, 1995 requesting continued operation of SN-01A, SN-01B, and SN-10 through July 1, 1996 while the concentrated nitric acid plant went through extended debugging.

A series of three Consent Administrative Orders were issued (CAO LIS No. 95-183, CAO LIS No. 95-183-001, CAO LIS No. 95-183-002) after the variance expired allowing the continued operation of SN-01A, SN-01B, and SN-10. These documents also required permitting of additional sources at the facility, installation of emission control equipment improvements by the permittee, and a thorough PSD review of all changes at the facility. The major emission control improvement was the installation of Selective Catalytic Reduction (SCR) units on SN-08 and SN-09. This resulted in a permitted reduction of 5,124 tpy NO<sub>x</sub> for these two sources, and an actual emission reduction in excess of 2,700 tpy NO<sub>x</sub>. A demister was also installed on the emissions from the North and South Sulfuric Acid Concentrator (SN-01A and SN-01B) which reduced sulfuric acid mist emissions by at least 50%.

Permit No. 0573-AOP-R0 was issued to El Dorado Chemical Company on October 21, 1999. This permit allowed a small capacity increase for the UHDE DSN Plant (SN-22) resulting in a 27.5 tpy increase in the NO<sub>x</sub> emission limit for that source. The permittee was also granted an option of installing a CEM on the Sulfuric Acid Plant (SN-07) and after the completion of the CEM, a daily production increase to 360 tons. Emission limits for the permit were: PM/PM<sub>10</sub> - 297.0 tpy, SO<sub>2</sub> - 2520.4 tpy, VOC - 2.7 tpy, CO - 25.4 tpy, NO<sub>x</sub> - 3002.5 tpy, HNO<sub>3</sub> - 242.3 tpy, H<sub>2</sub>SO<sub>4</sub> - 66.6 tpy, and NH<sub>3</sub> - 404.1 tpy.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

Permit No. 0573-AOP-R1 was issued to El Dorado Chemical Company on June 29, 2000. This permit modification was issued to resolve the appeal filed regarding the initial Title V permit. Primary changes are in the short term compliance mechanism in several of the Specific Conditions and the required testing Specific Conditions regarding opacity. One small source (SN-19) was deleted from the initial permit resulting in a 1.0 lb/hr reduction in the hourly particulate limits and no change in the yearly limit. Emission limits for the permit were: PM/PM<sub>10</sub> - 297.0 tpy, SO<sub>2</sub> - 2520.4 tpy, VOC - 2.7 tpy, CO - 25.4 tpy, NO<sub>x</sub> - 3002.5 tpy, HNO<sub>3</sub> - 242.3 tpy, H<sub>2</sub>SO<sub>4</sub> - 66.6 tpy, NH<sub>3</sub> - 404.1

Permit No. 0573-AOP-R2 was issued to El Dorado Chemical Company on December 3, 2001. This permit modification was issued to change the quantitative opacity observations for SN-27 and SN-28 from EPA Method 9 to EPA Method 22 (because both sources are non-point sources). The testing of the liquid in the peroxide scrubber in Specific Condition No. 24 was changed from a pH test to a hydrogen peroxide concentration test. ADEQ also modified the permit to clarify the reporting requirements and identify records that must be included in the semi-annual report specified in General Provision 7. The emission limits of the permit did not change in this modification.

Permit No. 0573-AOP-R3 was issued on February 20, 2003. This modification included the installation of a new ammonium nitrate transfer system to handle the finished ammonium nitrate product from the KT Ammonium Nitrate Plant, the installation of the new ammonium nitrate neutralizer in the E2 Ammonium Nitrate Plant, and the use of a "hard wired" PM<sub>10</sub> emission factor in demonstrating compliance with the Plantwide Applicability Limit for sources SN-01 through SN-21. Emissions of PM/PM<sub>10</sub> at SN-27 increased from 2.6 tpy to 2.7 tpy, as a result of the installation of a new ammonium nitrate transfer system (SN-27) at the KT Ammonium Nitrate Plant. Emissions of ammonia at SN-05 increased from 40.0 lb/hr to 45.7 lb/hr, as a result of the simultaneous operation of three ammonium neutralizers in the E2 Ammonium Nitrate Plant. The annual ammonia emissions remained the same. Additionally, there was no modification to the Prill Tower with this change. The increase in PM<sub>10</sub> actual emissions was 14.8 ton/year at SN-05 and SN-06, which was less than the 15.0 ton/year threshold for PSD significance level. In the ammonia dispersion modeling submitted with this application, the facility did not include ammonia emissions from SN-11. SN-11 was prohibited from operation until stack testing was performed at this unit. The air dispersion modeling results showed the maximum ambient impacts did not exceed any 1/100 TLV concentrations at any modeled receptor. Plantwide PM<sub>10</sub> emissions remained the same as listed in Permit #0573-AOP-R2.

Permit 0573-AOP-R4 was issued on June 30, 2003. This modification included the installation of a car barn scrubber (SN-37). Nitric acid emissions from cleaning and pressure checking rail cars were rerouted from the nitric acid concentrator vents (SN-10) to the scrubber (SN-37) at the car barn. There were no changes in plantwide nitric acid emissions.

Permit 0573-AOP-R5 was issued on April 12, 2005. This Title V air permit renewal included the installation of a new chemical steam scrubber (SN-41) at the E2 Plant, permitting four existing cooling towers (SN-38, SN-39, SN-42, and SN-43) and existing ammonium nitrate solution loading (SN-40), and revising the stack testing requirements for the Nitric Acid Vent

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

Collection System (SN-10), Sulfuric Acid Plant (SN-07), E2 HDAN Plant Cooling Train (SN-17), KT Plant Dryer/Cooler (SN-15), and the KT Plant Brinks Scrubber (SN-21). Emission rates were re-evaluated to reflect updated emission factors and additional stack test data. Maximum potential operation hours at SN-08 and SN-09 were increased from 8400 hours per year to 8760 hours per year. Emission rates for the two boilers (SN-16A and SN-16B) were updated using USEPA AP-42 emission factors. Two sources (SN-11 and SN-12) were removed. The E2 Plant Barometric Tower (SN-19), at one time deleted from permit, was incorporated back into the permit.

Permit 0573-AOP-R6 was issued on April 13, 2006. This modification included the installation of a new Mixed Acid Plant Scrubber (SN-44), revision of the language of stack testing for SN-05, removal of stack testing requirements for SN-06, clarification of permit requirements and revision of control equipment monitoring parameters in the permit issued on April 12, 2005 and the agreed upon changes in the Permit Appeal Resolution (PAR). This modification also incorporated hard-wired emission factors for the E2 and KT plants, and a PSD application to increase the ammonium nitrate production limit of the E2 Plant to the maximum equipment potential. Plantwide condition #7 was revised to have the following language: "... does not include the quantity of condensable particulate measured through the back-half sampling train procedure of EPA Reference Method 5...". This was because the back-half sampling train procedure of Reference Method was not available when this condition was first put in the permit for PSD netting offset purposes.

Permit 0573-AOP-R7 was issued on February 16, 2007. This modification included the routing of the exhaust from Pease Anthony (Venturi) Scrubber on the E2 HDAN Plant Cooling Train (SN-17) to the Ammonium Nitrate E2 Brinks Scrubber (SN-05) for additional control, the removal of the particulate matter stack testing requirements for SN-17, and the revision of the PM<sub>10</sub> hard-wired emission factor for the E2 Plant.

Permit 0573-AOP-R8 was issued on August 26, 2008. This permitting action included the following revisions:

- Production capacity increase at SN-07 to 550 ton/day (200,750 ton/year);
- Addition of a SSMP for SN-07, SN-08, SN-09, SN-13, SN-22, and SN-41;
- Addition of ammonia emissions at SN-08 and SN-09;
- Installation of an additional auxiliary air compressor at the East and West Nitric Acid Plant process area and at the DM Weatherly Nitric Acid Plant; and
- Removed the Car Barn Scrubber (SN-37) and route the nitric acid emissions to Nitric Acid Vent Collection System (SN-10).

The permitted emissions decreases included 2,115.5 tpy of SO<sub>2</sub>, 20.45 tpy of Sulfuric Acid Mist. The permitted emissions increases included 124.4 tpy of Ammonia and 0.7 tpy of Nitric Acid. There were no permitted NO<sub>x</sub> emission changes with the installation of the auxiliary air compressors.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

Permit 0573-AOP-R9 was issued on February 17, 2009. This minor modification authorized the installation of the sulfuric acid cooling tower (SN-46). This mechanically induced, cross-flow draft cooling tower is an integral part of the double absorption process required by CAO LIS 03-175 (December 31, 2003). The potential emissions increase from this modification was 0.7 tpy of PM/PM<sub>10</sub>.

Permit 0573-AOP-R10 was issued on October 26, 2009. With this modification the facility requested:

1. Revisions to particulate matter (PM/PM<sub>10</sub>) monitoring requirements (Specific Condition # 61) for the E2 Plant Chemical Steam Scrubber (SN-41) based on the Environmental Protection Agency's (EPA's) position on condensable PM in the recently released New Source Review (NSR) implementation rule for PM<sub>2.5</sub>.
2. Relocation of the Ammonium Nitrate (AN) Solution Loading facility (SN-40).
3. Removal of the obsolete Sampling Method for SN-41 (Appendix D) from the permit.
4. Revisions to the PM/PM<sub>10</sub> stack testing requirements (Specific Condition # 67 and added Specific Condition # 68) for the KT LDAN Dryer/Cooler (SN-15) based on EPA's current position on condensable PM.
5. Corrections to compliance demonstration references for various specific conditions related to the E2 Ammonium Nitrate Plant, KT Ammonium Nitrate Plant, Natural Gas Fired Boilers, and the Magnesium Oxide Silo Baghouse.

The modification authorized all of the above requests except for #1. Revisions to a BACT limit requires PSD review, as such the BACT limit remained until the facility submits a PSD application. There were no permitted emission changes with the modification.

The facility submitted an Administrative Amendment on August 28, 2009 to implement Ammonia offloading operations to the Insignificant Activities list. The Ammonia offloading operations were added during the comment period for permit 0573-AOP-R10.

Permit 0573-AOP-R11 was issued on November 24, 2010. With this Title V Renewal the facility requested:

1. Update emission limits for SN-25, SN-28, SN-30, SN-33, SN-40, and SN-44. Revisions to SN-28 and SN-33 are due to rounding. Revisions to SN-25 are due to updates to the TANKS software. Revisions to SN-30 are due to revisions based on actual production capabilities. Revisions to SN-40 are due to previous calculation errors. Revisions to SN-44 are due to a reduction in oleum concentration.
2. Remove Specific Conditions # 44 and # 46 which required EDCC to install, test, and operate SO<sub>2</sub> removal technology in accordance with Consent Administrative Order, LIS 03-175. The unit has been installed.
3. Limit the Oleum concentration to a maximum of 30%. The lower limit is due to Occupational Safety and Health Administration (OSHA) issues and transportation regulations.
4. Correct various compliance mechanisms to add consistency and clarification.

El Dorado Chemical Company

Permit #: 0573-AOP-R13

AFIN: 70-00040

5. EDCC also submitted a Prevention of Significant Deterioration (PSD) application to revise the Best Available Control Technology (BACT) limit at SN-41. The facility retained the BACT limit for the scrubber at 0.054 lb particulate per ton of Ammonium Nitrate (AN) solution for normal operations based on a 30-day rolling average. The facility incorporated a startup and shutdown BACT limit for the scrubber which was set at 0.223 lb particulate per ton of AN solution. The facility did not request to increase annual emissions from SN-41.

With the renewal, the total permitted emission changes included increases of 0.1 tpy of PM/PM<sub>10</sub>, 0.4 tpy of VOC, and 0.1 tpy of NO<sub>x</sub>, and a decrease of 6.4 tpy of SO<sub>2</sub>.

Permit 0573-AOP-R12 was issued on October 11, 2011. With this modification the facility requested to:

1. Incorporate the requirements of 40 CFR Part 63, Subpart CCCCCC – *National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Dispensing Facilities*; and
2. To incorporate Reference Method 202 into particulate matter sampling requirements at the KT Plant Dryer/Cooler (SN-15) as required by Specific Condition 90 of Permit 0573-AOP-R11.

There were no permitted emission changes with this modification.



SECTION IV: SPECIFIC CONDITIONS

East and West Regular Nitric Acid Plants

SN-08 and SN-09  
 East and West Nitric Acid Plant

Source Description

The East and West Nitric Acid Plants produce weak nitric acid at concentrations ranging from 52% to 58%. The West Nitric Acid Plant (SN-08) and East Nitric Acid Plant (SN-09) each utilize a C&I Girdler single pressure process to produce weak nitric acid. Therefore, the East and West Nitric Acid Plants are not subject to NSPS 40 CFR 60, Subpart G – New Source Performance Standard for Nitric Acid Plants since they were constructed prior to August 17, 1971. The air emissions from these processes are the tail gases from the absorption columns. The absorption columns employ bleaching air to oxidize nitrogen oxide to nitrogen dioxide. The amount of bleaching air used in the process controls the oxygen in the tail gases. The tail gases, which consist of nitrogen oxides, are passed through Selective Catalytic Reduction (SCR) Units before being vented to the atmosphere. The SCR units remove nitrogen oxide emissions by reacting ammonia with nitrogen oxide to form nitrogen gas and water vapor.

The uncontrolled emissions from SN-08 and SN-09 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 Code of Federal Regulations (CFR) Part (§) 64). Accordingly, the (CAM) Plan for the facility is provided in Appendix D. Per §64.2(a), the aforementioned sources are regulated under the CAM Rule because it meets the following criteria: (1) the units are subject to emission limitations for NO<sub>x</sub>, (2) the sources are equipped with a control device, and (3) the units have potential pre-control emissions of NO<sub>x</sub> that exceed the applicable major source threshold. In accordance with §64.3, EDCC has developed a CAM Plan for these sources. The Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the NO<sub>x</sub> emission limits at these sources.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rates are based on maximum capacity. Compliance with the annual emission limits for SN-08 and SN-09 are demonstrated by compliance with Specific Conditions # 4, # 5, and # 6 and satisfactory operation of the SCR Units. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
08	West Nitric Acid Plant	NO <sub>x</sub>	200.1	876.5
09	East Nitric Acid Plant	NO <sub>x</sub>	200.1	876.5

El Dorado Chemical Company

Permit #: 0573-AOP-R13

AFIN: 70-00040

2. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the lb/hr limit for ammonia for SN-08 and SN-09 will be demonstrated by comparison of the limit to the result of the test conducted pursuant to Specific Condition # 7. Compliance with the ton per year limit will be demonstrated by complying with the lb/hr limit. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
08	West Nitric Acid Plant	NH <sub>3</sub>	40.00	62.20
09	East Nitric Acid Plant	NH <sub>3</sub>	40.00	62.20

3. The permittee shall not exceed 10% opacity from the West Nitric Acid Plant and the East Nitric Acid Plant as measured by EPA Reference Method No. 9. Compliance with the opacity limit set forth in this Specific Condition will be shown by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
4. The permittee shall not operate either the west nitric acid plant or the east nitric acid plant without its associated SCR unit operating and fully functional except during start up and shut down of each plant. The permittee shall install, calibrate, maintain, and operate a continuous monitoring system for measuring NOx emissions from the West Nitric Acid Plant and the East Nitric Acid Plant. The CEM shall be installed, operated, maintained, and reports submitted per ADEQ's Continuous Emission Monitoring Systems Conditions, August 2004 Revision (listed as Appendix B in the back of this permit). Non-overlapping 3-hour averages, starting at midnight each calendar day, shall be used to demonstrate compliance with the emission rate limits in Specific Condition # 1. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]
5. The permittee shall not manufacture in excess of 835 tons 100% acid equivalent per day, and 304,775 tons 100% acid equivalent per rolling 12-month total of weak nitric acid through the east and west nitric acid plants. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
6. The permittee shall keep records of the production manufactured in the east and west nitric acid plants. These records shall identify any day during which acid in excess of the quantities specified in Specific Condition # 5 was produced, and shall contain each month's total and a rolling total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]

El Dorado Chemical Company

Permit #: 0573-AOP-R13

AFIN: 70-00040

7. The permittee shall test SN-08 and SN-09 for ammonia emissions. This test shall be conducted within 180 days after the issuance of Air Permit 0573-AOP-R8 and every five years thereafter. Test method CTM-027 or an equivalent method approved by the Department shall be used. Upon a failure of a stack test, the permittee shall stack test annually until two consecutive years are less than the permitted emission rates specified in Specific Condition #2. This unit shall be operated at 90% or more of rated capacity when the tests are completed. The 5-year testing cycle shall commence after the issuance of Air Permit 0573-AOP-R8 in accordance with Plantwide Condition # 3. [Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-29  
Nitric Acid Loading

Source Description

A portion of the nitric acid produced at EDCC is loaded into rail cars or trucks. Loading losses occur as vapors and are displaced to the atmosphere by the liquid being loaded into the rail cars or trucks.

Specific Conditions

8. The permittee shall not exceed the emission rates set forth in the following table. The pound per hour emission rate limit is based on engineering estimates. Compliance with this Specific Condition is demonstrated by compliance with Specific Conditions # 9 and # 10. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
29	Nitric Acid Loading	HNO <sub>3</sub>	1.30	5.50

9. The permittee shall not load in excess of 200,000 tons of nitric acid (100% acid equivalent) per rolling 12-month total. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and A.C.A. §8-4-311]
10. The permittee shall keep records of the nitric acid shipped by truck and by rail from the facility. These records shall contain each months total and a rolling total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and A.C.A. §8-4-311]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-33  
Production Fugitive Emissions

Source Description

Fugitive emissions from the production, handling, mixing, blending decoloration, and storage of nitric acid are generated due to leaks in flanges, valve packings, etc. resulting in the release of nitrogen oxides and nitric acid mist. EDCC has nitrogen trioxide specifications for weak and strong nitric acid ranging from 0.06% to 0.15%.

Specific Conditions

11. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on facility maximum capacity. Compliance with this Specific Condition is demonstrated by compliance with Specific Conditions # 5, # 6, # 20, # 21, # 36, and # 37. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
33	Nitric Acid Plants Fugitive Emissions	NO <sub>x</sub>	2.0	8.5

12. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on facility maximum capacity. Compliance with this Specific Condition is demonstrated by compliance with Specific Conditions # 5, # 6, # 20, # 21, # 36, and # 37. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
33	Nitric Acid Plants Fugitive Emissions	HNO <sub>3</sub>	2.00	8.50

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

SN-42  
 East and West Nitric Acid Plant Cooling Tower

Source Description

EDCC currently operates a cooling tower as part of the East and West Nitric Acid Plant operations.

Specific Conditions

13. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rates are based on maximum capacity. Compliance with the annual emission limits for SN-42 is demonstrated by compliance with Specific Condition # 16. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
42	East and West Nitric Acid Plant Cooling Tower	PM <sub>10</sub>	0.3	1.2

14. The permittee shall not exceed the emission rates set forth in the following table. Compliance with the emission limits for SN-42 is demonstrated by compliance with Specific Condition # 16. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
42	East and West Nitric Acid Plant Cooling Tower	PM	0.3	1.2

15. The permittee shall not exceed 20% opacity from the West Nitric Acid Plant and the East Nitric Acid Plant Cooling Tower as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-42 is demonstrated by compliance with Specific Condition # 16. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
16. The permittee shall test and record the total dissolved solids of the cooling water on a weekly basis when SN-42 is operating. Results less than 1,560 ppm total dissolved solids will demonstrate compliance with SN-42's requirements in Specific Conditions # 13, # 14, and # 15 of this permit. The results shall be kept on site and made available to Department personnel upon request. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

## DM Weatherly Nitric Acid Plant

### SN-13 DMW Nitric Acid Plant

#### Source Description

The DMW Nitric Acid Plant (SN-13) produces weak nitric acid (56%-65% strength) by oxidizing ammonia in the presence of a platinum catalyst. The major contributor to air emissions from this process is the absorption column tail gas. In the absorption column, nitrogen dioxide is absorbed into condensate with nitric acid exiting the absorption column. The efficiency of this process determines the amount of nitrogen oxides released to the atmosphere in the tail gas.

This nitric acid plant was originally installed at the American Cyanamid Company facility at Hannibal, Missouri and was relocated to the El Dorado Chemical in 1990. Therefore, this plant is subject to NSPS 40 CFR 60 Subpart G (New Source Performance Standard for Nitric Acid Plants) since it was constructed or modified after August 17, 1971 and produces weak nitric acid (between 30% and 70 % strength).

The uncontrolled emissions from SN-13 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 Code of Federal Regulations (CFR) Part (§) 64). Accordingly, the (CAM) Plan for the facility is provided in Appendix D. Per §64.2(a), the aforementioned source is regulated under the CAM Rule because it meets the following criteria: (1) the unit is subject to emission limitations for NO<sub>x</sub>, (2) the source is equipped with a control device, and (3) the unit has potential pre-control emissions of NO<sub>x</sub> that exceed the applicable major source threshold. In accordance with §64.3, EDCC has developed a CAM Plan for this source. The Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the NO<sub>x</sub> emission limit at this source.

#### Specific Conditions

17. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rates are based on maximum capacity. Compliance with this Specific Condition will be verified by compliance with Specific Conditions # 19, # 20, and # 21. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
13	DM Weatherly Nitric Acid Plant	NO <sub>x</sub>	50.1	210.0

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

18. The permittee shall not exceed 10% opacity from the DM Weatherly Nitric Acid Plant as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-13 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
19. The permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring nitrogen oxides emissions from the DM Weatherly Nitric Acid Plant (60.73(a)). The CEM shall be installed, operated, maintained, and reports submitted per ADEQ's Continuous Emission Monitoring Systems Conditions, August 2004 Revision (listed as Appendix B in the back of this permit). The span value shall be 500 ppm of NO<sub>2</sub>. The permittee shall establish a conversion factor for converting this reading to pounds NO<sub>2</sub> per ton of 100 percent acid produced (60.73(b)). An hourly value shall be computed by the system for each hour the plant is operating. The permittee shall keep records of daily production rates and hours of operation (60.73(c)). The permittee shall report to the Department as excess emissions any 3-hour period which the average emissions (arithmetic average of any 3 consecutive hours) from the facility exceed 3.0 pounds per ton of 100 per cent acid production (60.73(e)). During periods of start up, shut down, malfunction events, compliance with the limits shall be demonstrated using a CEM to measure the NO<sub>x</sub> concentration and flow monitor. The permittee shall report any 3-hour period in which the NO<sub>x</sub> emissions (arithmetic average of any 3 consecutive hours) from the facility exceed 50.1 lb/hr. [NSPS 40 CFR 60 Subpart G (New Source Performance Standard for Nitric Acid Plants) (listed as Appendix A in the back of this permit)]
20. The permittee shall not manufacture in excess of 140,000 tons 100% acid equivalent per rolling 12 month total of weak nitric acid through the DM Weatherly Nitric Acid Plant. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
21. The permittee shall keep records of the production manufactured in the DM Weatherly Nitric Acid Plant. These records shall contain each months total and a rolling total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]
22. The DM Weatherly Nitric Acid Plant (SN-13) must continuously have nitrogen oxide emissions that do not exceed 3.0 pounds per ton of 100 percent acid production. Compliance with this condition is demonstrated by Specific Condition # 19. [NSPS 40 CFR 60 Subpart G]



El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

SN-38  
 DMW Nitric Acid Plant Cooling Tower

Source Description

EDCC operates a cooling tower as part of the DMW Nitric Acid Plant.

Specific Conditions

23. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rates are based on maximum capacity. Compliance with this Specific Condition will be verified by compliance with Specific Condition # 26. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
38	DM Weatherly Nitric Acid Plant Cooling Tower	PM <sub>10</sub>	1.5	6.3

24. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition # 26. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
38	DM Weatherly Nitric Acid Plant Cooling Tower	PM	1.5	6.3

25. The permittee shall not exceed 20% opacity from the DM Weatherly Nitric Acid Plant Cooling Tower as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-38 is demonstrated by compliance with Specific Condition # 26. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
26. The permittee shall test and record the total dissolved solids of the cooling water on a weekly basis when SN-38 is operating. Results less than 1,560 ppm total dissolved solids will demonstrate compliance with SN-38's requirements in Specific Conditions # 23, # 24, and # 25 of this permit. The results shall be kept on site and made available to Department personnel upon request. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

### Nitric Acid Vent Collection System

SN-10

### Nitric Acid Vent Collection System

#### Source Description

In October of 1997, a packed tower hydrogen peroxide scrubber was installed to control nitrogen oxide emissions. The top portion of the packed tower treats nitrogen oxide emissions from the weak nitric acid storage vents (Tanks 49, 50, and 51). The bottom section of the packed tower treats the nitrogen oxide emissions present in the blend acid tanks (Tanks 43, 44, 45, and 46) bleaching air stream. The nitric acid loading system vents (SN-29) are also collected and routed to the packed tower. The overheads from the packed tower are routed through a Venturi Scrubber for additional treatment before being vented to the atmosphere through a stack designated as SN-10. The strong nitric acid storage tank vents (Tanks 47, 48, 66, 67, 68, 69, 70 and 71) are routed directly to the Venturi Scrubber (i.e. bypass the packed tower). Overall nitrogen oxide and visible emissions are reduced due to these pollution control devices.

With the issuance of Air Permit 0573-AOP-R8, the Car Barn Scrubber (previously permitted as SN-37) was removed as a source. The nitric acid fumes resulting from the cleaning and pressure checking of rail cars (conducted in the Car Barn) are now routed to SN-10 for control.

The uncontrolled emissions from SN-10 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 Code of Federal Regulations (CFR) Part (§) 64). Accordingly, the (CAM) Plan for the facility is provided in Appendix D. Per §64.2(a), the aforementioned source is regulated under the CAM Rule because it meets the following criteria: (1) the unit is subject to emission limitations for NO<sub>x</sub>, (2) the source is equipped with a control device, and (3) the unit has potential pre-control emissions of NO<sub>x</sub> that exceed the applicable major source threshold. In accordance with §64.3, EDCC has developed a CAM Plan for this source. The Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the NO<sub>x</sub> emission limit at this source.

#### Specific Conditions

27. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rates are based on maximum capacity. Compliance with this Specific Condition will be verified by proper operation of the Venturi and Packed Tower Scrubber and compliance with Specific Condition # 32. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
10	Nitric Acid Vent Collection System	NO <sub>x</sub>	19.5	85.5

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

28. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rates are based on maximum capacity. Compliance with this Specific Condition will be verified by proper operation of the Venturi and Packed Tower Scrubber and compliance with Specific Condition # 32. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
10	Nitric Acid Vent Collection System	Nitric Acid	3.40	10.80

29. The permittee shall not exceed 20% opacity from the Nitric Acid vent collection system (SN-10) as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-10 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
30. The permittee shall have a third party stack test once every five years the nitrogen oxides emissions from the nitric acid vent collection system using EPA Method 7E and the nitrogen oxides emissions shall be less than the hourly limit specified in Specific Condition # 27. Upon failure of a stack test, the permittee shall stack test annually until two consecutive years are below the limits specified in Specific Condition # 27. The facility will conduct rail car/truck loading and/or acid blending operations at normal operational rates when the stack test is performed. [Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]
31. The permittee shall have a third party stack test once every five years the nitric acid emissions from the nitric acid vent collection system using an approved method and the nitric acid emissions shall be less than the hourly limit specified in Specific Condition # 28. Upon failure of a stack test, the permittee shall stack test annually until two consecutive years are below the limit specified in Specific Condition # 28. The equipment which the nitric acid vent collection system serves as a pollution control device shall be operating at normal capacity when the testing is performed. [Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and A.C.A. §8-4-311]
32. The permittee shall not operate the nitric acid vent collection system without a functional hydrogen peroxide scrubber and a Venturi and Packed Tower Scrubber. The permittee shall sample, test and record daily the hydrogen peroxide concentration of the chemical condensate circulated at the scrubber outlet. These records shall be updated by the fifteenth of the month following which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. The permittee shall submit a summary of data including all information as required in the General Provision #8 if applicable. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

## Hoescht-UHDE Direct Strong Nitric Acid Plant

SN-22

### UHDE Direct Strong Nitric Acid Plant

#### Source Description

The DSN Plant produces strong nitric acid (i.e., greater than 98% strength) directly from ammonia oxidation technology designed by Hoechst-UHDE. This process is unique when compared to the other nitric acid plants at EDCC, in that weak nitric acid is rehydrated to produce strong nitric acid product. The DSN Plant produces concentrated nitric acid without the dehydration step, thereby, eliminating a major contributor of air emissions.

Air emissions from the DSN Plant occur due to the passing of the process gas through an absorption column. In this unit, dinitrogen tetroxide is dissolved in nitric acid, which assists in the removal of over 99.3% of the nitrogen oxides generated during the oxidation of ammonia earlier in the UHDE process. The spent process gas is fed to a final absorption column, which is heavily dependent on the conventional absorption process. The process gas exiting the absorber removes approximately 99.88% of the nitrogen oxides.

This plant was originally permitted to comply with the NSPS for Nitric Acid Plants (40 CFR 60, Subpart G), which limits nitrogen oxide emissions to 3.0 lb NO<sub>x</sub>/ton of nitric acid produced. A CEMs unit was installed to continuously measure the NO<sub>x</sub> emissions from the exhaust gas to comply with this emission limit. NSPS Subpart G only applies to Nitric Acid Plants that produce nitric acid between 30% and 70% concentration. Therefore, NSPS Subpart G does not apply to this plant. However, EDCC continues to operate the CEMs to monitor NO<sub>x</sub> emissions using the 3.0 lb/ton emission limit.

The uncontrolled emissions from SN-22 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 Code of Federal Regulations (CFR) Part (§) 64). Accordingly, the (CAM) Plan for the facility is provided in Appendix D. Per §64.2(a), the aforementioned source is regulated under the CAM Rule because it meets the following criteria: (1) the unit is subject to emission limitations for NO<sub>x</sub>, (2) the source is equipped with a control device, and (3) the unit has potential pre-control emissions of NO<sub>x</sub> that exceed the applicable major source threshold. In accordance with §64.3, EDCC has developed a CAM Plan for this source. The Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the NO<sub>x</sub> emission limit at this source.

Specific Conditions

33. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on normal operation. Compliance with this Specific Condition is demonstrated by compliance with Specific Conditions # 36, and # 37, and the CEM required by Specific Condition 38. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
22	UHDE Direct (Strong) Nitric Acid Plant	NO <sub>x</sub>	40.5	177.4

34. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on maximum capacity. Compliance with this Specific Condition is demonstrated by compliance with Specific Conditions # 36 and # 37. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
22	UHDE Direct (Strong) Nitric Acid Plant	HNO <sub>3</sub>	10.00	42.00

35. The permittee shall not exceed 10% opacity from the UHDE Direct (Strong) Nitric Acid Plant (SN-22) as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-22 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
36. The permittee shall not manufacture in excess of 118,260 tons 100% acid equivalent per rolling 12-month total of concentrated nitric acid through the UHDE Direct (Strong) Nitric Acid Plant (SN-22). [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
37. The permittee shall keep records of the concentrated nitric acid production manufactured in the UHDE Direct (Strong) Nitric Acid Plant (SN-22). These records contain each months total and a rolling total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]

El Dorado Chemical Company

Permit #: 0573-AOP-R13

AFIN: 70-00040

38. The permittee shall install, calibrate, maintain and operate a continuous monitoring system for measuring nitrogen oxides emissions from the UHDE Direct (Strong) Nitric Acid Plant. The CEM shall be installed, operated, maintained, and reports submitted per ADEQ's Continuous Emission Monitoring Systems Conditions, August 2004 Revision (listed as Appendix B). The pound per hour of nitrogen oxides quantity shall be computed as described in ADEQ's Continuous Emission Monitoring Systems Conditions, August, 2004 Revision. The nitrogen oxides emission shall be less than hourly limit specified in Specific Condition # 33. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and A.C.A. §8-4-311]

SN-39  
DSN Plant Cooling Tower

Source Description

EDCC operates a cooling tower as part of the UHDE DSN Plant.

Specific Conditions

39. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rates are based on maximum capacity. Compliance with this Specific Condition will be verified by compliance with Specific Condition and # 42. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
39	DSN Plant Cooling Tower	PM <sub>10</sub>	2.3	9.8

40. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this Specific Condition will be verified by compliance with Specific Condition and # 42. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
39	DSN Plant Cooling Tower	PM	2.3	9.8

41. The permittee shall not exceed 20% opacity from the DSN Plant Cooling Tower (SN-39) as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-39 is demonstrated by compliance with Specific Condition # 42. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
42. The permittee shall test and record the total dissolved solids of the cooling water on a weekly basis when SN-39 is operating. Results less than 1,560 ppm total dissolved solids will demonstrate compliance with SN-39's requirements in Specific Conditions # 39, # 40, and # 41 of this permit. The results shall be kept on site and made available to Department personnel upon request. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

### Sulfuric Acid Plant

SN-07

### Sulfuric Acid Plant

### Source Description

The Sulfuric Acid Plant (SN-07), originally constructed in 1949 when Lion Oil Company operated the facility, is a single absorption contact process of the Chemco design. The plant was later modified by Monsanto (Leonard). The plant has been upgraded over the years to include emissions control systems, updated acid cooling technology, and process control equipment.

The Sulfuric Acid Plant (SN-07) manufactures sulfuric acid at 93% - 99% strength through the combustion of sulfur to form sulfur dioxide, the use of oxygen to convert the newly formed sulfur dioxide to sulfur trioxide, and then finally the double absorption of sulfur trioxide with water to form sulfuric acid.

The Sulfuric Acid Plant is subject to 40 CFR 60 Subpart H (Standard of Performance for Sulfuric Acid Plants), which limits sulfur dioxide (SO<sub>2</sub>) and sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>) emissions to 4.0 pounds per ton of 100% acid production and 0.15 pounds per ton of 100% acid production, respectively.

The uncontrolled emissions from SN-07 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 Code of Federal Regulations (CFR) Part (§) 64). Accordingly, the (CAM) Plan for the facility is provided in Appendix D. Per §64.2(a), the aforementioned source is regulated under the CAM Rule because it meets the following criteria: (1) the unit is subject to emission limitations for SO<sub>2</sub>, (2) the source is equipped with a control device, and (3) the unit has potential pre-control emissions of SO<sub>2</sub> that exceed the applicable major source threshold. In accordance with §64.3, EDCC has developed a CAM Plan for this source. The Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the SO<sub>2</sub> emission limit at this source.

### Specific Conditions

43. The permittee shall not exceed the emission rates set forth in the following table. Compliance of SO<sub>2</sub> with this Specific Condition is demonstrated by compliance with Specific Conditions # 46 and # 47. Compliance of SO<sub>2</sub> is also demonstrated by the CEM required in Specific Condition # 47c. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
07	Sulfuric Acid Plant	SO <sub>2</sub>	600.0	401.5



El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

44. The permittee shall not exceed the emission rates set forth in the following table. Compliance of sulfuric acid mists with this Specific Condition is demonstrated by compliance with Specific Conditions # 46 and # 47. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
07	Sulfuric Acid Plant	H <sub>2</sub> SO <sub>4</sub>	2.82	12.35

45. The permittee shall not exceed 10% opacity from the Sulfuric Acid Plant (SN-07) as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-07 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
46. The permittee shall not manufacture in excess of 200,750 tons of 100% sulfuric acid per rolling 12-month total through the sulfuric acid plant. These records shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and A.C.A. §8-4-311]
47. Sulfuric Acid Plant (SN-07) is subject to and shall comply with applicable provisions of 40 CFR Part 60, Subpart H – *Standards of Performance for Sulfuric Acid Plants*. Applicable provisions of Subpart H include, but are not limited to, the following: [Regulation 19, §19.304 and 40 CFR §60.80]
- a. The permittee shall not cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of 2 kg per metric ton of acid produced (4 lb per ton), the production being expressed as 100 percent H<sub>2</sub>SO<sub>4</sub>. [Regulation 19, §19.304 and 40 CFR §60.82]
  - b. The permittee shall not cause to be discharged into the atmosphere from any affected facility any gases which:
    - (1) Contain acid mist, expressed as H<sub>2</sub>SO<sub>4</sub>, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H<sub>2</sub>SO<sub>4</sub>.
    - (2) Exhibit 10 percent opacity, or greater. [Regulation 19, §19.304 and 40 CFR §60.83]
  - c. A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under §60.13(d), shall be sulfur dioxide (SO<sub>2</sub>). Method 6C shall be used for conducting monitoring system performance evaluations under §60.13(c). The span value shall be set at 1000 ppm of sulfur dioxide. [Regulation 19, §19.304 and 40 CFR §60.84(a)]
  - d. The permittee shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each eight-hour period as follows:

$$CF=k[(1.000-0.015r)/(r-s)]$$

where:

CF=conversion factor (kg/metric ton per ppm, lb/ton per ppm).

k=constant derived from material balance. For determining CF in metric units, k=0.0653. For determining CF in English units, k=0.1306.

r=percentage of sulfur dioxide by volume entering the gas converter. Appropriate corrections must be made for air injection plants subject to the Department's approval.

s=percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under §60.84(a).

[Regulation 19, §19.304 and 40 CFR §60.84(b)]

- e. The owner or operator shall record all conversion factors and values under §60.84(b) from which they were computed (i.e., CF, r, and s). [Regulation 19, §19.304 and 40 CFR §60.84(c)]
- f. Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO<sub>2</sub> emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO<sub>2</sub>, O<sub>2</sub>, and CO<sub>2</sub> (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO<sub>2</sub> monitor shall be as specified in §60.84(b). The span value for CO<sub>2</sub> (if required) shall be 10 percent and for O<sub>2</sub> shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO<sub>2</sub> emission rate as follows:

$$Es=(CsS)/[0.265-(0.126 \%O_2)-(A \%CO_2)]$$

where:

Es=emission rate of SO<sub>2</sub>, kg/metric ton (lb/ton) of 100 percent of H<sub>2</sub>SO<sub>4</sub> produced.

Cs=concentration of SO<sub>2</sub>, kg/dscm (lb/dscf).

S=acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100 percent H<sub>2</sub>SO<sub>4</sub> produced.

%O<sub>2</sub>=oxygen concentration, percent dry basis.

A=auxiliary fuel factor,

=0.00 for no fuel.

=0.0226 for methane.

=0.0217 for natural gas.

=0.0196 for propane.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

=0.0172 for No 2 oil.

=0.0161 for No 6 oil.

=0.0148 for coal.

=0.0126 for coke.

%CO<sub>2</sub>= carbon dioxide concentration, percent dry basis.

[Regulation 19, §19.304 and 40 CFR §60.84(d)]

- g. For the purpose of reports under §60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under §60.82. [Regulation 19, §19.304 and 40 CFR §60.84(e)]
- h. The permittee shall comply with the test methods and procedures in 40 CFR §60.85. [Regulation 19, §19.304 and 40 CFR §60.85]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-30  
Sulfuric Acid Loading

Source Description

The sulfuric acid produced at EDCC is loaded into rail cars or trucks. Loading losses occurring as vapors are displaced to the atmosphere by the liquid being loaded into the rail cars or trucks.

Specific Conditions

48. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on engineering estimates and production. Compliance with this Specific Condition is demonstrated by compliance with Specific Condition # 49. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
30	Sulfuric Acid Loading	H <sub>2</sub> SO <sub>4</sub>	0.03	0.05

49. The permittee shall not load in excess of 200,750 tons of sulfuric acid (100% acid equivalent) per rolling 12-month total. The permittee shall keep records of the sulfuric acid shipped by truck and by rail from the facility. These records shall contain each month's total and a rolling total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and A.C.A. §8-4-311]

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

SN-46  
 Sulfuric Acid Plant Cooling Tower

Source Description

The Sulfuric Acid Plant cooling tower uses a combination of river water and cooling system condensation water to cool the heat generated by the sulfuric acid production process.

Specific Conditions

50. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition # 53. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
46	Sulfuric Acid Plant Cooling Tower	PM <sub>10</sub>	0.2	0.7

51. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition # 53. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
46	Sulfuric Acid Plant Cooling Tower	PM	0.2	0.7

52. The permittee shall not exceed 20% opacity from the Sulfuric Acid Plant Cooling Tower (SN-46) as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-46 is demonstrated by compliance with Specific Condition # 53. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

53. The permittee shall test and record the total dissolved solids of the cooling water on a weekly basis when SN-46 is operating. Results less than 1,560 ppm total dissolved solids will demonstrate compliance with SN-46's requirements in Specific Conditions # 50, # 51, and # 52 of this permit. The results shall be kept on site and made available to Department personnel upon request. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

## E2 Ammonium Nitrate Plant

### SN-05, SN-17, and SN-41 Scrubbers

#### Source Description

The Ammonium Nitrate E2 Plant Brinks Scrubber (SN-05) controls emissions from the air stream from the shroud of the E2 Ammonium Nitrate Prill Tower Fans (SN-06), the intermediate ammonium nitrate storage tanks, and the E2 Plant Chemical Condensate Tank. The E2 Plant Brinks Scrubber (SN-05) is actually two scrubbers, one for each prill tower. EDCC has the ability to shut down one scrubber and the associated prill tower. When one scrubber is shut down, EDCC will not operate the associated prill tower while the scrubber is not operating.

The prills are cooled and screened when they exit the prill tower. The air from the cooling process is vented to the Pease-Anthony (Venturi) Scrubber (SN-17). With the issuance of permit 0573-AOP-R7, emissions from the Pease Anthony Scrubber (SN-17) on the E2 HDAN Plant Cooling Train were routed to SN-05 for additional control.

The E2 Plant Chemical Steam Scrubber (SN-41) controls particulate matter and ammonia emissions from the three E2 Plant Neutralizers (formerly SN-02 and SN-03, and a third neutralizer added in 2002), the Ammonium Nitrate Low Concentrator (formerly SN-04), and the E2 Auxiliary Ammonium Nitrate Concentrator (formerly SN-20).

The uncontrolled emissions from SN-05 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 Code of Federal Regulations (CFR) Part (§) 64). Accordingly, the (CAM) Plan for the facility is provided in Appendix D. Per §64.2(a), the aforementioned source is regulated under the CAM Rule because it meets the following criteria: (1) the unit is subject to emission limitations for  $PM_{10}$ , (2) the source is equipped with a control device, and (3) the unit has potential pre-control emissions of  $PM_{10}$  that exceed the applicable major source threshold. In accordance with §64.3, EDCC has developed a CAM Plan for this source. The Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the  $PM_{10}$  emission limit at this source.

Specific Conditions

54. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour limits are based on engineering estimates, maximum capacity, and stack testing results. Compliance with the emission limits for SN-05 is demonstrated by compliance with Specific Conditions # 58, # 59, # 60, and # 61, and the reporting required in Plantwide Condition 7. Compliance with the emission limits for SN-41 is demonstrated by compliance with Specific Conditions # 61, # 0, # 64, # 65, and # 66. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
05	Ammonium Nitrate E2 Brinks Scrubber	PM <sub>10</sub>	14.1	*
17	E2 HDAN Plant Cooling Train	Exhaust from Pease Anthony Scrubber is routed to SN-05		
41	E2 Plant Chemical Steam Scrubber	PM <sub>10</sub>	13.7 (daily 24-hr average)	14.5
		PM <sub>10</sub>	3.3 (30-day rolling average)	

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

55. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour limits are based on engineering estimates, maximum capacity, and stack testing results. Compliance with the emission limits for SN-05 is demonstrated by compliance with Specific Conditions # 57, # 59, # 60, and # 61, and the reporting required in Plantwide Condition # 7. Compliance with the emission limits for SN-41 is demonstrated by compliance with Specific Conditions # 61 and # 0. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
05	Ammonium Nitrate E2 Brinks Scrubber	NH <sub>3</sub> PM	8.50 14.1	37.30 *
17	E2 HDAN Plant Cooling Train	Exhaust from Pease Anthony Scrubber is routed to SN-05		
41	E2 Plant Chemical Steam Scrubber	PM	13.7 (daily 24-hr average)	14.5
		PM	3.3 (30-day rolling average)	
		NH <sub>3</sub>	10.00	43.80

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

56. The permittee shall not exceed 20% opacity from SN-05 and 15% opacity from SN-41 as measured by EPA Reference Method No. 9. Compliance with the opacity limits set forth

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

in this Specific Condition will be shown by compliance with Plantwide Condition # 10.  
[Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

57. The permittee shall have a third party test once every five years the NH<sub>3</sub> emissions from SN-17's exhaust prior to the inlet of SN-05 using an approved method. The NH<sub>3</sub> emissions from SN-17 shall be less than 5.0 lb/hr. Upon failure of a test, the permittee shall test annually until two consecutive years are less than 5.0 lb/hr. The units shall be operated at least at 90% of rated capacity when the stack test is completed. For SN-17, 90% rated capacity is defined as:
- a. The 90% of the rated capacity of the prill towers will be on an ammonium nitrate production basis.
  - b. The product exit temperature at the prill towers at the time of test must be less than 275°F.

[Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

58. The permittee shall have a third party analyze the PM<sub>10</sub> emissions from SN-05 once every five years. Analysis for SN-05 shall be conducted using a method approved in advance by the Department. If the analysis predicts PM<sub>10</sub> emissions may exceed 13.0 lb/hr, then an audit shall be conducted by an independent third party to evaluate the operating condition of SN-05 and shall recommend any maintenance and/or repairs needed. A copy of the audit report shall be forwarded directly to the Department by the auditor within fifteen (15) days of the completion of the audit. Any necessary maintenance and/or repairs shall be performed by the permittee as expeditiously as possible. The permittee shall repeat the emissions analysis within thirty (30) days after completion of any maintenance and/or repairs. The permittee shall submit the compliance analysis results to the Department with thirty (30) days after completing the analysis. The unit shall be operated at 90% or more of rated capacity when the analysis is conducted. For SN-05, 90% of rated capacity is defined as:
- a. The 90% of the rated capacity of the prill towers will be on an ammonium nitrate production basis.
  - b. The product exit temperature at the prill towers at the time of test must be less than 275°F.

[Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]

59. The permittee shall not manufacture in excess of 473,040 tons of ammonium nitrate prill through the E2 Ammonium Nitrate Plant during any consecutive 12-month period.  
[Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
60. The permittee shall keep records of the ammonium nitrate prill production in the E2 Ammonium Nitrate Plant. These records shall contain each month's total and a rolling



El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]

61. The E2 plant brinks scrubber (SN-05), the E2 Plant HDAN Cooling Train Pease/Anthony Scrubber (SN-17), and the E2 Plant Chemical Steam Scrubber (SN-41) shall be kept in good working condition at all times. SN-05 and SN-17 shall meet the conditions shown in the following table when the plant is operating. The monitoring parameters for SN-05 and SN-17 shall be measured and recorded daily. All hourly data recorded during a calendar day shall be averaged to demonstrate compliance with the daily limit. A valid daily period is defined as the period from 12 a.m. to 12 a.m. where at least 67% of the data or at least 16 hourly readings collected in the 24-hour period when the plant is operating must be recorded. All data shall be recorded every 4 hours when the plant is operating shall be averaged to demonstrate compliance with the daily limit. In the event that a daily parameter is outside the range, the permittee shall take immediate action to identify the cause of the parametric exceedance, implement corrective action, and document that the parameter was back inside the range following corrective action by the end of the next 24-hour period. The results shall be kept on site and be made available to Department personnel upon request. The permittee shall submit a summary of data including all information as required in the General Provision #8 if applicable.

SN	Description	Parameter	Units	Operation Limits
05	E2 plant brinks scrubber	Scrubber Liquid Flow Rate for Each Scrubber	gal/min	225 (minimum)
		Gas Pressure Drop Across Unit for Each Scrubber	in. H <sub>2</sub> O	2.5 (minimum)
		pH	-	0.5 - 6.0
17	E2 Plant HDAN Cooling Train Pease/Anthony Scrubber	Scrubber Liquor pH	-	0.5 - 6.0
		Scrubber Liquid Flow Rate (dual scrubbers)	gal/min	120 (minimum per scrubber)
		Amperage	amps	100 (minimum)

[Regulation 18, §18.1004 and A.C.A. 8-4-203 as referenced by 8-4-304 and 8-4-311]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

62. The permittee shall operate, maintain, and submit reports for the continuous monitoring device for SN-41, as required by Specific Condition 66, in accordance with all applicable requirements of ADEQ CEMS Conditions, located in Appendix B of this permit. The applicable requirements of ADEQ CEMS Conditions include, but are not limited to, the following:
- a. The stack gas sampling system at SN-41 shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Percent of monitor down-time is calculated by dividing the total minutes the monitor is not in operation by the total time in the calendar quarter and multiplying by one hundred. Failure to maintain operation time shall constitute a violation of the CEMS conditions.
  - b. Percent of excess emissions are calculated by dividing the total minutes of excess emissions by the total time the source operated and multiplying by one hundred. Failure to maintain compliance may constitute a violation of the CEMS conditions.
  - c. The permittee shall maintain records of the occurrence and duration of startup/shutdown, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of SN-41 which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative.
  - d. The permittee shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, CEM Coordinator) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter.
  - e. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADEQ Quarterly Excess Emission Report Forms. Alternate forms may be used with prior written approval from the Department.
  - f. The permittee must maintain on site a file of the continuous monitored data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for a period of at least five years, and is required to be maintained in such a condition that it can easily be audited by an inspector.
  - g. The permittee shall develop and implement a Quality Assurance/Quality Control (QA/QC) plan within 90 days of permit issuance, and shall be submitted to the Department (Attn.: Air Division, CEM Coordinator). CEMS quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability. The permittee must keep a copy of the QA/QC Plan at the source's location and retain all previous versions of the QA/QC Plan for five years.
  - h. The submitted QA/QC plan shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

- i. A back-up monitor may be placed on SN-41 to minimize monitor downtime. This back-up sampling and monitoring system is subject to the same QA/QC procedure and practices as the primary sampling and monitoring system. When the primary sampling and monitoring system goes down, the back-up sampling and monitoring system may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up sampling and monitoring system is placed in service, these records shall include at a minimum the reason the primary sampling and monitoring system is out of service, the date and time the primary sampling and monitoring system was out of service and the date and time the primary sampling and monitoring system was placed back in service.

[Regulation 19, §19.705 and §19.304; 40 CFR Part 52, Subpart E; and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

63. The permittee shall calculate PM<sub>10</sub> emissions for Plantwide Condition #7 from the E2 Plant Brinks Scrubber (SN-05), and the E2 Prill Tower (SN-06) using a total emission factor of 0.967 lb of PM<sub>10</sub> per ton of ammonium nitrate produced. These records shall be updated by the fifteenth of the month following the month which the records represent. These records shall be kept on site and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
64. The 30-day rolling average PM<sub>10</sub> emissions from SN-41 shall not exceed 0.054 pound per ton of ammonium nitrate produced at the neutralizers. Compliance is demonstrated by compliance with the PM<sub>10</sub> testing requirement of Specific Condition # 66. [Regulation 19, §19.901 and 40 CFR Part 52 Subpart E]
65. The daily 24-hour average PM<sub>10</sub> emissions from SN-41 shall not exceed 0.223 pound per ton of ammonium nitrate produced at the neutralizers. Compliance is demonstrated by compliance with the PM<sub>10</sub> testing requirement of Specific Condition # 66. [Regulation 19, §19.901 and 40 CFR Part 52 Subpart E]
66. The permittee shall continue to conduct continuous sampling of the stack gas at SN-41 to produce two 12-hr composite samples each day to demonstrate compliance with the limits in Specific Conditions # 54 and # 65. The permittee shall maintain a 30-day rolling average of the PM<sub>10</sub> emissions at SN-41 to demonstrate compliance with the limits in Specific Conditions # 54 and # 64.

Each 12-hour composite sample shall be analyzed using Method EDCC-330.2 (to determine ammonia concentration) and EPA Method 300.0 "Determination of Inorganic Anions by Ion Chromatography" (to determine nitrate concentration). EDCC's analysis procedure for ammonia shall be consistent with Method 4500-NH<sub>3</sub> from "Standard

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

Methods for the Examination of Water and Wastewater, 19th Edition". The data from the analyses shall be entered into an Excel spreadsheet on a daily basis to calculate the mass concentrations of ammonia (as  $\text{NH}_3$ ) and condensable particulate (as  $\text{NH}_4\text{NO}_3$ ) in the vapor stream leaving SN-41. Total vapor flow from process equipment controlled by SN-41 (i.e., Auxiliary Concentrator, E2 Low Concentrator, Fresh Neutralizer, Off-Gas Neutralizer, and the #4 Neutralizer) shall be assumed to be at maximum rates for initial calculations/compliance demonstration purposes. Should spreadsheet results indicate an exceedance of the permitted rate for ammonia/particulate matter, EDCC shall calculate the actual total vapor flow rate by mass balance around the operations that feed vapors to SN-41 to verify compliance, based on the following:

- The vapor stream from the Auxiliary Concentrator will be considered to be at its maximum rate if the unit is in operation.
- The vapor stream from the Low Concentrator will be calculated based on the measured prill production rate and solution concentrations.
- Vapor flow from the neutralizers will be calculated based on the acid and ammonia feed rates and the acid and product solution concentrations.

The permittee shall maintain an emission inventory spreadsheet for particulate matter and ammonia emissions from SN-41. The spreadsheet shall contain each 12-hour composite sample result and shall be used to maintain a daily, 24-hour average result to demonstrate compliance with the lb/hr emission limits and a 12-month rolling total to demonstrate compliance with the annual emission limits. A valid 12-hour period is defined as beginning at 8:00 a.m. and at 8:00 p.m. This information shall be submitted in accordance with General Provision 7.

[Regulation 19, §19.702 and §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

SN-06  
 Ammonium Nitrate Prill Tower Fans

Source Description

The E2 Ammonium Nitrate Prill Tower Fans (SN-06) are composed of three fans located in each of the two independent ammonium nitrate prill towers (North and South). E2 Plant prilling operations are accomplished by valving a 99% ammonium nitrate solution from a head tank through a prill plate. The prill plate breaks up the solution stream into droplets that fall through one of the two towers. An air stream is pulled through the tower shrouds to remove the majority of the ammonium nitrate emissions generated as the solution is broken into droplets at the prill plates. The air stream from inside the shroud is exhausted through the Brinks Scrubber (SN-05) to control particulate emissions.

Specific Conditions

67. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour limits are based on engineering estimates, maximum capacity, and stack testing results. Compliance with the emission limits for SN-06 is demonstrated by compliance with Specific Conditions # 58, # 59, # 60, and # 61, and the reporting required in Plantwide Condition # 7. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
06	E2 Ammonium Nitrate Prill Tower Fans	PM <sub>10</sub>	67.0	*

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

68. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour limits are based on engineering estimates, maximum capacity, and stack testing results. Compliance with the emission limits for SN-06 is demonstrated by compliance with Specific Conditions # 59, # 60, and # 61, and the reporting required in Plantwide Condition # 7. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
06	E2 Ammonium Nitrate Prill Tower Fans	PM	67.0	*

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

69. The permittee shall not exceed 25% opacity from SN-06 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-06 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-19  
 E2 Plant Barometric Tower

Source Description

A wooden structure operating similar to a cooling tower is used to create a “barometric leg” for the high concentrator (located at the top of the E2 Plant Prill Tower) to concentrate ammonium nitrate from 95% strength to greater than 99%. The high concentrator operates under a vacuum and non-condensables are pulled through the barometric leg to this dedicated barometric tower (SN-19). The barometric tower uses weak ammonium nitrate (~20%) process water as the circulation media. Particulate matter emissions occur as a result of particulate entrained in the water vapor mist that is emitted (sprayed) from the tower. Ammonia emissions also occur due to the water containing ammonium nitrate in solution.

Specific Conditions

70. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour limits are based on engineering estimates, maximum capacity, and stack testing results. Compliance with the emission limits for SN-19 is demonstrated by compliance with Specific Conditions # 59 and # 60. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
19	E2 Plant Barometric Tower	PM <sub>10</sub>	0.5	*

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

71. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour limits are based on engineering estimates, maximum capacity, and stack testing results. Compliance with the emission limits for SN-19 is demonstrated by compliance with Specific Conditions # 59 and # 60. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
19	E2 Plant Barometric Tower	PM	0.5	*
		NH <sub>3</sub>	4.10	17.70

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

72. The permittee shall not exceed 15% opacity from SN-19 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-19 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-28  
 E2 Plant HDAN/LDAN Loading

Source Description

E2 Plant HDAN/LDAN produced at the E2 Plant is loaded in to rail cars or trucks. Particulate emissions occur as the HDAN/LDAN is being loaded into the rail cars or trucks.

Specific Conditions

73. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour limits are based on engineering estimates, maximum capacity, and stack testing results. Compliance with the emission limits for SN-28 is demonstrated by compliance with Specific Conditions # 56, # 59, and # 60. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
28	E2 Plant HDAN/LDAN Loading	PM <sub>10</sub>	1.1	4.8

74. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour limits are based on engineering estimates, maximum capacity, and stack testing results. Compliance with the emission limits for SN-28 is demonstrated by compliance with Specific Conditions # 56, # 59, and # 60. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
28	E2 Plant HDAN/LDAN Loading	PM	1.1	4.8

75. The permittee shall not exceed 25% opacity from SN-28 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-28 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-34  
 E2 Plant Solution Reactor

Source Description

A 35% nitric acid/magnesium oxide solution is created by reacting 56% nitric acid with magnesium oxide through agitation. Approximately 0.5% of the magnesium oxide is contained in the final ammonium nitrate product. Each batch takes two and a half hours to make 6.77 tons of nitric acid/magnesium oxide solution. This solution reactor, which does not contain any pollution control equipment, has the capability of producing eight batches of E2 solution a day while the E2 Ammonium Nitrate Plant is running at its maximum rate. The solution leaves the reactor, where it is filtered to remove any excess magnesium oxide and other trace particulates, and is stored in a heated tank as 35% solution. The solution is pumped from the tank to the top of the E2 Prill Tower (SN-06), where it is mixed with 95% ammonium nitrate solution prior to the High Concentrator.

Specific Conditions

76. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rate limits are based on maximum capacity. The tons per year emission rate limits are based on yearly throughput through the E2 Ammonium Nitrate Plant. Compliance with this Specific Condition shall be demonstrated by compliance with Specific Conditions # 59 and # 60. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
34	E2 Plant Solution Reactor	PM <sub>10</sub>	0.9	3.0

77. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rate limits are based on maximum capacity. The tons per year emission rate limits are based on yearly throughput through the E2 Ammonium Nitrate Plant. Compliance with this Specific Condition shall be demonstrated by compliance with Specific Conditions # 59 and # 60. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
34	E2 Plant Solution Reactor	PM	0.9	3.0

78. The permittee shall not exceed 20% opacity from SN-34 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-34 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]



KT Ammonium Nitrate Plant

SN-14  
 LDAN Prill Tower

Source Description

To be sold in final product form, LDAN at the KT Plant is prilled in a prilling tower. A 97% ammonium nitrate solution is mixed with a proprietary additive in a head tank. The prilling operation is accomplished by dispersing the ammonium nitrate solution downward in the tower through a spray nozzle. Long residence times and low air rates contribute to the production of high quality prills, which generate lower particle fines and therefore, lower particulate matter emissions. Four fans control the temperature of the prills leaving the bottom of the prilling tower. This air cools and solidifies the ammonium nitrate droplets into solid prills. The air stream and entrained particles are vented to the atmosphere through chimneys on top of the tower.

Specific Conditions

79. The permittee shall not exceed the emission rates set forth in the following table. The hourly emission limits are based on maximum capacity of 38.5 tons per hour of ammonium nitrate production. Compliance with the emission limits is demonstrated by compliance with Specific Conditions # 82, # 83, # 84, and # 85, and the reporting required in Plantwide Condition # 7. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
14	KT LDAN Prill Tower	PM <sub>10</sub>	44.2	*

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

80. The permittee shall not exceed the emission rates set forth in the following table. The hourly emission limits are based on maximum capacity of 38.5 tons per hour of ammonium nitrate production. Compliance with the emission limits is demonstrated by compliance with Specific Conditions # 82, # 83, # 84, and # 85, and the reporting required in Plantwide Condition # 7. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
14	KT LDAN Prill Tower	PM	44.2	*

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

81. The permittee shall not exceed 15% opacity from SN-14 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-14 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
82. The permittee shall not manufacture in excess of 252,000 tons of ammonium nitrate per rolling 12-month total through the KT Ammonium Nitrate Plant. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]
83. The permittee shall keep records of the ammonium nitrate production manufactured in the KT Ammonium Nitrate Plant. These records shall contain each month's total and a rolling total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]
84. The permittee shall have a third party stack test the PM<sub>10</sub> emissions from SN-14 within 180 days of issuance of Permit 0573-AOP-R12, and annually thereafter. The stack test shall be performed using EPA Reference Method 201A or 5, EPA Reference Method 202, and a method approved in advance by the Department. The permittee shall maintain the approved method with the permit. By using Method 5 for PM<sub>10</sub>, the facility will assume all collected particulate is PM<sub>10</sub>. PM<sub>10</sub> emission rates measured during this testing shall be less than the permitted emission rates specified in Specific Condition # 79. This unit shall be operated at 90% or more of maximum capacity when the stack test is performed. 90% of maximum capacity is defined as:
  - a. 90% of the maximum capacity of the prill tower on an ammonium nitrate production basis.
  - b. The product exit temperature at the prill tower at the time of the test must be less than 180°F.
  - c. The moisture content of the product exiting the dryer must be less than 0.1%.

[Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]

85. The permittee shall calculate PM<sub>10</sub> emissions for Plantwide Condition #7 from the KT LDAN Prill Tower (SN-14), the KT Plant Dryer/Cooler (SN-15), and the KT Plant Brinks Scrubber (SN-21) using a total emission factor of 1.13 lb of PM<sub>10</sub> per ton of ammonium nitrate produced at the KT Plant. These records shall be updated by the fifteenth of the month following the month which the records represent. These records shall be kept on site and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision No. 7. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-15, SN-18, and SN-21  
KT Plant Dryer/Cooler, Baghouse, and Scrubber

Source Description

Prills exiting the bottom of the KT LDAN Prill Tower (SN-14) are conveyed to a predryer and dryer. The predryer and dryer exhaust air streams are drawn by a common fan concurrent to the direction of the prill and blown to a wet scrubber. The scrubber efficiency is increased by injecting a portion of the scrubbing solution into the fan system. The wet scrubber exhaust, which contains ammonia and particulate matter, is vented directly to the atmosphere through a stack designated as SN-15.

An external coating of high melting point organic material and talc is added to the LDAN to improve the storage and flow of the final product. The talc is stored in an enclosed silo that pneumatically feeds into a bulk talc hopper. Both the silo and the hopper are equipped with a baghouse (SN-18) to minimize particulate matter emissions. The silo baghouse only operates when the talc is being blown into the silo during the unloading of talc when delivered to the plant. The baghouse at the hopper operates when talc is being added to the LDAN. The baghouses do not operate at the same.

During LDAN production at the KT Plant, ammonium nitrate solution exits a neutralizer and is pumped into a 50 ton solution storage tank. The ammonium nitrate solution (composed of 95% ammonium nitrate and 5% water) is in molten form at this stage in the process. In the storage tank, the ammonium nitrate solution is blended with "recycled" ammonium nitrate solution, which has been concentrated in the auxiliary concentrator. The ammonium nitrate must be concentrated to 97.5% prior to prilling operations. For this to occur, the ammonium nitrate solution is transferred from the 50 ton tank to a dehydrator. The dehydrator air is blown through the solution to remove excess water. The exhaust stream from the dehydrator is directed to the Brinks Scrubber (SN-21) prior to being vented to the atmosphere.

The uncontrolled emissions from SN-15, SN-18, and SN-21 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 Code of Federal Regulations (CFR) Part (§) 64). Accordingly, the (CAM) Plan for the facility is provided in Appendix D. Per §64.2(a), the aforementioned sources are regulated under the CAM Rule because it meets the following criteria: (1) the units are subject to emission limitations for PM<sub>10</sub>, (2) the sources are equipped with a control device, and (3) the units have potential pre-control emissions of PM<sub>10</sub> that exceed the applicable major source threshold. In accordance with §64.3, EDCC has developed a CAM Plan for these sources. The Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the PM<sub>10</sub> emission limits at these sources.

Specific Conditions

86. The permittee shall not exceed the emission rates set forth in the following table. The hourly emission limits are based on maximum capacity of 38.5 tons per hour of ammonium nitrate production. Compliance with the emission limits for SN-15 is demonstrated by compliance with Specific Conditions # 82, # 83, # 85, # 89, and # 91, and the reporting required in Plantwide Condition # 7. Compliance with the emission limits for SN-18 is demonstrated by compliance with Specific Conditions # 82, # 83, and # 91, and the reporting required in Plantwide Condition # 7. Compliance with the emission limits for SN-21 is demonstrated by compliance with Specific Conditions # 82, # 83, # 85, # 89, and # 91, and the reporting required in Plantwide Condition # 7. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
15	KT Plant Dryer/Cooler	PM <sub>10</sub>	17.0	*
18	KT Plant Clay Baghouse	PM <sub>10</sub>	1.0	*
21	KT Plant Brinks Scrubber	PM <sub>10</sub>	3.0	*

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

87. The permittee shall not exceed the emission rates set forth in the following table. The hourly emission limits are based on maximum capacity of 38.5 tons per hour of ammonium nitrate production. Compliance with the emission limits for SN-15 is demonstrated by compliance with Specific Conditions # 82, # 83, # 85, # 90, and # 91, and the reporting required in Plantwide Condition # 7. Compliance with the emission limits for SN-18 is demonstrated by compliance with Specific Conditions # 82, # 83, and # 91, and the reporting required in Plantwide Condition # 7. Compliance with the emission limits for SN-21 is demonstrated by compliance with Specific Conditions # 82, # 83, # 85, # 90, and # 91, and the reporting required in Plantwide Condition # 7. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
15	KT Plant Dryer/Cooler	NH <sub>3</sub>	18.00	75.60
		PM	17.0	*
18	KT Plant Clay Baghouse	PM	1.0	*
21	KT Plant Brinks Scrubber	NH <sub>3</sub>	30.00	126.00
		PM	3.0	*

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

88. The permittee shall not exceed 5% opacity from SN-18, 10% opacity from SN-21, and 20% opacity from SN-15, as measured by EPA Reference Method No. 9. Compliance with the opacity limits set forth in this Specific Condition will be shown by compliance with Plantwide Condition # 10. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
89. The permittee shall have a third party annually stack test the PM<sub>10</sub> emissions from SN-15 using EPA Reference Method 201A or 5, and EPA Reference Method 202. The permittee shall have a third party stack test the PM<sub>10</sub> emissions from SN-21 within 180 days of issuance of Permit 0573-AOP-R12, and annually thereafter. The stack test shall be performed using EPA Reference Method 201A or 5, EPA Reference Method 202, and a method approved in advance by the Department. The permittee shall maintain the approved method with the permit. By using Method 5 for PM<sub>10</sub>, the facility will assume all collected particulate is PM<sub>10</sub>. PM<sub>10</sub> emission rates measured during this testing shall be less than the permitted emission rates specified in Specific Condition # 86. These units shall be operated at 90% or more of maximum capacity when the stack tests are performed. For SN-15 and SN-21, 90% of maximum capacity is defined as:
- a. 90% of the maximum capacity of the prill tower on an ammonium nitrate production basis.
  - b. The product exit temperature at the prill tower at the time of the test must be less than 180°F.
  - c. The moisture content of the product exiting the dryer must be less than 0.1%.

[Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]

90. The permittee shall have a third party annually stack test the NH<sub>3</sub> emissions from SN-21 using a method approved in advance by the Department to capture ammonia, and the NH<sub>3</sub> emissions shall be less than the permitted emission rates specified in Specific Condition # 87. The permittee shall maintain the approved method with the permit. For SN-21, if the stack tests pass three consecutive years of annual testing, the permittee shall perform stack test once every three years. Upon failure of a stack test, the permittee shall stack test annually until three consecutive years yield results less than the permitted emission rates specified in Specific Condition # 87. The permittee shall have a third party stack test once every five years the NH<sub>3</sub> emissions from SN-15 using a EPA Method 5 modified to simultaneously capture ammonia, and the NH<sub>3</sub> emissions shall be less than the permitted emission rates specified in Specific Condition # 87. For SN-15, upon failure of a stack test, the permittee shall stack test annually until two consecutive years are less than the permitted emission rates specified in Specific Condition # 87. The units shall be operated at 90% or more of maximum capacity when the stack tests are performed. The 90% of maximum capacity is defined as:
- a. For SN-15, 90% of the maximum capacity during NH<sub>3</sub> testing is defined as:

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

- i. 90% of the maximum capacity of the prill tower on an ammonium nitrate production basis.
- ii. The product exit temperature at the prill tower at the time of the test must be less than 180°F.
- iii. The moisture content of the product exiting the dryer must be less than 0.1%.

b. For SN-21, 90% of maximum capacity during NH<sub>3</sub> testing is defined as:

- i. 90% of the maximum capacity of the prill tower on an ammonium nitrate production basis.
- ii. Maximum input rate to dehydrator (i.e. ammonium nitrate solution) is 105 gpm; therefore, 90% would be 94.5 gpm.
- iii. The product exit temperature at the prill tower at the time of the test must be less than 180°F.
- iv. The moisture content of the product exiting the dryer must be less than 0.1%.

[Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

91. The KT brinks scrubber (SN-21), the KT Plant Dryer/Cooler Scrubber (SN-15), and the KT Plant Clay Baghouse (SN-18) shall be kept in good working condition at all times and shall meet the conditions shown in the following table when the plant is operating. The monitoring parameters for SN-15, and SN-18, and SN-21 shall be measured and recorded daily. All hourly data recorded during a calendar day shall be averaged to demonstrate compliance with the daily limit. A valid daily period is defined as the period from 12 a.m. to 12 a.m. where at least 67% of the data or at least 16 hourly readings collected in the 24-hour period when the plant is operating must be recorded. All data shall be recorded every 4 hours when the plant is operating shall be averaged to demonstrate compliance with the daily limit. In the event that a daily parameter is outside the range, the permittee shall take immediate action to identify the cause of the parameter to be outside the range, implement corrective action, and document that the parameter was back inside the range following corrective action by the end of the next 24-hour period. The results shall be kept on site and be available to Department personnel upon request. The permittee shall submit a summary of data including all information as required in the General Provision # 8 if applicable. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

SN	Description	Parameter	Units	Operation Limits
15	KT Plant Dryer/Cooler Scrubber	Scrubber Liquor pH	-	0.5 – 4.5
		Liquid Flow Rate (combination of fan and ductwork)	gal/min	80 (minimum)
		Amperage	amps	290 (minimum)
18	KT Plant Baghouse	Gas Pressure Drop	in. H <sub>2</sub> O	0.5 - 8.0
21	KT Brinks Scrubber	Liquid Gas Pressure to Top Spray Nozzles	psig	80 - 100
		Gas Pressure Drop Across Unit	in. H <sub>2</sub> O	2.5 (minimum)
		pH	-	0.5 – 4.5

92. The permittee shall calculate PM<sub>10</sub> emissions for Plantwide Condition # 7 from the KT LDAN Prill Tower (SN-14), the KT Plant Dryer/Cooler (SN-15), and the KT Plant Brinks Scrubber (SN-21) using a total emission factor of 1.13 lb of PM<sub>10</sub> per ton of ammonium nitrate produced at the KT Plant. These records shall be updated by the fifteenth of the month following the month which the records represent. These records shall be kept on site and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision # 7.  
 [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

SN-27  
 KT Plant LDAN Loading

Source Description

LDAN produced at the KT Plant is loaded into rail cars or trucks. Particulate emissions occur as the LDAN is being loaded into the rail cars or trucks.

Specific Conditions

93. The permittee shall not exceed the emission rates set forth in the following table. The emission limits are based on maximum capacity. Compliance with the emission limits is demonstrated by compliance with Specific Conditions # 82 and # 83. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	Lb/hr	tpy
27	KT Plant LDAN Loading	PM <sub>10</sub>	0.6	2.6

94. The permittee shall not exceed the emission rates set forth in the following table. The emission limits are based on maximum capacity. Compliance with the emission limits is demonstrated by compliance with Specific Conditions # 82 and # 83. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
27	KT Plant LDAN Loading	PM	0.6	2.6

95. The permittee shall not exceed 10% opacity from SN-27 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-27 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 19, §19.503 and 40 CFR 52, Subpart E]



El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-43  
KT Plant Cooling Tower

Source Description

EDCC operates a cooling tower as part of the KT Ammonium Nitrate Plant. The cooling tower is used to cool the process acid.

Specific Conditions

96. The permittee shall not exceed the emission rates set forth in the following table. The emission limits are based on maximum capacity. Compliance with the emission limits is demonstrated by compliance with Specific Condition # 99. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
43	KT Plant Cooling Tower	PM <sub>10</sub>	0.4	1.4

97. The permittee shall not exceed the emission rates set forth in the following table. The emission limits are based on maximum capacity. Compliance with the emission limits is demonstrated by compliance with Specific Condition # 99. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
43	KT Plant Cooling Tower	PM	0.4	1.4

98. The permittee shall not exceed 20% opacity from SN-43 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-43 is demonstrated by compliance with Specific Condition # 99. [Regulation 19, §19.503 and 40 CFR 52, Subpart E]
99. The permittee shall test and record the total dissolved solids of the cooling water on a weekly basis when SN-43 is operating. Results less than 1,560 ppm total dissolved solids will demonstrate compliance with SN-43's requirements in Specific Conditions # 96, # 97, and # 98 of this permit. The results shall be kept on site and made available to Department personnel upon request. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

Mixed Acid Plant

SN-44

Mixed Acid Plant Scrubber

Source Description

EDCC manufactures mixed acid by mixing  $\leq 30\%$  oleum (concentrated sulfuric acid) and/or 98% sulfuric acid with 98% nitric acid. The  $\leq 30\%$  oleum is purchased from a vendor and delivered to EDCC by railcar or tanker truck, while the 98% sulfuric acid will come from EDCC's Sulfuric Acid Plant, and the 98% nitric acid will come from EDCC's Nitric Acid Plant. The manufactured mixed acid is stored in the product storage tank or the mixing tank until it is loaded into a railcar or tanker truck. Air emissions from the tanks, the unloading of oleum, and the loading/unloading of the mixed acid into tank cars and/or trucks will be routed to the scrubber (SN-44) prior to being released to the atmosphere.

This scrubber is not subject to CAM because the scrubber is not used to control the NO<sub>x</sub> emissions from this source.

Specific Conditions

100. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through compliance with Specific Conditions # 103 - 108. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
44	Mixed Acid Plant Scrubber	NO <sub>x</sub>	0.4	1.7

101. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this Specific Condition shall be demonstrated by compliance with Specific Conditions # 103 - 108. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
44	Mixed Acid Plant Scrubber	SO <sub>3</sub>	0.05	0.18
		H <sub>2</sub> SO <sub>4</sub>	0.05	0.18
		HNO <sub>3</sub>	0.20	0.90

102. The permittee shall not exceed 20% opacity from SN-44 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-44 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 19, §19.503 and 40 CFR 52, Subpart E]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

103. The permittee shall offload no more than 394,200 tons of Oleum into the Oleum Storage Tank per consecutive 12 month period. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
104. The permittee shall not use Oleum in excess of 30% in strength (SO<sub>3</sub> concentration). [Regulation 19, §19.705, A.C.A. 8-4-203 as referenced by 8-4-304 and 8-4-311, and 40 CFR 70.6]
105. The permittee shall not produce more than 219,000 tons of mixed acid per consecutive 12-month period. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
106. The permittee shall maintain monthly records of the amount of Oleum offloaded into the Oleum Storage Tank, the percent strength of the Oleum, and the amount of mixed acid produced. These records shall be updated on monthly basis, kept on site, and made available to Department personnel upon request. An annual total and each month's individual total shall be submitted to the Department in accordance with General Provision 7. [Regulation 19, §19.705, A.C.A. 8-4-203 as referenced by 8-4-304 and 8-4-311, and 40 CFR 70.6]
107. The permittee shall have a third party stack test SN-44 once every five years for HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, SO<sub>3</sub>, and NO<sub>x</sub> emissions using an approved method, and the emissions shall be less than the hourly limit specified in Specific Conditions # 100 and # 101. Upon failure of a stack test, the permittee shall stack test annually until two consecutive years are below the permitted emission rates. During stack testing, the mixed acid plant shall be operating at a rate greater than or equal to 90% capacity. [Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]
108. The Mixed Acid Scrubber shall be kept in good working condition at all times. The following monitoring parameters for SN-44 shall be measured and recorded daily. All hourly data recorded during a calendar day shall be averaged to demonstrate compliance with the daily limit. A valid daily period is defined as the period from 12 a.m. to 12 a.m. where at least 67% of the data or at least 16 hourly readings collected in the 24-hour period when the plant is operating must be recorded. All data recorded once per 12-hour shift when the plant is operating shall be averaged to demonstrate compliance with the daily limit. In the event that a daily parameter is outside the range, the permittee shall take immediate action to identify the cause of the parameter to be outside the range, implement corrective action, and document that the parameter was back inside the range following corrective action by the end of the next 24-hour period. The results shall be kept on site and made available to Department personnel upon request. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

El Dorado Chemical Company

Permit #: 0573-AOP-R13

AFIN: 70-00040

SN	Description	Parameter	Units	Operation Limits
44	Mixed Acid Plant Scrubber	Scrubber Liquid Flow Rate	gal/min	5.0 (minimum)
		Gas Pressure Drop Across Unit	in. H <sub>2</sub> O	10 - 35
		Scrubber liquid pH	-	0.5 – 7.5

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

Natural Gas Fired Boilers

SN-16A and SN-16B  
 Natural Gas Fired Boilers

Source Description

Boilers No. 2 (SN-16A) and No. 4 (SN-16B) are used to supply steam throughout the various plants at the facility. Both units are fired only with natural gas and each has a design heat input of 145 MMBtu/hr. One boiler can provide steam adequately for the entire facility and only one boiler is allowed to be in operation per the netting this facility underwent in 1990 to avoid PSD (except when they are being switched). It requires about 24 hours for an inactive boiler to warm-up and to take the plant loads. Both boilers will be operated during these switching periods.

Since the boilers at this facility were constructed in 1944, New Source Performance Standards 40 CFR 60 Subparts D, Da, Db, and Dc are not applicable.

Specific Conditions

109. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rate limits are based on engineering estimates and the maximum capacity of each boiler and the tons per year emission rate limits are based on the maximum capacity of one boiler. Compliance with this Specific Condition is demonstrated by compliance with Specific Conditions # 112 and # 113. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
16A	Boiler No. 2	PM <sub>10</sub>	1.1	*
		SO <sub>2</sub>	0.1	0.4
		VOC	0.8	3.5
		CO	12.0	52.3
		NO <sub>x</sub>	39.8	174.2
16B	Boiler No. 4	PM <sub>10</sub>	1.1	*
		SO <sub>2</sub>	0.1	**
		VOC	0.8	**
		CO	12.0	**
		NO <sub>x</sub>	39.8	**

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

\*\* - SO<sub>2</sub>, VOC, CO, and NO<sub>x</sub> annual emissions are bubbled together for SN-16A and SN-16B.

El Dorado Chemical Company  
 Permit #: 0573-AOP-R13  
 AFIN: 70-00040

110. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour emission rate limits are based on engineering estimates and the maximum capacity of each boiler and the tons per year emission rate limits are based on maximum capacity of one boiler. Compliance with this Specific Condition is demonstrated by compliance with Specific Conditions # 112 and # 113. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
16A	Boiler No. 2	PM	1.1	*
		Hexane	0.3	1.20
16B	Boiler No. 4	PM	1.1	*
		Hexane	0.3	**

\* - Included in a Plantwide limit of 281.0 tpy shown in Plantwide Condition 7.

\*\* - Hexane annual emissions are bubbled together for SN-16A and SN-16B.

111. The permittee shall not exceed 5% opacity from SN-16A and SN-16B as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-16A and SN-16B are demonstrated by compliance with Specific Condition # 112. [Regulation 19, §19.503 and 40 CFR 52, Subpart E]
112. The permittee shall burn only pipeline quality natural gas in Boiler No. 2 (SN-16A) and Boiler No. 4 (SN-16B). [Regulation 19, §19.705, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
113. The permittee shall keep records of the operating hours when both boilers are operating. The permittee shall not operate the two (2) boilers simultaneously for more than 240 hours per year. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR Part 52, Subpart E]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

Miscellaneous Operations

SN-25  
Gasoline Storage Tank

Source Description

This 2,000 gallon aboveground storage tank (SN-25) is used to fuel facility vehicles and equipment.

Specific Conditions

114. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this Specific Condition shall be demonstrated by compliance with Specific Conditions # 115 and # 116. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
25	Gasoline Storage Tank (2000 Gallon)	VOC	16.9	1.4

115. The permittee shall not use in excess of 40,000 gallons of gasoline per rolling 12-month total. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
116. The permittee shall keep records of the gasoline usage through the gasoline storage tank. These records shall contain each month's total and a rolling total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. This information shall be submitted in accordance with General Provision 7. [Regulation 19, §19.705 and 40 CFR 52, Subpart E]

NESHAP Requirements

117. SN-25 is subject to 40 CFR Part 63, Subpart CCCCCC. The permittee shall comply with all applicable provisions of 40 CFR Part 63, Subpart CCCCCC which includes, but is not limited to, Specific Condition # 118. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart CCCCCC]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

118. §63.11116 – Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

- (1) Minimize gasoline spills;
- (2) Clean up spills as expeditiously as practicable;
- (3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
- (4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

[Regulation 19, §19.304 and 40 CFR §63.11116]



El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-26  
Ammonium Nitrate (90% Solution) Storage Tanks

Source Description

Six above ground storage tanks (SN-26) are used to store 90% ammonium nitrate solution for prilling operations. Four (4) of the tanks are 650,000 gallons, and two (2) of the tanks are 1,200,000 gallons for a total storage of 5,000,000 gallons. Air emissions occur due to steam line heaters degrading the ammonium nitrate solution to ammonia.

Specific Conditions

119. The permittee shall not exceed the emission rates set forth in the following table. The pound per hour emission rate limit is based on maximum capacity and tons per year emission rate limits are based on compliance with Specific Conditions # 59 and # 60. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
26	Ammonium Nitrate Storage Tanks	NH <sub>3</sub>	1.60	0.90

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-31  
Frick Ammonia Compressors

Source Description

Fugitive emissions occur from the handling of ammonia in the Frick Compressor Building. Standard Organic Chemical Manufacturing Industry (SOCMI) emission factors for compressors, pumps, valves, and flanges in ammonia service were used to estimate the fugitive ammonia emissions from the Frick Compressor Building.

Specific Conditions

120. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on maximum capacity. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
31	Frick Ammonia Compressors	NH <sub>3</sub>	0.50	2.00

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-32  
Ammonia Storage/Distribution Losses

Source Description

Fugitive emissions occur from the handling and distribution of ammonia. Standard Organic Chemical Manufacturing Industry (SOCMI) emission factors for compressors, pumps, valves, and flanges in ammonia service were used to estimate the fugitive ammonia emissions from the Ammonia Storage/Distribution.

Specific Conditions

121. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on maximum capacity. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
32	Ammonia Storage/Distribution Losses	NH <sub>3</sub>	1.30	5.70

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-35  
Magnesium Oxide Silo Baghouse

Source Description

The magnesium oxide silo baghouse (SN-35) pneumatically receives magnesium oxide powder from semi-truck transport or railcar. The baghouse is situated on top of the silo structure which is approximately 50 feet tall.

Specific Conditions

122. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on yearly throughput through the E2 Ammonium Nitrate Plant as limited by Specific Condition # 59. Compliance with this Specific Condition shall be demonstrated by compliance with Specific Condition # 60. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
35	Magnesium Oxide Silo Baghouse	PM <sub>10</sub>	2.0	8.8

123. The permittee shall not exceed the emission rates set forth in the following table. The pounds per hour and tons per year emission rate limits are based on yearly throughput through the E2 Ammonium Nitrate Plant as limited by Specific Condition # 59. Compliance with this Specific Condition shall be demonstrated by compliance with Specific Condition # 60. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
35	Magnesium Oxide Silo Baghouse	PM	2.0	8.8

124. The permittee shall not exceed 5% opacity from SN-35 as measured by EPA Reference Method No. 9. Compliance with the opacity limit for SN-35 is demonstrated by compliance with Plantwide Condition # 10. [Regulation 19, §19.503 and 40 CFR 52, Subpart E]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SN-40  
Ammonium Nitrate Solution Loading

Source Description

EDCC ships ammonium nitrate solution to customers via trucks. The content of the solution ranges from 83% to 90% ammonium nitrate. Ammonia emissions occur as a result of the loading of the trucks.

Specific Conditions

125. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this Specific Condition shall be demonstrated by compliance with Specific Condition # 126 and # 127. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
40	Ammonium Nitrate Solution Loading	NH <sub>3</sub>	3.80	4.70

126. The permittee shall not load more than 468,660 tons per rolling 12-month total of ammonium nitrate solution into railcars and/or trucks. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
127. The permittee shall keep records of the amount of ammonium nitrate solution loaded into railcars and/or trucks. These records shall contain each month's total and the rolling total for the previous 12 months. These records shall be updated by the fifteenth of the month following the month which the records represent. These records shall be kept on site, made available to the Department personnel upon request, and submitted in accordance with General Provision 7. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

#### SECTION V: COMPLIANCE PLAN AND SCHEDULE

El Dorado Chemical Company will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19 §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19 §19.410(B) and 40 CFR Part 52, Subpart E]
3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) calendar days after completing the testing. [Regulation 19 §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
4. The permittee must provide:
  - a. Sampling ports adequate for applicable test methods;
  - b. Safe sampling platforms;
  - c. Safe access to sampling platforms; and
  - d. Utilities for sampling and testing equipment.

[Regulation 19 §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19 §19.303 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
7. The permittee must complete a monthly production/emission inventory spreadsheet for particulate emissions from sources SN-05, SN-06, SN-14, SN-15, SN-16A/B, SN-18, SN-19, and SN-21 (those listed in the permit in 1989) in order to keep track of the

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

monthly particulate emissions from these sources. The permittee shall not exceed the 12 month rolling total of 281.0 tons that was accepted for PSD offsetting in 1989. The Plantwide PM limit of 281.0 ton/year does not include the quantity of condensable particulate measured through the back-half sampling train procedure of EPA Reference Method 5. An exceedance of this 12 month rate shall constitute a violation of PSD regulations. The permittee shall notify this Department immediately if the 12 month rolling total limit is exceeded. [Regulation 19, §19.901 and 40 CFR Part 52, Subpart E]

8. The permittee must submit a 12 month summary of the monthly particulate emissions in accordance with General Provision 7. [Regulation 19, §19.901 and 40 CFR Part 52, Subpart E]
9. The permittee shall maintain and employ the Startup, Shutdown, and Malfunction Plan for SN-07, SN-08, SN-09, SN-22, SN-13, and SN-41 as required by Air Permit 0573-AOP-R8. If the Department requests a review of the SSM, the permittee will make the SSM available for review. The permittee must keep a copy of the SSM at the source's location and retain all previous versions of the SSM plan for five years. The SSMP shall include requirements to record any downtime, malfunction, startup, or shutdown. Any deviations from a permit requirement shall be reported to the Department in accordance with General Provision #8 with the exception that exceedances to which procedures exist in the SSM Plan may be reported as part of the semi-annual reporting. The Department reserves the right to review any such exceedances in accordance with provisions of §19.601. [Regulation 18, §18.801 and §18.1004, Regulation 19 §19.601, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
10. Daily observations of the opacity from SN-05 thru SN-10, SN-13 thru SN-15, SN-18, SN-19, SN-21, SN-22, SN-27, SN-28, SN-34, SN-35, SN-41, and SN-44 shall be conducted by a person trained, but not necessarily certified, in EPA Reference Method 9. If emissions which appear to be in excess of the permitted level are observed, the permittee shall take immediate action to identify and correct the cause of the visible emissions. After corrective action has been taken, which may include shutting down and restarting the unit, the permittee shall conduct another observation of the opacity from this source. If the opacity observed does not appear to be in excess of the permitted level, then no further action is needed, and the permittee will be considered in compliance with the permitted opacity limit. If visible emissions which appear to be in excess of the permitted level are still observed, a 6-minute visible emissions reading shall be conducted by a person certified in EPA Reference Method 9 to determine if the opacity is less than the permitted level. If the opacity observed is not in excess of the permitted level, then no further action is needed, and the permittee will be considered in compliance with the permitted opacity limit and 19.705 of Regulation #19. If no Method 9 reading is conducted despite emissions appearing to be in excess of the permitted level after corrective action has been taken, the permittee shall be considered out of compliance with the permitted opacity limit and 19.705 of Regulation #19 for that day. The permittee shall maintain records which contain the following items in order to demonstrate



compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request and shall include:

- a. The date and time of the observation;
- b. If visible emissions which appeared to be above the permitted limit were detected;
- c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken; and
- d. The name of the person conducting the opacity observations. For observations made on weekends or holidays, the report may be prepared by a member of the environmental compliance staff who may not have actually observed the emissions. This report will be based upon an interview with the person who actually observed the emissions conducted by a member of the environmental compliance staff who is certified in EPA Reference Method 9. This report must be completed on or before the next business day.

[Regulation 18, §18.1004, Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52 Subpart E]

#### Title VI Provisions

11. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]
  - a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
12. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

- c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. (“MVAC like appliance” as defined at §82.152)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
13. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
14. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

15. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated October 1, 2009.

Description	Category
Molten Sulfur Storage Tank (formerly SN-23)	Group B, No. 21
Diesel Storage Tank (500 Gallon) (formerly SN-24)	Group A, No. 3
Diesel Storage Tank (500 Gallon) (formerly SN-36)	Group A, No. 3
Diesel Storage Tank (2,000 Gallon) (formerly SN-45)	Group A, No. 3
80 HP Emergency Fire Pump Engine	Group A, No. 13
2 x Ammonia Flares	Group A, No. 13
Air Liquide Cooling Tower	Group A, No. 13
Sulfur Unloading/Storage	Group A, No. 13
Ammonia Offloading	Group A, No. 13

## SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]
2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and Regulation 26 §26.701(B)]
3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26 §26.406]
4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26 §26.701(A)(2)]
5. The permittee must maintain the following records of monitoring information as required by this permit.
  - a. The date, place as defined in this permit, and time of sampling or measurements;
  - b. The date(s) analyses performed;
  - c. The company or entity performing the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of such analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.

[40 CFR 70.6(a)(3)(ii)(A) and Regulation 26 §26.701(C)(2)]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26 §26.701(C)(2)(b)]
7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below:

Arkansas Department of Environmental Quality  
Air Division  
ATTN: Compliance Inspector Supervisor  
5301 Northshore Drive  
North Little Rock, AR 72118-5317

[40 CFR 70.6(a)(3)(iii)(A) and Regulation 26 §26.701(C)(3)(a)]

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
  - a. For all upset conditions (as defined in Regulation 19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
    - i. The facility name and location;
    - ii. The process unit or emission source deviating from the permit limit;
    - iii. The permit limit, including the identification of pollutants, from which deviation occurs;
    - iv. The date and time the deviation started;
    - v. The duration of the deviation;
    - vi. The average emissions during the deviation;
    - vii. The probable cause of such deviations;
    - viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and
    - ix. The name of the person submitting the report.

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

- b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Regulation 19 §19.601 and §19.602, Regulation 26 §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26 §26.701(E), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26 §26.701(F)(1)]
11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26 §26.701(F)(2)]
12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26 §26.701(F)(3)]
13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26 §26.701(F)(4)]

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26 §26.701(F)(5)]
15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26 §26.701(G)]
16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26 §26.701(H)]
17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26 §26.701(I)(1)]
18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26 §26.702(A) and (B)]
19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26 §26.703(A)]
20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26 §26.703(B)]
  - a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

- d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.
21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26 §26.703(E)(3)]
    - a. The identification of each term or condition of the permit that is the basis of the certification;
    - b. The compliance status;
    - c. Whether compliance was continuous or intermittent;
    - d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
    - e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.
  22. Nothing in this permit will alter or affect the following: [Regulation 26 §26.704(C)]
    - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
    - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
    - c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
    - d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.
  23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
  24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:
    - a. Such an extension does not violate a federal requirement;
    - b. The permittee demonstrates the need for the extension; and



El Dorado Chemical Company  
Permit #: 0573-AOP-R13  
AFIN: 70-00040

- c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Regulation 18 §18.314(A), Regulation 19 §19.416(A), Regulation 26 §26.1013(A), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:

- a. Such a request does not violate a federal requirement;
- b. Such a request is temporary in nature;
- c. Such a request will not result in a condition of air pollution;
- d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
- e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
- f. The permittee maintains records of the dates and results of such temporary emissions/testing.

[Regulation 18 §18.314(B), Regulation 19 §19.416(B), Regulation 26 §26.1013(B), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:

- a. The request does not violate a federal requirement;
- b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
- c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

[Regulation 18 §18.314(C), Regulation 19 §19.416(C), Regulation 26 §26.1013(C), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

APPENDIX A

NSPS 40 CFR 60, Subpart G - *Standards of Performance for Nitric Acid Plants*

## **Subpart G—Standards of Performance for Nitric Acid Plants**

### **§ 60.70 Applicability and designation of affected facility.**

(a) The provisions of this subpart are applicable to each nitric acid production unit, which is the affected facility.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977]

### **§ 60.71 Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Nitric acid production unit* means any facility producing weak nitric acid by either the pressure or atmospheric pressure process.

(b) *Weak nitric acid* means acid which is 30 to 70 percent in strength.

### **§ 60.72 Standard for nitrogen oxides.**

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain nitrogen oxides, expressed as NO<sub>2</sub>, in excess of 1.5 kg per metric ton of acid produced (3.0 lb per ton), the production being expressed as 100 percent nitric acid.

(2) Exhibit 10 percent opacity, or greater.

[39 FR 20794, June 14, 1974, as amended at 40 FR 46258, Oct. 6, 1975]

### **§ 60.73 Emission monitoring.**

(a) The source owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxides (NO<sub>x</sub>). The pollutant gas mixtures under Performance Specification 2 and for calibration checks under §60.13(d) of this part shall be nitrogen dioxide (NO<sub>2</sub>). The span value shall be 500 ppm of NO<sub>2</sub>. Method 7 shall be used for the performance evaluations under §60.13(c). Acceptable alternative methods to Method 7 are given in §60.74(c).

(b) The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be established by measuring emissions with the continuous monitoring system concurrent with measuring emissions with the applicable reference method tests. Using only that portion of the continuous monitoring emission data that represents emission measurements concurrent with the reference method test periods, the conversion factor shall be determined by dividing the reference method test data averages by the monitoring data averages to obtain a ratio expressed in units of the applicable standard to units of the monitoring data, i.e., kg/metric ton per ppm (lb/ton per ppm). The conversion factor shall be reestablished during any performance test under §60.8 or any continuous monitoring system performance evaluation under §60.13(c).

(c) The owner or operator shall record the daily production rate and hours of operation.

(d) [Reserved]

(e) For the purpose of reports required under §60.7(c), periods of excess emissions that shall be reported are defined as any 3-hour period during which the average nitrogen oxides emissions (arithmetic average of three contiguous 1-hour periods) as measured by a continuous monitoring system exceed the standard under §60.72(a).

[39 FR 20794, June 14, 1974, as amended at 40 FR 46258, Oct. 6, 1975; 50 FR 15894, Apr. 22, 1985; 54 FR 6666, Feb. 14, 1989]

#### § 60.74 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the NO<sub>x</sub> standard in §60.72 as follows:

(1) The emission rate (E) of NO<sub>x</sub> shall be computed for each run using the following equation:

$$E = (C_s Q_{sd}) / (P K)$$

where:

E = emission rate of NO<sub>x</sub> as NO<sub>2</sub>, kg/metric ton (lb/ton) of 100 percent nitric acid.

C<sub>s</sub> = concentration of NO<sub>x</sub> as NO<sub>2</sub>, g/dscm (lb/dscf).

Q<sub>sd</sub> = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P = acid production rate, metric ton/hr (ton/hr) or 100 percent nitric acid.

K = conversion factor, 1000 g/kg (1.0 lb/lb).

(2) Method 7 shall be used to determine the NO<sub>x</sub> concentration of each grab sample. Method 1 shall be used to select the sampling site, and the sampling point shall be the centroid of the stack or duct or at a point no closer to the walls than 1 m (3.28 ft). Four grab samples shall be taken at approximately 15-minute intervals. The arithmetic mean of the four sample concentrations shall constitute the run value (C<sub>s</sub>).

(3) Method 2 shall be used to determine the volumetric flow rate (Q<sub>sd</sub>) of the effluent gas. The measurement site shall be the same as for the NO<sub>x</sub> sample. A velocity traverse shall be made once per run within the hour that the NO<sub>x</sub> samples are taken.

(4) The methods of §60.73(c) shall be used to determine the production rate (P) of 100 percent nitric acid for each run. Material balance over the production system shall be used to confirm the production rate.

(c) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For Method 7, Method 7A, 7B, 7C, or 7D may be used. If Method 7C or 7D is used, the sampling time shall be at least 1 hour.

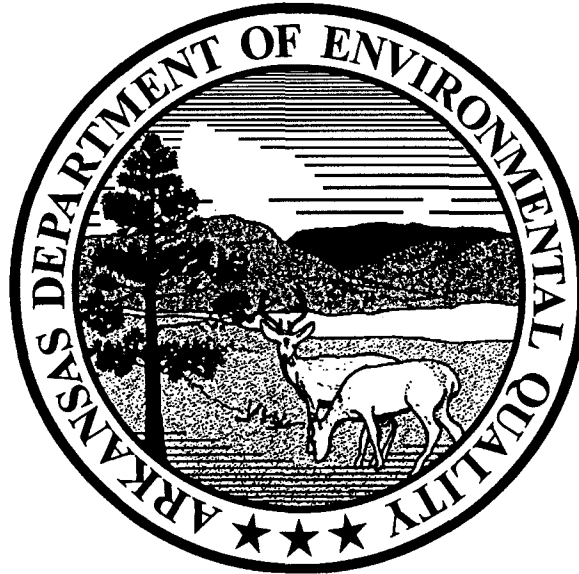
(d) The owner or operator shall use the procedure in §60.73(b) to determine the conversion factor for converting the monitoring data to the units of the standard.

[54 FR 6666, Feb. 14, 1989]

## APPENDIX B

### Continuous Emission Monitoring Systems Conditions

# Arkansas Department of Environmental Quality



## CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

Revised August 2004

## PREAMBLE

These conditions are intended to outline the requirements for facilities required to operate Continuous Emission Monitoring Systems/Continuous Opacity Monitoring Systems (CEMS/COMS). Generally there are three types of sources required to operate CEMS/COMS:

1. CEMS/COMS required by 40 CFR Part 60 or 63,
2. CEMS required by 40 CFR Part 75,
3. CEMS/COMS required by ADEQ permit for reasons other than Part 60, 63 or 75.

These CEMS/COMS conditions are not intended to supercede Part 60, 63 or 75 requirements.

- Only CEMS/COMS in the third category (those required by ADEQ permit for reasons other than Part 60, 63, or 75) shall comply with SECTION II, MONITORING REQUIREMENTS and SECTION IV, QUALITY ASSURANCE/QUALITY CONTROL.
- All CEMS/COMS shall comply with Section III, NOTIFICATION AND RECORDKEEPING.

## SECTION I

### DEFINITIONS

**Continuous Emission Monitoring System (CEMS)** - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data.

**Continuous Opacity Monitoring System (COMS)** - The total equipment required for the determination of opacity as to include sampling, analysis and recording of emission data.

**Calibration Drift (CD)** - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place.

**Back-up CEMS (Secondary CEMS)** - A CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEMS is to serve as a back-up to the primary CEMS to minimize monitor downtime.

**Excess Emissions** - Any period in which the emissions exceed the permit limits.

**Monitor Downtime** - Any period during which the CEMS/COMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

**Out-of-Control Period** - Begins with the time corresponding to the completion of the fifth, consecutive, daily CD check with a CD in excess of two times the allowable limit, or the time corresponding to the completion of the daily CD check preceding the daily CD check that results in a CD in excess of four times the allowable limit and the time corresponding to the completion of the sampling for the RATA, RAA, or CGA which exceeds the limits outlined in Section IV. Out-of-Control Period ends with the time corresponding to the completion of the CD check following corrective action with the results being within the allowable CD limit or the completion of the sampling of the subsequent successful RATA, RAA, or CGA.

**Primary CEMS** - The main reporting CEMS with the ability to sample, analyze, and record stack pollutant to determine gas concentration and/or emission rate.

**Relative Accuracy (RA)** - The absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the reference method plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the reference method tests of the applicable emission limit.

**Span Value** – The upper limit of a gas concentration measurement range.



## SECTION II

### MONITORING REQUIREMENTS

- A. For new sources, the installation date for the CEMS/COMS shall be no later than thirty (30) days from the date of start-up of the source.
- B. For existing sources, the installation date for the CEMS/COMS shall be no later than sixty (60) days from the issuance of the permit unless the permit requires a specific date.
- C. Within sixty (60) days of installation of a CEMS/COMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PST's for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the ADEQ CEM Coordinator prior to testing.
- D. Each CEMS/COMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval the excess zero and span drifts measured must be quantified and recorded.
- E. All CEMS/COMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Percent of monitor down-time is calculated by dividing the total minutes the monitor is not in operation by the total time in the calendar quarter and multiplying by one hundred. Failure to maintain operation time shall constitute a violation of the CEMS conditions.
- F. Percent of excess emissions are calculated by dividing the total minutes of excess emissions by the total time the source operated and multiplying by one hundred. Failure to maintain compliance may constitute a violation of the CEMS conditions.
- G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit.
- H. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
- I. When the pollutant from a single affected facility is released through more than one point, a CEMS/COMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the ADEQ CEM Coordinator. When more than one CEM/COM is used to monitor emissions from one affected facility the owner or operator shall report the results as required from each CEMS/COMS.

### SECTION III

#### NOTIFICATION AND RECORD KEEPING

- A. When requested to do so by an owner or operator, the ADEQ CEM Coordinator will review plans for installation or modification for the purpose of providing technical advice to the owner or operator.
- B. Each facility which operates a CEMS/COMS shall notify the ADEQ CEM Coordinator of the date for which the demonstration of the CEMS/COMS performance will commence (i.e. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 days prior to testing. Performance test results shall be submitted to the Department within thirty days after completion of testing.
- C. Each facility which operates a CEMS/COMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative.
- D. Except for Part 75 CEMs, each facility required to install a CEMS/COMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, CEM Coordinator) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter. Part 75 CEMs shall submit this information semi-annually and as part of Title V six (6) month reporting requirement if the facility is a Title V facility.
- E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADEQ Quarterly Excess Emission Report Forms. Alternate forms may be used with prior written approval from the Department.
- F. Each facility which operates a CEMS/COMS must maintain on site a file of CEMS/COMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for a period of at least five years, and is required to be maintained in such a condition that it can easily be audited by an inspector.
- G. Except for Part 75 CEMs, quarterly reports shall be used by the Department to determine compliance with the permit. For Part 75 CEMs, the semi-annual report shall be used.

## SECTION IV

### QUALITY ASSURANCE/QUALITY CONTROL

- A. For each CEMS/COMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, CEM Coordinator). CEMS quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS/COMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.
- B. The submitted QA/QC plan for each CEMS/COMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.
- C. Facilities responsible for one, or more, CEMS/COMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:
1. Calibration of CEMS/COMS
    - a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
  2. Calibration drift determination and adjustment of CEMS/COMS
    - a. Out-of-control period determination
    - b. Steps of corrective action
  3. Preventive maintenance of CEMS/COMS
    - a. CEMS/COMS information
      - 1) Manufacture
      - 2) Model number
      - 3) Serial number
    - b. Scheduled activities (check list)
    - c. Spare part inventory
  4. Data recording, calculations, and reporting
  5. Accuracy audit procedures including sampling and analysis methods
  6. Program of corrective action for malfunctioning CEMS/COMS
- D. A Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three quarters but in no more than three quarters in succession. The RATA should be conducted in accordance with the applicable test procedure in 40 CFR Part 60 Appendix A and calculated in accordance with the applicable performance specification in 40 CFR Part 60 Appendix B. CGA's and RAA's should be conducted and the data calculated in accordance with the procedures outlined on 40 CFR Part 60 Appendix F.

If alternative testing procedures or methods of calculation are to be used in the RATA, RAA or CGA audits prior authorization must be obtained from the ADEQ CEM Coordinator.

E. Criteria for excessive audit inaccuracy.

**RATA**

All Pollutants except Carbon Monoxide	> 20% Relative Accuracy
Carbon Monoxide	> 10% Relative Accuracy
All Pollutants except Carbon Monoxide	> 10% of the Applicable Standard
Carbon Monoxide	> 5% of the Applicable Standard
Diluent (O <sub>2</sub> & CO <sub>2</sub> )	> 1.0 % O <sub>2</sub> or CO <sub>2</sub>
Flow	> 20% Relative Accuracy

**CGA**

Pollutant	> 15% of average audit value or 5 ppm difference
Diluent (O <sub>2</sub> & CO <sub>2</sub> )	> 15% of average audit value or 5 ppm difference

**RAA**

Pollutant	> 15% of the three run average or > 7.5 % of the applicable standard
Diluent (O <sub>2</sub> & CO <sub>2</sub> )	> 15% of the three run average or > 7.5 % of the applicable standard

- F. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. If the CEMS exceeds the audit inaccuracies listed above, the CEMS is out-of-control. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart. The end of the out-of-control period is the time corresponding to the completion of the successful daily zero or span drift or completion of the successful CGA, RAA or RATA.
- G. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEMS is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEMS shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minimum the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

APPENDIX C

40 CFR Part 60, Subpart H – *Standards of Performance for Sulfuric Acid Plants*

## **Subpart H—Standards of Performance for Sulfuric Acid Plants**

### **§ 60.80 Applicability and designation of affected facility.**

(a) The provisions of this subpart are applicable to each sulfuric acid production unit, which is the affected facility.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977]

### **§ 60.81 Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Sulfuric acid production unit* means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans, or acid sludge, but does not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.

(b) *Acid mist* means sulfuric acid mist, as measured by Method 8 of appendix A to this part or an equivalent or alternative method.

[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 20794, June 14, 1974]

### **§ 60.82 Standard for sulfur dioxide.**

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of 2 kg per metric ton of acid produced (4 lb per ton), the production being expressed as 100 percent H<sub>2</sub>SO<sub>4</sub>.

[39 FR 20794, June 14, 1974]

### **§ 60.83 Standard for acid mist.**

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain acid mist, expressed as H<sub>2</sub>SO<sub>4</sub>, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H<sub>2</sub>SO<sub>4</sub>.

(2) Exhibit 10 percent opacity, or greater.

[39 FR 20794, June 14, 1974, as amended at 40 FR 46258, Oct. 6, 1975]

### **§ 60.84 Emission monitoring.**

(a) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under §60.13(d), shall be sulfur dioxide (SO<sub>2</sub>). Method 8 shall be used for conducting monitoring system performance evaluations under §60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.

(b) The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each eight-hour period as follows:

$$CF=k[(1.000-0.015r)/(r-s)]$$

where:

CF=conversion factor (kg/metric ton per ppm, lb/ton per ppm).

k=constant derived from material balance. For determining CF in metric units, k=0.0653. For determining CF in English units, k=0.1306.

r=percentage of sulfur dioxide by volume entering the gas converter. Appropriate corrections must be made for air injection plants subject to the Administrator's approval.

s=percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under paragraph (a) of this section.

(c) The owner or operator shall record all conversion factors and values under paragraph (b) of this section from which they were computed (i.e., CF, r, and s).

(d) Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO<sub>2</sub> emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO<sub>2</sub>, O<sub>2</sub>, and CO<sub>2</sub>(if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO<sub>2</sub> monitor shall be as specified in paragraph (b) of this section. The span value for CO<sub>2</sub>(if required) shall be 10 percent and for O<sub>2</sub> shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO<sub>2</sub> emission rate as follows:

$$E_s=(C_sS)/[0.265-(0.126 \%O_2)-(A \%CO_2)]$$

where:

E<sub>s</sub>=emission rate of SO<sub>2</sub>, kg/metric ton (lb/ton) of 100 percent of H<sub>2</sub>SO<sub>4</sub> produced.

C<sub>s</sub>=concentration of SO<sub>2</sub>, kg/dscm (lb/dscf).

S=acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100 percent H<sub>2</sub>SO<sub>4</sub> produced.

%O<sub>2</sub>=oxygen concentration, percent dry basis.

A=auxiliary fuel factor,

=0.00 for no fuel.

=0.0226 for methane.

=0.0217 for natural gas.



=0.0196 for propane.

=0.0172 for No 2 oil.

=0.0161 for No 6 oil.

=0.0148 for coal.

=0.0126 for coke.

%CO<sub>2</sub>= carbon dioxide concentration, percent dry basis.

Note: It is necessary in some cases to convert measured concentration units to other units for these calculations:

Use the following table for such conversions:

From—	To—	Multiply by—
g/scm	kg/scm	10 <sup>-3</sup>
mg/scm	kg/scm	10 <sup>-6</sup>
ppm (SO <sub>2</sub> )	kg/scm	2.660×10 <sup>-6</sup>
ppm (SO <sub>2</sub> )	lb/scf	1.660×10 <sup>-7</sup>

(e) For the purpose of reports under §60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under §60.82.

[39 FR 20794, June 14, 1974, as amended at 40 FR 46258, Oct. 6, 1975; 48 FR 23611, May 25, 1983; 48 FR 4700, Sept. 29, 1983; 48 FR 48669, Oct. 20, 1983; 54 FR 6666, Feb. 14, 1989; 65 FR 61753, Oct. 17, 2000]

### § 60.85 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the SO<sub>2</sub> acid mist, and visible emission standards in §§60.82 and 60.83 as follows:

(1) The emission rate (E) of acid mist or SO<sub>2</sub> shall be computed for each run using the following equation:

$$E=(CQ_{sd})/(PK)$$

where:

E=emission rate of acid mist or SO<sub>2</sub>kg/metric ton (lb/ton) of 100 percent H<sub>2</sub>SO<sub>4</sub> produced.

C=concentration of acid mist or SO<sub>2</sub>, g/dscm (lb/dscf).

$Q_{sd}$ =volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).

P=production rate of 100 percent  $H_2SO_4$ , metric ton/hr (ton/hr).

K=conversion factor, 1000 g/kg (1.0 lb/lb).

(2) Method 8 shall be used to determine the acid mist and  $SO_2$  concentrations (C's) and the volumetric flow rate ( $Q_{sd}$ ) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

(3) Suitable methods shall be used to determine the production rate (P) of 100 percent  $H_2SO_4$  for each run. Material balance over the production system shall be used to confirm the production rate.

(4) Method 9 and the procedures in §60.11 shall be used to determine opacity.

(c) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:

(i) The integrated technique of Method 3 is used to determine the  $O_2$  concentration and, if required,  $CO_2$  concentration.

(ii) The  $SO_2$  or acid mist emission rate is calculated as described in §60.84(d), substituting the acid mist concentration for  $C_s$  as appropriate.

[54 FR 6666, Feb. 14, 1989]

**APPENDIX D**

**Compliance Assurance Monitoring (CAM) Plans**

# COMPLIANCE ASSURANCE MONITORING APPLICABILITY DETERMINATION

---

## Background

Upon renewal of a Title V permit, a facility must include Compliance Assurance Monitoring (CAM) Plans for certain pollutant-specific emissions units. The following criteria determine the applicability of the CAM Rule (found in 40 CFR Part 64) to emissions units:

1. The pollutant-specific emissions unit must be located at major source with a Title V permit.
2. The unit must be subject to an emission limitation or standard for the applicable regulated air pollutant.
3. The unit uses a control device to achieve compliance with any such emission limitation or standard.
4. The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100% of the major source threshold.

The intent of the CAM Rule is to ensure that facilities maintain control equipment at levels that assure compliance with emission limitations. CAM Plans are the program by which these control devices will be maintained. The elements of a CAM plan must include a description of the indicators to be monitored, the indicator ranges or the process to set indicator ranges, and the performance criteria for the monitoring. These criteria include specifications for obtaining representative data, verification procedures to confirm the operational status of the chosen monitoring, quality assurance and control procedures, monitoring frequency, and the data averaging period. In addition, the plan must contain a justification for the use of parameters/indicators chosen for monitoring, the ranges developed, and the monitoring approach. Finally, an implementation plan for installing, testing, and operating the monitoring must be included.

The CAM Rule requires the following monitoring frequency:

1. Continuous monitoring for units that are classified as a major source after control. For each parameter monitored, the owner or operator shall collect four or more data values equally spaced over each hour and average the values, as applicable, over the applicable averaging period.
2. Daily monitoring (or some frequency less than continuous but at least once per a 24-hour period) for units that are not classified as a major source after control.

# COMPLIANCE ASSURANCE MONITORING APPLICABILITY DETERMINATION

## CAM Rule Applicability

The following table outlines the pre-control emission calculations based on the manufacturer's data. As shown below, a CAM Plan is required for each source.

Source No.	Source Description	Pollutant	Pre-Control PTE (tpy)	Control Efficiency (%)	Post Control PTE (tpy)	Type of Control Required
SN-05	E2 Plant Brinks Scrubber	PM <sub>10</sub>	>100	97.0	62.0	Daily
SN-07	Sulfuric Acid Plant	SO <sub>2</sub>	>100	see note 1	401.5	Continuous
SN-08	West Nitric Acid Plant	NO <sub>x</sub>	>100	98.5	876.5	Continuous
SN-09	East Nitric Acid Plant	NO <sub>x</sub>	>100	98.5	876.5	Continuous
SN-10	Nitric Acid Vent Collection System	NO <sub>x</sub>	>100	95.0	85.5	Daily
SN-13	DM Weatherly Nitric Acid Plant	NO <sub>x</sub>	>100	99.9	210.0	Continuous
SN-15	KT Plant Dryer / Cooler	PM <sub>10</sub>	>100	99.9	71.4	Daily
SN-18	KT Plant Clay Baghouse	PM <sub>10</sub>	>100	99.0	4.2	Daily
SN-21	KT Brinks Scrubber	PM <sub>10</sub>	>100	99.0	13.1	Daily
SN-22	UHDE DSN Plant	NO <sub>x</sub>	>100	—	177.4	Continuous

Note:

<sup>1</sup>For SN-07, an absorption tower is considered a control/production device per BACT clearinghouse. Data on how efficient the absorption tower is for controlling SO<sub>2</sub> emissions is not available.

# COMPLIANCE ASSURANCE MONITORING

---

## E2 Plant Brinks Scrubber

### I. E2 Plant Brinks Scrubber Background

#### A. Emissions Unit

Description: E2 Plant Brinks Scrubber (2 scrubbers)  
Identification: SN-05  
Facility: EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: 573-AOP-R9, Title V Permit  
Emission Limits:  
Particulate Matter: 14.1 lb/hr  
Opacity: 20%  
Monitoring Requirements: Scrubber liquid pH, flow rate, gas pressure drop

#### C. Control Technology: Scrubber

### II. Monitoring Approach

The key elements of the monitoring approach are presented below:

#### A. Indicator

1. Scrubber liquid pH
2. Minimum scrubber liquid flow rate for each scrubber
3. Minimum gas pressure drop for each scrubber

#### B. Measurement Approach

The scrubber liquid pH, flow rate and the gas pressure drop will be measured and recorded daily.

#### C. Indicator Range

1. Scrubber liquid range of 0.5 – 6.0
2. The minimum scrubber liquor flow rate is 225 gal/min for each scrubber.
3. The minimum gas pressure drop is 2.5" H<sub>2</sub>O for each scrubber.

#### D. QIP Threshold

The QIP threshold is nine excursions in a six month reporting period.

# COMPLIANCE ASSURANCE MONITORING

---

## E. Performance Criteria

Data Representativeness:	Measurements are being made at the emission point.
Verification of Operational Status:	Not Applicable
QA/QC Practices and Criteria:	Calibration of the monitoring devices (flow meter and pressure drop indices) will be performed once per year.
Monitoring Frequency and Data:	The scrubber liquid pH, flow rate and the gas pressure drop will be measured and recorded daily.
Collection Procedure:	Monitoring device.

## III. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A scrubber is used to control some of the particulate matter emissions generated in the E2 Plant. The scrubber has a maximum gas flow rate of 100,000 ft<sup>3</sup>/min.

### B. Rationale for Selection of Performance Indicator

The scrubber liquid pH, flow rate and gas pressure drop were selected as the performance indicators because they are indicative of operation of the scrubber in a manner necessary to comply with the particulate emission standard. The scrubber liquor flow rate indicates that there is adequate liquor flow to ensure sufficient liquid to gas contact to scrub particulate from the gas prior to it being exhausted to the atmosphere. Monitoring the pH of the scrubber liquid indicates if the scrubber liquid is performing sufficiently. Likewise, the gas pressure drop indicates that there is sufficient air flow to support gas to liquid contact to scrub particulate from the gas prior to it being exhausted to the atmosphere. The minimum scrubber liquor flow rate, the scrubber liquid pH, and the minimum gas pressure drop is monitored to ensure that the scrubber is operating properly. When the scrubber is operating properly, the particulate emissions from the exhaust of the E2 Plant Brinks Scrubber will not exceed permitted limits.

### C. Rationale for Selection of Indicator Level

The indicator parameters were selected based on vendor recommendations, as influenced by site specific design considerations. Subsequent stack testing has confirmed that the indicator levels are appropriate. Daily monitoring is considered adequate to demonstrate compliance considering that post-control potential to emit is less than major source thresholds.

# COMPLIANCE ASSURANCE MONITORING

---

## Sulfuric Acid Plant

### I. Sulfuric Acid Plant Background

#### A. Emissions Unit

Description:	Sulfuric Acid Plant
Identification:	SN-07
Facility:	EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	573-AOP-R9, Title V Permit
Emission Limits:	
Sulfur Dioxide:	600.0 lb/hr
Monitoring Requirements:	Sulfur dioxide (SO <sub>2</sub> ) emissions

#### C. Control Technology

An absorption tower is considered a control/production device per BACT clearinghouse.

### II. Monitoring Approach

#### A. Indicator

SO<sub>2</sub> hourly emissions

#### B. Measurement Approach

Continuously monitor SO<sub>2</sub> emissions

#### C. Indicator Range

600.0 lb/hr on a 3-hour average basis

#### D. QIP Threshold

Excursions will be handled in accordance with the QA/QC Plan for the CEMS.



# COMPLIANCE ASSURANCE MONITORING

---

## E. Performance Criteria

Data Representativeness:	Measurements are being made at the emission point.
Verification of Operational Status:	CEMS is in place and operating, verification is not applicable.
QA/QC Practices and Criteria:	Calibration of the CEMS will be performed in accordance with the QA/QC plan.
Monitoring Frequency and Data:	Continuously monitor SO <sub>2</sub> emissions using a CEMS.
Collection Procedure:	CEMS device

## II. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A control device (an absorption tower) is used to control SO<sub>2</sub> emissions generated in the Sulfuric Acid Plant.

### B. Rationale for Selection of Performance Indicator

The post-control SO<sub>2</sub> emissions are above major source thresholds; therefore, emissions will be continuously monitored using a CEMS to demonstrate compliance with the permit limits.

### C. Rationale for Selection of Indicator Level

The selected indicator is the permit limit. Post-control potential to emit is greater than major source thresholds; therefore, continuous monitoring is conducted to demonstrate compliance.

# COMPLIANCE ASSURANCE MONITORING

---

## West Nitric Acid Plant

### I. West Nitric Acid Plant Background

#### A. Emissions Unit

Description:	West Nitric Acid Plant
Identification:	SN-08
Facility:	EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	573-AOP-R9, Title V Permit
Emission Limits:	
Nitrogen Oxide:	200.1 lb/hr
Monitoring Requirements:	Nitrogen oxide (NO <sub>x</sub> ) emissions

#### C. Control Technology

Selective Catalytic Reduction (SCR) Unit

### II. Monitoring Approach

The key elements of the monitoring approach are presented below:

#### A. Indicator

NO<sub>x</sub> hourly emissions

#### B. Measurement Approach

Continuously monitor NO<sub>x</sub> emissions

#### C. Indicator Range

200.1 lb/hr on a 3-hour average basis

#### D. QIP Threshold

Excursions will be handled in accordance with the QA/QC Plan for the CEMS.

# COMPLIANCE ASSURANCE MONITORING

---

## E. Performance Criteria

Data Representativeness:	Measurements are being made at the emission point.
Verification of Operational Status:	CEMS is in place and operating, verification is not applicable.
QA/QC Practices and Criteria:	Calibration of the CEMS will be performed in accordance with the QA/QC plan.
Monitoring Frequency and Data:	Continuously monitor NO <sub>x</sub> emissions using a CEMS.
Collection Procedure:	CEMS device

## III. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A SCR unit is used to control nitrogen oxide emissions generated in the West Nitric Acid Plant.

### B. Rationale for Selection of Performance Indicator

The post-control NO<sub>x</sub> emissions are above major source thresholds; therefore, emissions will be continuously monitored using a CEMS to demonstrate compliance with the permit limits.

### C. Rationale for Selection of Indicator Level

The selected indicator is the permit limit. Post-control potential to emit is greater than major source thresholds; therefore, continuous monitoring is conducted to demonstrate compliance.

# COMPLIANCE ASSURANCE MONITORING

---

## East Nitric Acid Plant

### I. East Nitric Acid Plant Background

#### A. Emissions Unit

Description:	East Nitric Acid Plant
Identification:	SN-09
Facility:	EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	573-AOP-R9, Title V Permit
Emission Limits:	
Nitrogen Oxide:	200.1 lb/hr
Monitoring Requirements:	Sulfur dioxide (NO <sub>x</sub> ) emissions

#### C. Control Technology

Selective Catalytic Reduction (SCR) Unit

### II. Monitoring Approach

#### A. Indicator

NO<sub>x</sub> hourly emissions

#### B. Measurement Approach

Continuously monitor NO<sub>x</sub> emissions

#### C. Indicator Range

200.1 lb/hr on a 3-hour average basis

#### D. QIP Threshold

Excursions will be handled in accordance with the QA/QC Plan for the CEMS.

# COMPLIANCE ASSURANCE MONITORING

---

## E. Performance Criteria

Data Representativeness:	Measurements are being made at the emission point.
Verification of Operational Status:	CEMS is in place and operating, verification is not applicable.
QA/QC Practices and Criteria:	Calibration of the CEMS will be performed in accordance with the QA/QC plan.
Monitoring Frequency and Data:	Continuously monitor SO <sub>2</sub> emissions using a CEMS.
Collection Procedure:	CEMS device

## III. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A SCR unit is used to control nitrogen oxide emissions generated in the East Nitric Acid Plant.

### B. Rationale for Selection of Performance Indicator

The post-control SO<sub>2</sub> emissions are above major source thresholds; therefore, emissions will be continuously monitored using a CEMS to demonstrate compliance with the permit limits.

### C. Rationale for Selection of Indicator Level

The selected indicator is the permit limit. Post-control potential to emit is greater than major source thresholds; therefore, continuous monitoring is conducted to demonstrate compliance.

# COMPLIANCE ASSURANCE MONITORING

---

## Nitric Acid Vent Collection System Scrubber

### I. Nitric Acid Vent Collection System Scrubber Background

#### A. Emissions Unit

Description: Nitric Acid Concentrator Hydrogen Peroxide Scrubber  
Identification: SN-10  
Facility: EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: 573-AOP-R9, Title V Permit  
Emission Limits:  
Nitrogen Oxide: 19.5 lb/hr  
Monitoring Requirements: Hydrogen peroxide concentration (%) in the chemical condensate circulated at the scrubber outlet.

#### C. Control Technology

Hydrogen peroxide scrubber

### II. Monitoring Approach

The key elements of the monitoring approach are presented below:

#### A. Indicator

Hydrogen peroxide concentration (%) in the chemical condensate.

#### B. Measurement Approach

Sample, test and record daily the hydrogen peroxide concentration of the chemical condensate.

#### C. Indicator Range

> 0%

# COMPLIANCE ASSURANCE MONITORING

---

## D. QIP Threshold

The QIP threshold is nine excursions in a six month reporting period.

## E. Performance Criteria

Data Representativeness:	Measurements are being made at the emission point.
Verification of Operational Status:	Not Applicable
QA/QC Practices and Criteria:	Lab QA/QC procedures will be followed.
Monitoring Frequency and Data:	The chemical condensate will be sampled and tested daily to determine the hydrogen peroxide concentration.
Collection Procedure:	A sample of the chemical condensate is collected manually and tested for hydrogen peroxide concentration. The test data is recorded manually in the log book.

## III. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A scrubber is used to control nitrogen oxide (NO<sub>x</sub>) emissions generated by the Nitric Acid Vent Collection System. The scrubber has a maximum gas flow rate of 1,000 ft<sup>3</sup>/min.

### B. Rationale for Selection of Performance Indicator

The concentration of hydrogen peroxide in the chemical condensate was selected as the performance indicator because it is indicative of operation of the scrubber in a manner necessary to comply with the NO<sub>x</sub> emission standard. When the scrubber is operating properly, the NO<sub>x</sub> emissions from the exhaust of the Nitric Acid Vent Collection System Scrubber will not exceed permitted limits.

### C. Rationale for Selection of Indicator Level

The indicator parameter was selected based on vendor recommendations, as influenced by site specific design considerations. Subsequent stack testing has confirmed that the indicator levels are appropriate. Daily monitoring is considered adequate to demonstrate compliance considering that post-control potential to emit is less than major source thresholds.

# COMPLIANCE ASSURANCE MONITORING

---

## DMW Nitric Acid Plant

### I. DMW Nitric Acid Plant Background

#### A. Emissions Unit

Description:	DMW Nitric Acid Plant
Identification:	SN-13
Facility:	EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	573-AOP-R9, Title V Permit
Emission Limits:	
Nitrogen Oxide:	50.1 lb/hr

Monitoring Requirements: Nitrogen oxide (NO<sub>x</sub>) emissions

#### C. Control Technology

Refrigerated absorber

### II. Monitoring Approach

The key elements of the monitoring approach are presented below:

#### A. Indicator

NO<sub>x</sub> hourly emissions

#### B. Measurement Approach

Continuously monitor NO<sub>x</sub> emissions

#### C. Indicator Range

1. 3 lb/ton of 100% acid on 3-hour average
2. 50.1 lb/hr on 3-hour average for startup, shutdown, malfunction events

#### D. QIP Threshold

Excursions will be handled in accordance with the QA/QC Plan for the CEMS.



# COMPLIANCE ASSURANCE MONITORING

---

## E. Performance Criteria

- Data Representativeness: Measurements are being made at the emission point.
- Verification of Operational Status: CEMS is in place and operating, verification is not applicable.
- QA/QC Practices and Criteria: Calibration of the CEMS will be performed in accordance with the QA/QC plan.
- Monitoring Frequency and Data: Continuously monitor NO<sub>x</sub> emissions using a CEMS.
- Collection Procedure: CEMS device

## II. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A control device (refrigerated absorber) is used to control nitrogen oxide emissions generated in the DMW Nitric Acid Plant.

### B. Rationale for Selection of Performance Indicator

NO<sub>x</sub> emissions are above major source thresholds after control; therefore, emissions will be continuously monitored using a CEMS to demonstrate compliance with the permit limits.

### C. Rationale for Selection of Indicator Level

The selected indicator is the permit limits. Post-control potential to emit is greater than major source thresholds; therefore, continuous monitoring is conducted to demonstrate compliance.

# COMPLIANCE ASSURANCE MONITORING

---

## KT Plant Dryer/Cooler Scrubber

### IV. KT Plant Dryer/Cooler Scrubber Background

#### A. Emissions Unit

Description:	KT Plant Dryer/Cooler Scrubber
Identification:	SN-15
Facility:	EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	573-AOP-R9, Title V Permit
Emission Limits:	
Particulate Matter:	17.0 lb/hr
Monitoring Requirements:	Scrubber liquor pH, liquid flow rate, and amperage

#### C. Control Technology

Scrubber

### V. Monitoring Approach

The key elements of the monitoring approach are presented below:

#### A. Indicator

1. Scrubber liquor pH
2. Minimum liquid flow rate
3. Minimum amperage

#### B. Measurement Approach

The scrubber liquor pH, the liquid flow rate, and the amperage shall be measured and recorded daily.

#### C. Indicator Range

1. The scrubber liquor pH range is 0.5 – 4.5.
2. The minimum scrubber liquor flow rate is 80 gal/min.
3. The minimum amperage is 290 amps.

#### D. QIP Threshold

The QIP threshold is nine excursions in a six month reporting period.

# COMPLIANCE ASSURANCE MONITORING

---

## E. Performance Criteria

Data Representativeness:	Measurements are being made at the emission point.
Verification of Operational Status:	Not Applicable
QA/QC Practices and Criteria:	Calibration of the monitoring devices will be performed once per year.
Monitoring Frequency and Data:	The scrubber liquor pH, flow rate will be measured and recorded daily. The scrubber amperage will be measured and recorded daily.
Collection Procedure:	Monitoring device.

## VI. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A wet scrubber with a mist eliminator is used to control the particulate matter emissions generated by the KT Plant Dry/Cooler. The scrubber has a maximum gas flow rate of 48,000 ft<sup>3</sup>/min.

### B. Rationale for Selection of Performance Indicator

The scrubber liquor pH and flow rate were selected as the performance indicators because they are indicative of operation of the scrubber in a manner necessary to comply with the particulate emission standard. The scrubber liquor flow rate indicates that there is adequate liquor flow to ensure sufficient liquid to gas contact to scrub particulate from the gas prior to it being exhausted to the atmosphere. Monitoring the pH of the scrubber liquid indicates if the scrubber liquid is performing sufficiently. Likewise, the gas pressure drop indicates that there is sufficient air flow to support gas to liquid contact to scrub particulate from the gas prior to it being exhausted to the atmosphere. The minimum scrubber liquor flow rate, the scrubber liquid pH, and the minimum gas pressure drop is monitored to ensure that the scrubber is operating properly. When the scrubber is operating properly, the particulate emissions from the exhaust of the KT Plant Dryer/Cooler Scrubber will not exceed permitted limits.

### C. Rationale for Selection of Indicator Level

The indicator parameters were selected based on vendor recommendations, as influenced by site specific design considerations. Daily monitoring is considered adequate to demonstrate compliance considering that post-control potential to emit is less than major source thresholds.

# COMPLIANCE ASSURANCE MONITORING

---

## KT Plant Clay Baghouse

### I. KT Plant Clay Baghouse

#### A. Emissions Unit

Description:	KT Plant Clay Baghouse
Identification:	SN-18
Facility:	EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	573-AOP-R9, Title V Permit
Emission Limits:	
Particulate Matter:	1.0 lb/hr
Monitoring Requirements:	Gas pressure drop across the baghouse

#### C. Control Technology

Baghouse

### II. Monitoring Approach

The key elements of the monitoring approach are presented below:

#### A. Indicator

Gas pressure drop

#### B. Measurement Approach

The gas pressure drop across the baghouse will be measured and recorded daily.

#### C. Indicator Range

0.5" H<sub>2</sub>O – 8.0" H<sub>2</sub>O

#### D. QIP Threshold

The QIP threshold is nine excursions in a six month reporting period.

# COMPLIANCE ASSURANCE MONITORING

---

## E. Performance Criteria

Data Representativeness:	Measurements are being made at the emission point.
Verification of Operational Status:	Not Applicable
QA/QC Practices and Criteria:	Preventative maintenance inspection will be performed once per year.
Monitoring Frequency and Data:	The gas pressure drop across the baghouse will be measured and recorded daily.
Collection Procedure:	Monitoring device.

## III. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A baghouse is used to control of the particulate matter emissions generated by the KT Plant.

### B. Rationale for Selection of Performance Indicator

The gas pressure drop across the baghouse was selected as the performance indicator because it is indicative of operation of the baghouse in a manner necessary to comply with the particulate emission standard. The gas pressure drop across the baghouse indicates the amount of particle build up on the filter media. A freshly cleaned baghouse will have an estimated gas pressure drop of 0.5" H<sub>2</sub>O. When the gas pressure drop reaches 8.0" H<sub>2</sub>O, the filter media will be cleaned. When the baghouse is operating properly, the particulate emissions from the KT Plant Clay Baghouse will not exceed permitted limits.

### C. Rationale for Selection of Indicator Level

The indicator parameter was selected based on vender recommendations, as influenced by site specific design considerations. Daily monitoring is considered adequate to demonstrate compliance considering that post-control potential to emit is less than major source thresholds.

# COMPLIANCE ASSURANCE MONITORING

---

## KT Brinks Scrubber

### I. KT Brinks Scrubber

#### A. Emissions Unit

Description:	KT Brinks Scrubber
Identification:	SN-21
Facility:	EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	573-AOP-R9, Title V Permit
Emission Limits:	
Particulate Matter:	3.0 lb/hr
Monitoring Requirements:	Scrubber liquid pH, liquid gas pressure to top spray nozzles, and gas pressure drop across unit

#### C. Control Technology

Scrubber

### II. Monitoring Approach

The key elements of the monitoring approach are presented below:

#### A. Indicator

1. Scrubber liquor pH
2. Liquid gas pressure to top spray nozzles
3. Minimum gas pressure drop across unit

#### B. Measurement Approach

The scrubber liquor flow rate and gas pressure drop will be measured and recorded daily.

#### C. Indicator Range

1. The scrubber liquor pH range is 0.5 – 4.5.
2. The liquid gas pressure to top spray nozzles range is 80 – 100 psig.
3. The minimum gas pressure drop across unit is 2.5" H<sub>2</sub>O.

# COMPLIANCE ASSURANCE MONITORING

---

## D. QIP Threshold

The QIP threshold is nine excursions in a six month reporting period.

## E. Performance Criteria

Data Representativeness:	Measurements are being made at the emission point.
Verification of Operational Status:	Not Applicable
QA/QC Practices and Criteria:	Calibration of the monitoring devices will be performed once per year.
Monitoring Frequency and Data:	The scrubber liquid pH, liquid gas pressure to top spray nozzles, and gas pressure drop across unit will be measured and recorded daily.
Collection Procedure:	Monitoring device.

## III. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A Brinks scrubber is used to control particulate matter emissions generated by the KT Plant. The scrubber has a maximum gas flow rate of 8,835 acfm.

### B. Rationale for Selection of Performance Indicator

The scrubber liquid pH, liquid gas pressure to top spray nozzles, and gas pressure drop across unit were selected as the performance indicators because they are indicative of operation of the scrubber in a manner necessary to comply with the particulate emission standard. The scrubber liquor pH indicates that scrubber liquor is performing properly to scrub particulate from the gas prior to it being exhausted to the atmosphere. Likewise, the liquid gas pressure to top spray nozzles and the gas pressure drop indicates that there is sufficient air flow to support gas to liquid contact to scrub particulate from the gas prior to it being exhausted to the atmosphere. The selected performance indicators will be monitored daily to ensure that the scrubber is operating properly. When the scrubber is operating properly, the particulate emissions from the exhaust of the KT Plant Brinks Scrubber will not exceed permitted limits.

# COMPLIANCE ASSURANCE MONITORING

---

## C. Rationale for Selection of Indicator Level

The indicator parameters were selected based on vendor recommendations, as influenced by site specific design considerations. Daily monitoring is considered adequate to demonstrate compliance considering that post-control potential to emit is less than major source thresholds.



# COMPLIANCE ASSURANCE MONITORING

---

## UHDE DSN Plant

### I. USHE DSN Plant Background

#### A. Emissions Unit

Description:	UHDE DSN Plant
Identification:	SN-22
Facility:	EDCC

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	573-AOP-R9, Title V Permit
Emission Limits:	
Nitrogen oxide:	40.5 lb/hr
Monitoring Requirements:	Nitrogen oxide (NO <sub>x</sub> ) emissions

#### C. Control Technology

Cryogenic Absorber

### II. Monitoring Approach

The key elements of the monitoring approach are presented below:

#### A. Indicator

NO<sub>x</sub> hourly emissions

#### B. Measurement Approach

Continuously monitor NO<sub>x</sub> emissions

#### C. Indicator Range

40.5 lb/hr

#### D. QIP Threshold

Excursions will be handled in accordance with the QA/QC Plan for the CEMS.

# COMPLIANCE ASSURANCE MONITORING

---

## E. Performance Criteria

- Data Representativeness: Measurements are being made at the emission point.
- Verification of Operational Status: CEMS is in place and operating, verification is not applicable.
- QA/QC Practices and Criteria: Calibration of the CEMS will be performed in accordance with the QA/QC plan.
- Monitoring Frequency and Data: Continuously monitor NO<sub>x</sub> emissions using a CEMS.
- Collection Procedure: CEMS device.

## II. Justification

### A. Background

EDCC operates a chemical manufacturing plant in El Dorado, Arkansas. A control device (cryogenic absorber) is used to control NO<sub>x</sub> emissions generated in the UHDE DNS Plant.

### B. Rationale for Selection of Performance Indicator

NO<sub>x</sub> emissions are above major source thresholds; therefore, emissions will be continuously monitored using a CEMS to demonstrate compliance with the permit limits.

### C. Rationale for Selection of Indicator Level

The selected indicator is the hourly permit limit. Post-control potential to emit is greater than major source thresholds; therefore, continuous monitoring is conducted to demonstrate compliance.

APPENDIX E

40 CFR Part 63, Subpart CCCCCC – *National Emission Standards For Hazardous Air  
Pollutants For Source Category: Gasoline Dispensing Facilities*

**Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities**

**Source:** 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

**What This Subpart Covers**

**§ 63.11110 What is the purpose of this subpart?**

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

**§ 63.11111 Am I subject to the requirements in this subpart?**

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in §63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in §63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in §63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in §63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in §63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).

(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source's throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to §63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under §63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4181, Jan. 24, 2011]

#### **§ 63.11112 What parts of my affected source does this subpart cover?**

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in §63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in §63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in §63.2.

(d) An affected source is an existing affected source if it is not new or reconstructed.

#### **§ 63.11113 When do I have to comply with this subpart?**

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in §63.11111(c) or §63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under §63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4181, Jan. 24, 2011]

## **Emission Limitations and Management Practices**

### **§ 63.11115 What are my general duties to minimize emissions?**

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) You must keep applicable records and submit reports as specified in §63.11125(d) and §63.11126(b).

[76 FR 4182, Jan. 24, 2011]

### **§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.**

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

- (1) Minimize gasoline spills;
- (2) Clean up spills as expeditiously as practicable;
- (3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
- (4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in §63.11125, §63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in §63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

**§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.**

(a) You must comply with the requirements in section §63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in §63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in §63.11116.

(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under §63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

**§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.**

- (a) You must comply with the requirements in §§63.11116(a) and 63.11117(b).
- (b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.
  - (1) Each management practice in Table 1 to this subpart that applies to your GDF.
  - (2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.
    - (i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.
      - (A) Achieves emissions reduction of at least 90 percent.
      - (B) Operates using management practices at least as stringent as those in Table 1 to this subpart.
    - (ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.
  - (c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in §63.11117.
    - (1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.
    - (2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.
    - (3) Gasoline storage tanks equipped with floating roofs, or the equivalent.
  - (d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.
  - (e) You must comply with the applicable testing requirements contained in §63.11120.
  - (f) You must submit the applicable notifications as required under §63.11124.
  - (g) You must keep records and submit reports as specified in §§63.11125 and 63.11126.
  - (h) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

## **Testing and Monitoring Requirements**

### **§ 63.11120 What testing and monitoring requirements must I meet?**

- (a) Each owner or operator, at the time of installation, as specified in §63.11113(e), of a vapor balance system required under §63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.
  - (1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.



(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see §63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see §63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

(iii) Bay Area Air Quality Management District Source Test Procedure ST-30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994 (incorporated by reference, see §63.14).

(b) Each owner or operator choosing, under the provisions of §63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph §63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see §63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (*i.e.*, performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in §63.11092(f).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

## **Notifications, Records, and Reports**

### **§ 63.11124 What notifications must I submit and when?**

(a) Each owner or operator subject to the control requirements in §63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in §63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, within 60 days of the applicable compliance date specified in §63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in §63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in §63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11118. If your affected source is subject to the control requirements in §63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, in accordance with the schedule specified in §63.9(h). The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in §63.9(e), prior to initiating testing required by §63.11120(a) and (b).

(5) You must submit additional notifications specified in §63.9, as applicable.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

### **§ 63.11125 What are my recordkeeping requirements?**

(a) Each owner or operator subject to the management practices in §63.11118 must keep records of all tests performed under §63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in §63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (e.g., via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.

(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

(1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

### **§ 63.11126 What are my reporting requirements?**

(a) Each owner or operator subject to the management practices in §63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under §63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

### **Other Requirements and Information**

#### **§ 63.11130 What parts of the General Provisions apply to me?**

Table 3 to this subpart shows which parts of the General Provisions apply to you.

#### **§ 63.11131 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§63.11116 through 63.11118 and 63.11120.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

#### **§ 63.11132 What definitions apply to this subpart?**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

*Dual-point vapor balance system* means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

*Gasoline* means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

*Gasoline cargo tank* means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

*Gasoline dispensing facility (GDF)* means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

*Monthly throughput* means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

*Motor vehicle* means any self-propelled vehicle designed for transporting persons or property on a street or highway.

*Nonroad engine* means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

*Nonroad vehicle* means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

*Submerged filling* means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in §63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

*Vapor balance system* means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

*Vapor-tight* means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

*Vapor-tight gasoline cargo tank* means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in §63.11092(f) of this part.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

**Table 1 to Subpart CCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More<sup>1</sup>**

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to §63.11118	Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).
	(a) All vapor connections and lines on the storage tank shall be

	equipped with closures that seal upon disconnect.
	(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in §63.11132.
	(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.
	(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.
	(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in §63.11117(b).
	(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.
	(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
	(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:
	$P_f = 2e^{-500.887/v}$
	Where:
	$P_f$ = Minimum allowable final pressure, inches of water.
	$v$ = Total ullage affected by the test, gallons.
	$e$ = Dimensionless constant equal to approximately 2.718.
	$2$ = The initial pressure, inches water.
2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in §63.11132, and comply with the requirements of item 1 in this Table.

facility subject to §63.11118	
-------------------------------	--

<sup>1</sup>The management practices specified in this Table are not applicable if you are complying with the requirements in §63.11118(b)(2), except that if you are complying with the requirements in §63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4184, Jan. 24, 2011]

**Table 2 to Subpart CCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More**

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:
	(i) All hoses in the vapor balance system are properly connected,
	(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,
	(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,
	(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and
	(v) All hatches on the tank truck are closed and securely fastened.
	(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in §63.11125(c).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

**Table 3 to Subpart CCCCC of Part 63—Applicability of General Provisions**

Citation	Subject	Brief description	Applies to subpart CCCCC
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in §63.11111.
§63.1(c)(2)	Title V Permit	Requirements for obtaining a	Yes,

		title V permit from the applicable permitting authority	§63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.
§63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in §63.11132.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes, except that these notifications are not required for facilities subject to §63.11116.
§63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon	No.



		becoming major, regardless of whether required to comply when they were an area source	
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, §63.11113 specifies the compliance dates.
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§63.6(d)	[Reserved]		
63.6(e)(1)(i)	General duty to minimize emissions	Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.	No. <i>See</i> §63.11115 for general duty requirement.
63.6(e)(1)(ii)	Requirement to correct malfunctions ASAP	Owner or operator must correct malfunctions as soon as possible.	No.
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.

§63.6(h)(1)	Compliance with Opacity/Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§63.6(h)(2)(ii)	[Reserved]		
§63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§63.6(h)(3)	[Reserved]		
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.
§63.6(h)(5)(i), (iii)–(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.

§63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to §63.8(e); COMS are properly maintained and operated according to §63.8(c) and data quality as §63.8(d)	No.
§63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.
§63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§63.7(a)(3)	CAA Section 114 Authority	Administrator may require a	Yes.

		performance test under CAA section 114 at any time	
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
63.7(e)(1)	Conditions for Conducting Performance Tests	Performance test must be conducted under representative conditions	No, §63.11120(c) specifies conditions for conducting performance tests.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.

§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in §63.11 apply	Yes.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	No.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§63.8(c)(1)(i)–(iii)	Operation and Maintenance of Continuous Monitoring Systems (CMS)	Must maintain and operate each CMS as specified in §63.6(e)(1); must keep parts for routine repairs readily available;	No.

		must develop a written SSM plan for CMS, as specified in §63.6(e)(3)	
§63.8(c)(2)–(8)	CMS Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions	No.
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	No.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)	No.
§63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	No.
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1)–(2), (4)–(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
§63.9(c)	Request for Compliance	Can request if cannot comply by	Yes.

	Extension	date or if installed best available control technology or lowest achievable emission rate	
§63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§63.9(g)	Additional Notifications when Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
§63.9(h)(1)–(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, however, there are no opacity standards.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
§63.10(b)(2)(i)	Records related to SSM	Recordkeeping of occurrence and duration of startups and shutdowns	No.

§63.10(b)(2)(ii)	Records related to SSM	Recordkeeping of malfunctions	No. <i>See</i> §63.11125(d) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
§63.10(b)(2)(iii)	Maintenance records	Recordkeeping of maintenance on air pollution control and monitoring equipment	Yes.
§63.10(b)(2)(iv)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§63.10(b)(2)(v)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§63.10(b)(2)(vi)–(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	No.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)	Records	Additional records for CMS	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)	SSM Reports	Contents and submission	No. <i>See</i>



			§63.11126(b) for malfunction reporting requirements.
§63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation	No.
§63.10(e)(3)(i)–(iii)	Reports	Schedule for reporting excess emissions	No.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	No.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit	No, §63.11130(K) specifies excess emission events for this subpart.

		report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	
§63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in §§63.10(c)(5)–(13) and 63.8(c)(7)–(8)	No.
§63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§63.11(b)	Flares	Requirements for flares	No.
§63.12	Delegation	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information	Public and confidential information	Yes.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

**CERTIFICATE OF SERVICE**

I, Cynthia Hook, hereby certify that a copy of this permit has been mailed by first class mail to El Dorado Chemical Company, P.O. Box 231, El Dorado, AR, 71730, on this 18<sup>th</sup> day of June, 2012.

A handwritten signature in cursive script, appearing to read 'C. Hook', written over a horizontal line.

Cynthia Hook, ASIII, Air Division