



OCT 01 2010

Tim Van Domelen  
J.R. Simplot Company  
P.O. Box 198  
Lathrop, CA 95330

**Re: Proposed Authorities to Construct / Certificate of Conformity (Minor Mod)  
District Facility # N-767  
Project # N-1101268**

Dear Mr. Van Domelen:

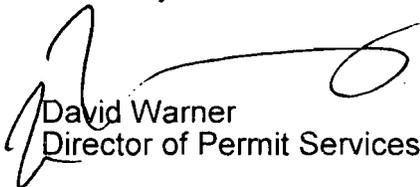
Enclosed for your review is the District's analysis of your application for Authorities to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. Modification of the Thermal Transfer Corp. start-up heater with a 16.0 MMBtu/hr Coen Micro-NOx burner to limit the annual heat input to less than 9 billion Btu for Rule 4306 compliance (ATC Permit N-767-58-8) and to only include the Sur-Lite Corp. Model 6-H250TT 15.0 MMBtu/hr furnace igniter burner in the sulfuric acid production plant permit under permit unit N-767-9 (ATC Permit N-767-9-13).

After addressing any EPA comments made during the 45-day comment period, the Authorities to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Kai Chan, Permit Services

**Sayed Sadredin**  
Executive Director/Air Pollution Control Officer

**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
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34946 Flyover Court  
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OCT 01 2010

Gerardo C. Rios, Chief  
Permits Office  
Air Division  
U.S. EPA - Region IX  
75 Hawthorne St  
San Francisco, CA 94105

Re: **Proposed Authorities to Construct / Certificate of Conformity (Minor Mod)  
District Facility # N-767  
Project # N-1101268**

Dear Mr. Rios:

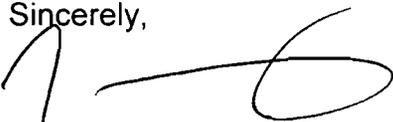
Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for J.R. Simplot Company, located at 16777 S. Howland Road in Lathrop, CA, which has been issued a Title V permit. J.R. Simplot Company is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. Modification of the Thermal Transfer Corp. start-up heater with a 16.0 MMBtu/hr Coen Micro-NOx burner to limit the annual heat input to less than 9 billion Btu for Rule 4306 compliance (ATC Permit N-767-58-8) and to only include the Sur-Lite Corp. Model 6-H250TT 15.0 MMBtu/hr furnace igniter burner in the sulfuric acid production plant permit under permit unit N-767-9 (ATC Permit N-767-9-13).

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authorities to Construct # N-767-9-13 and N-767-58-8 with Certificate of Conformity. After demonstrating compliance with the Authorities to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
Director of Permit Services

Enclosures  
cc: Kai Chan, Permit Services

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Engineer Name	Kai Chan
Engineer's Regional Manager	Rupi Gill
Facility Name	J.R. Simplot Company
Facility #	N-767
Project #	N-1101268
Facility Location	16777 S. Howland Road in Lathrop, CA
More than one ATC?	yes
ATC's with COC (ex. S-134-3-2, '-4-3, and '6-2)	N-767-9-13 and N-767-58-8
Modification Details (Complete Sentences)	Modification of the Thermal Transfer Corp. start-up heater with a 16.0 MMBtu/hr Coen Micro-NOx burner to limit the annual heat input to less than 9 billion Btu for Rule 4306 compliance (ATC Permit N-767-58-8) and to only include the Sur-Lite Corp. Model 6-H250TT 15.0 MMBtu/hr furnace igniter burner in the sulfuric acid production plant permit under permit unit N-767-9 (ATC Permit N-767-9-13).
Contact Receiving Proposed	Mr. Tim Van Domelen
Mailing Address	P.O. Box 198 Lathrop, CA 95330



the other emission rate limits for any pollutant and the current emission control system as a result of this project.

N-767-58-8:

J.R. Simplot Company is also requesting an Authority to Construct (ATC) permit for the modification of the Thermal Transfer Corp. start-up heater with a Coen Micro-NOx 16 MMBTU/HR start-up burner (4919-H-302) to limit the annual heat input to less than 9.0 billion Btu/hr for District Rule 4306 compliance and to remove the Sur-Lite Corp. furnace igniter burner from the equipment description on this permit unit and include it under permit unit N-767-9. The applicant is not proposing any changes to the remaining emission rate limits for any pollutant and the current emission control system as a result of this project.

*See Appendix II: Current Permit To Operate (PTO)*

## II. APPLICABLE RULES

District Rule 2010	Permits Required (12/17/92)
District Rule 2201	New and Modified Stationary Source Review Rule (9/21/06)
District Rule 2520	Federally Mandated Operating Permits (6/21/01)
District Rule 4001	New Source Performance Standards (4/14/99)
District Rule 4101	Visible Emissions (2/17/05)
District Rule 4102	Nuisance (12/17/92)
District Rule 4201	Particulate Matter Concentration (12/17/92)
District Rule 4202	Particulate Matter Emission Rate (12/17/92)
District Rule 4301	Fuel Burning Equipment (12/17/92)
District Rule 4304	Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
District Rule 4305	Boilers, Steam Generators and Process Heaters – Phase 2 (8/21/03)
District Rule 4306	Boilers, Steam Generators and Process Heaters – Phase 3 (3/17/05)
District Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
District Rule 4351	Boilers, Steam Generators and Process Heaters – Phase I (8/21/03)
District Rule 4801	Sulfur Compounds (12/17/92)
District Rule 4802	Sulfuric Acid Mist (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Public Resources Code 21000-21177:	California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387:	CEQA Guidelines

## III. PROJECT LOCATION

This facility is located at 16777 Howland Road in Lathrop, CA. The facility is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

#### IV. PROCESS DESCRIPTION

J R Simplot manufactures, blends, and stores agricultural fertilizer products. The J R Simplot facility in Lathrop is a manufacturer of Ammonium Sulfate and Nitrogen Phosphate Potassium (NPK) fertilizers.

##### N-767-9-13:

JR Simplot Company operates a sulfuric acid plant that manufactures sulfuric acid via the contact process. To produce sulfuric acid, elemental molten sulfur is combusted in a furnace with air to produce  $\text{SO}_2$ . After being passed through heat recovery boilers to remove heat from the gas stream, the  $\text{SO}_2$  is passed through a vanadium catalyst to convert the  $\text{SO}_2$  to  $\text{SO}_3$ . Following conversion, the  $\text{SO}_3$  is absorbed in water to form  $\text{H}_2\text{SO}_4$ . The produced sulfuric acid is pumped into storage tanks. This permit unit also consists of a Sur-Lite Corp. furnace igniter burner which is utilized to restart the sulfur furnace after shutdown and is inserted through a port to ignite the molten sulfur in the furnace. Once the sulfur ignites the burner is removed and the port closed. The applicant is not proposing any changes to the current processing method or equipment due to this proposed project.

##### N-767-58-8:

Prior to the sulfuric acid plant startup, after shutdown for maintenance and/or repair, the existing Thermal Transfer Corp. start-up heater with a Coen Micro-NOx 16 MMBtu/hr start-up burner (4919-H-302) is utilized to pre-heat the plant ducting and catalytic converters to prevent thermal shock damage. In addition, if the catalyst beds are below the required operating temperature, less  $\text{SO}_2$  will be converted to  $\text{SO}_3$ . The unconverted  $\text{SO}_2$  is not absorbed into the water and is emitted into the atmosphere. In order to minimize  $\text{SO}_2$  emissions during plant start-up due to the catalysts being at a lower than adequate temperature, the existing start-up heater system is used to pre-heat the catalyst beds to operating temperature. The current system consists of a natural gas-fired burner located after the furnace and just upstream of the catalyst. The applicant is not proposing any changes to the current processing method or equipment due to this proposed project.

##### **Operating Schedule:**

The maximum operating schedule used for Potential to Emit calculations are 24 hr/day and 365 days/year (8,760 hr/year).

#### V. EQUIPMENT LISTING

##### ***Pre-Project Equipment Description:***

**N-767-9-10:** SULFURIC ACID PRODUCTION PLANT CONSISTING OF A SULFUR FURNACE, TWO CONVERTERS, SIX WASTE HEAT RECOVERY BOILERS, A DRYING TOWER WITH AN ENTRAINMENT SEPARATOR, AN INTERSTAGE ABSORPTION TOWER WITH A MIST ELIMINATOR, A FINAL ABSORPTION TOWER WITH A MIST ELIMINATOR, AND ASSOCIATED EQUIPMENT.

**N-767-58-6:** THERMAL TRANSFER CORP START-UP HEATER WITH A COEN MICRONOX 16 MMBTU/HR START-UP BURNER (4919-H-302) AND A SUR-LITE CORP MODEL 6-H250 TT 15 MMBTU/HR PRE-HEAT FURNACE BURNER (4919-H-303).

***Post-Project Equipment Description:***

**N-767-9-13:** SULFURIC ACID PRODUCTION PLANT CONSISTING OF A SULFUR FURNACE, TWO CONVERTERS, SIX WASTE HEAT RECOVERY BOILERS, A DRYING TOWER WITH AN ENTRAINMENT SEPARATOR, AN INTERSTAGE ABSORPTION TOWER WITH A MIST ELIMINATOR, A FINAL ABSORPTION TOWER WITH A MIST ELIMINATOR, 15 MMBTU/HR SUR-LITE CORP. MODEL 6-H250 TT NATURAL GAS-FIRED FURNACE IGNITER BURNER (4919-H-303), AND ASSOCIATED EQUIPMENT.

**N-767-58-8:** THERMAL TRANSFER CORP START-UP HEATER WITH A COEN MICRONOX 16 MMBTU/HR NATURAL GAS-FIRED START-UP BURNER (4919-H-302).

## **VI. EMISSION CONTROL TECHNOLOGY EVALUATION**

### **N-767-9-13 & N-767-58-8:**

Since no changes to the emission control systems will occur due to this proposed project, an emission control technology evaluation is not necessary for this project.

## **VII. GENERAL CALCULATIONS**

### **A. Assumptions:**

#### **N-767-9-13:**

1. SO<sub>x</sub>, sulfuric acid mist, and PM<sub>10</sub> (sulfuric acid mist emissions with an aerodynamic diameter less than 10 microns) are the only pollutants generated by the sulfuric acid manufacturing process.
2. NO<sub>x</sub>, CO, VOC, PM<sub>10</sub>, and SO<sub>x</sub> will be emitted from the combustion of natural gas in the Sur-Lite Corp. furnace igniter burner.
3. 100 % of the sulfuric acid emissions have an aerodynamic diameter less than or equal to 10 microns (Ref. Project #N1040522).

#### **N-767-58-8:**

1. NO<sub>x</sub>, CO, VOC, PM<sub>10</sub>, and SO<sub>x</sub> will be emitted from the combustion of natural gas in the Coen Micro-NO<sub>x</sub> start-up burner.

**B. Emission Factors:**

N-767-9-13:

1. For the sulfuric acid plant the emission factors under normal, start-up, and shutdown conditions is based on the current emission limits on the existing permit. For the Sur-Lite Corp. furnace igniter burner no changes to the current permitted emission factor limits are proposed. Therefore, the post-project emission factors are equal to the pre-project emission factors as listed in the table below:

Pre & Post-Project Emission Factors for ATC Permit N-767-9-13	
Pollutant	EF1 & EF2
PM <sub>10</sub> /Acid Mist	0.3 lb-PM <sub>10</sub> (Acid Mist)/ton of 100% sulfuric acid produced
SOX <sub>Normal Operation</sub>	4.0 lb-SO <sub>2</sub> /ton of 100% sulfuric acid produced
SOX <sub>Start-Up &amp; Shutdown</sub>	21.5 lb-SO <sub>2</sub> /ton of 100% sulfuric acid produced
NOX <sub>Furnace Igniter</sub>	0.060 lb/MMBtu
CO <sub>Furnace Igniter</sub>	0.035 lb/MMBtu
VOC <sub>Furnace Igniter</sub>	0.003 lb/MMBtu
PM <sub>10</sub> /Furnace Igniter	0.005 lb/MMBtu
SOX <sub>Furnace Igniter</sub>	0.00285 lb/MMBtu

N-767-58-8:

1. For the Coen Micro-NOx start-up burner no changes to the current permitted emission factor limits are proposed. Therefore, the post-project emission factors are equal to the pre-project emission factors as listed in the table below:

Pre & Post-Project Emission Factors for ATC Permit N-767-58-8	
Pollutant	EF1 & EF2
NOX <sub>Start-Up Burner</sub>	0.0365 lb/MMBtu
CO <sub>Start-Up Burner</sub>	0.061 lb/MMBtu
VOC <sub>Start-Up Burner</sub>	0.0028 lb/MMBtu
PM <sub>10</sub> /Start-Up Burner	0.014 lb/MMBtu
SOX <sub>Start-Up Burner</sub>	0.00285 lb/MMBtu

**C. Operating Schedule & Processing Rates:**

Facility operating schedule of 24 hrs/day and 365 days/year.

N-767-9-13:

1. There will be no changes in emission factors or current permitted SOx (as SO<sub>2</sub>) emission rate limit of 2,461 lb/day with this project (per applicant's proposal).
2. Sur-Lite Corp. furnace igniter burner heat input limit of 21,000 MMBtu/year.

N-767-58-8:

1. Coen Micro-NOx start-up burner heat input limit of < 9,000 MMBtu/year.

**D. Calculations:**

**1. Pre-Project Potential to Emit (PE1)**

N-767-9-10

Daily and Annual PE1 from the Sulfuric Acid Plant:

Daily SOx emissions are limited to 2,461 lb/day by a permit condition on the existing permit. Acid Mist emissions are limited to 0.3 pounds per ton of 100% sulfuric acid produced. The amount of sulfuric acid that can be produced in any one day is:

$$2,461.0 \text{ lb-SOx/day} \div 4.0 \text{ lb-SOx/ ton-Sulfuric Acid} = 615 \text{ tons-Sulfuric Acid/day}$$

Acid Mist emissions are then:

$$\begin{aligned} \text{Daily PE1}_{\text{Acid Mist}} &= 615 \text{ tons-Sulfuric Acid/day} \times 0.3 \text{ lb-Acid Mist/ton-Sulfuric Acid} \\ &= 184.5 \text{ lb-Acid Mist/day} \end{aligned}$$

Pursuant to the Title V engineering evaluation for project # N-960569, PM<sub>10</sub> emissions are in the form of sulfuric acid mist emissions. Therefore, PM<sub>10</sub> emissions will be assumed to be equal to the sulfuric acid mist emissions, shown above. The annual emissions will be calculated based on operating at a worst case of 365 days/year. Therefore:

$$\begin{aligned} \text{Daily PE1}_{\text{SOx/Sulfuric Acid Plant}} &= \text{Daily Emission Limit}_{\text{N-767-9-10}} \text{ (lb-SOx/day)} \\ \text{Daily PE1}_{\text{PM10/Sulfuric Acid Plant}} &= \text{Daily PE1}_{\text{Acid Mist}} \text{ (lb-PM}_{10}\text{/day)} \\ \text{Annual PE1}_{\text{PM10 \& SOx/Sulfuric Acid Plant}} &= \text{Daily PE1 (lb/day)} \times 365 \text{ days/year} \end{aligned}$$

Pollutant	DEL <sub>N-767-9-10</sub> (lb/day)	Daily PE1 <sub>N-767-9-10</sub> (lb/day)	Annual PE1 <sub>N-767-9-10</sub> (lb/year)
SOx	2,461.0	2,461.0	898,265
PM <sub>10</sub>	184.5	184.5	67,343

N-767-58-6:

Daily and Annual PE1 from the Coen Micro-NOx Start-Up Burner:

Daily emissions from the combustion of natural gas in the start-up burner is based on the worst-case of operating 24 hours/day and the annual emissions is based on the worst-case heat input rate of 29,999 MMBtu/year (combined limit on current permit N-767-58-6). Therefore:

Daily Heat Input = 16.0 MMBtu/hr × 24 hr/day = 384 MMBtu/day  
 Annual Heat Input = 29,999 MMBtu/yr

$PE1_{\text{Start-Up Burner}} = \text{Heat Input (MMBtu/day, MMBtu/yr)} \times EF1 \text{ lb/MMBtu}$

Pollutant	EF1 (lb/MMBtu)	Daily PE1 <sub>Start-Up Burner</sub> (lb/day)	Annual PE1 <sub>Start-Up Burner</sub> (lb/yr)
NOx	0.0365	14.0	1,095
CO	0.061	23.4	1,830
VOC	0.0028	1.1	84
PM <sub>10</sub>	0.014	5.4	420
SOx	0.00285	1.1	85

Daily and Annual PE1 from the Sur-Lite Furnace Igniter Burner:

Daily emissions from the combustion of natural gas in the furnace igniter burner is based on the worst-case of operating 24 hours/day and the annual emissions is based on the worst-case heat input rate of 29,999 MMBtu/year (combined limit on current permit N-767-58-6). Therefore:

Daily Heat Input = 15.0 MMBtu/hr × 24 hr/day = 360 MMBtu/day  
 Annual Heat Input = 29,999 MMBtu/yr

$PE1_{\text{Pre-Heat Burner}} = \text{Heat Input (MMBtu/day, MMBtu/yr)} \times EF1 \text{ lb/MMBtu}$

Pollutant	EF1 (lb/MMBtu)	Daily PE1 <sub>Furnace Igniter</sub> (lb/day)	Annual PE1 <sub>Furnace Igniter</sub> (lb/yr)
NOx	0.060	21.6	1,800
CO	0.035	12.6	1,050
VOC	0.003	1.1	90
PM <sub>10</sub>	0.005	1.8	150
SOx	0.00285	1.0	85

Combined Total Daily and Annual PE1:

The current permit limits the combined heat input of the two burners to less than 30,000 MMBtu/year. Therefore, the worst-case emissions for this permit unit is the highest emission rate for each pollutant from either burner as indicated in the following table:

Pollutant	Daily PE1 <sub>N-767-58-6</sub> (lb/day)	Annual PE1 <sub>N-767-58-6</sub> (lb/yr)
NOx	21.6	1,800
CO	23.4	1,830
VOC	1.1	90
PM <sub>10</sub>	5.4	420
SOx	1.1	85

## 2. Post-Project Potential Emissions (PE2)

N-767-9-13:

Daily and Annual PE2 from the Sulfuric Acid Plant:

The applicant is not proposing any changes to the processing equipment, processing rate, or emission rates due to this project. Therefore, the pre-project potential to emit (PE1) is equal to the post-project potential to emit (PE2).

$$\text{Daily PE2}_{\text{PM}_{10} \text{ \& } \text{SOx/N-767-9-13}} = \text{Daily PE1}_{\text{PM}_{10} \text{ \& } \text{SOx/N-767-9-10}}$$

$$\text{Annual PE2}_{\text{PM}_{10} \text{ \& } \text{SOx/N-767-9-13}} = \text{Annual PE1}_{\text{PM}_{10} \text{ \& } \text{SOx/N-767-9-10}}$$

Pollutant	Daily PE2 <sub>Acid Plant</sub> (lb/day)	Annual PE2 <sub>Acid Plant</sub> (lb/year)
SOx	2,461.0	898,265
PM <sub>10</sub>	184.5	67,343

Daily and Annual PE2 from the Sur-Lite Furnace Igniter Burner:

Daily emissions from the combustion of natural gas in the furnace igniter burner is based on the worst-case of operating 24 hours/day and annual emissions is based on the applicants proposed heat input rate of 21,000 MMBtu/year. Therefore:

$$\text{Daily Heat Input} = 15.0 \text{ MMBtu/hr} \times 24 \text{ hr/day} = 360 \text{ MMBtu/day}$$

$$\text{Annual Heat Input} = 21,000 \text{ MMBtu/yr}$$

$$\text{PE2}_{\text{Furnace Igniter}} = \text{Heat Input (MMBtu/day, MMBtu/yr)} \times \text{EF2 lb/MMBtu}$$

Pollutant	EF2 (lb/MMBtu)	Daily PE2 <sub>Furnace Igniter</sub> (lb/day)	Annual PE2 <sub>Furnace Igniter</sub> (lb/yr)
NOx	0.060	21.6	1,260
CO	0.035	12.6	735
VOC	0.003	1.1	63
PM <sub>10</sub>	0.005	1.8	105
SOx	0.00285	1.0	60

Combined Total Annual PE2:

$$\text{Annual PE2}_{\text{N-767-9-13}} = \text{Annual PE2}_{\text{Acid Plant}} + \text{Annual PE2}_{\text{Furnace Igniter}}$$

Pollutant	Annual PE2 <sub>Acid Plant</sub> (lb/year)	Annual PE2 <sub>Furnace Igniter</sub> (lb/year)	Annual PE2 <sub>N-767-9-13</sub> (lb/year)
NOx	0	1,260	1,260
CO	0	735	735
VOC	0.003	63	63
PM <sub>10</sub>	67,343	105	67,448
SOx	898,265	60	898,325

N-767-58-8:

Daily and Annual PE2 from the Coen Micro-NOx Start-Up Burner:

Daily emissions from the combustion of natural gas in the pre-heat furnace burner is based on the worst-case of operating 24 hours/day and annual emissions is based on the applicants proposed heat input rate of 8,999 MMBtu/year. Therefore:

Daily Heat Input = 16.0 MMBtu/hr × 24 hr/day = 384 MMBtu/day

Annual Heat Input = 8,999 MMBtu/yr

PE2<sub>N-767-58-8</sub> = Heat Input (MMBtu/day, MMBtu/yr) × EF2 lb/MMBtu

Pollutant	EF2 (lb/MMBtu)	Daily PE2 <sub>N-767-58-8</sub> (lb/day)	Annual PE2 <sub>N-767-58-8</sub> (lb/yr)
NOx	0.0365	14.0	328
CO	0.061	23.4	549
VOC	0.0028	1.1	25
PM <sub>10</sub>	0.014	5.4	126
SOx	0.00285	1.1	25

**E. Increase in Permitted Emissions (IPE):**

**1. Quarterly Increase in Permitted Emissions (Quarterly IPE):**

N-767-9-13 & N-767-58-8:

Quarterly IPE calculations are only required to complete the emission profile for this emissions unit. It is assumed that this unit's annual emission changes are evenly distributed throughout the year. Therefore, for the proposed modifications:

Quarterly IPE (lb/qtr) = (Annual PE2 (lb/yr) – Annual PE1 (lb/yr)) ÷ 4 qtr/yr.

Quarterly IPE for ATC Permit N-767-9-13			
Pollutant	Annual PE2 <sub>N-767-9-13</sub> (lb/yr)	Annual PE1 <sub>N-767-9-10</sub> (lb/yr)	Quarterly IPE <sub>N-767-9-13</sub> (lb/qtr)
NOx	1,260	0	315.0
CO	735	0	183.75
VOC	63	0	15.75
PM <sub>10</sub>	67,448	67,343	26.25
SOx	898,325	898,265	15.0

<b>Quarterly IPE for ATC Permit N-767-58-8</b>			
<b>Pollutant</b>	<b>Annual PE2<sub>N-767-58-8</sub> (lb/yr)</b>	<b>Annual PE1<sub>N-767-58-6</sub> (lb/yr)</b>	<b>Quarterly IPE<sub>N-767-58-8</sub> (lb/qtr)</b>
NOx	328	1,800	-368.0
CO	549	1,830	-320.25
VOC	25	90	-16.25
PM <sub>10</sub>	126	420	-73.5
SOx	25	85	-15.0

**2. Adjusted Increase in Permitted Emissions (AIPE):**

The AIPE is used to determine if BACT is required for emission units that are being modified. AIPE will be calculated utilizing the following equations (Ref. Rule 2201, Section 4.3 & 4.4):

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

where, AIPE = Adjusted Increase in Permitted Emissions (lb/day)  
 PE2 = The emission units post project Potential to Emit (lb/day)  
 HAPE = The emission unit's Historically Adjusted Potential to Emit (lb/day)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

where, PE1 = The emission unit's Potential to Emit prior to modification or relocation.  
 EF2 = The emission unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set equal to 1.0.  
 EF1 = The emission unit's permitted emission factor for the pollutant before the modification or relocation.

**N-767-9-13:**

For this project the applicant is only proposing to include this emissions unit (Sur-Lite Corp. furnace igniter burner) as part of permit unit N-767-9. The applicant is not proposing an increase in the daily processing rate or control method to these emissions unit due to this project. Therefore:

$$\text{EF2} = \text{EF1} \text{ and } \text{EF2} / \text{EF1} = 1.0 \text{ (for all pollutants)}$$

AIPE for ATC Permit N-767-9-13					
Pollutant	PE2 (lb/day)	PE1 (lb/day)	EF2 / EF1	HAPE (lb/day)	AIPE (lb/day)
NOx (Furnace Igniter)	21.6	21.6	1.0	21.6	0
CO (Furnace Igniter)	12.6	12.6	1.0	12.6	0
VOC (Furnace Igniter)	1.1	1.1	1.0	1.1	0
PM <sub>10</sub> (Furnace Igniter)	1.8	1.8	1.0	1.8	0
VOC (Furnace Igniter)	1.0	1.0	1.0	1.0	0
SOx (Sulfuric Acid Plant)	2,461.0	2,461.0	1.0	2,461.0	0
PM <sub>10</sub> (Sulfuric Acid Plant)	184.5	184.5	1.0	184.5	0

N-767-58-8:

The applicant is not proposing an increase in the daily processing rate or control method to this emissions unit due to this project. Therefore:

EF2 = EF1 and EF2 / EF1 = 1.0 (for all pollutants)

AIPE for ATC Permit N-767-58-8					
Pollutant	PE2 (lb/day)	PE1 (lb/day)	EF2 / EF1	HAPE (lb/day)	AIPE (lb/day)
NOx (Start-Up Burner)	14.0	14.0	1.0	14.0	0
CO (Start-Up Burner)	23.4	23.4	1.0	23.4	0
VOC (Start-Up Burner)	1.1	1.1	1.0	1.1	0
PM <sub>10</sub> (Start-Up Burner)	5.4	5.4	1.0	5.4	0
VOC (Start-Up Burner)	1.1	1.1	1.0	1.1	0

**F. Facility Emissions:**

**1. Pre-Project Stationary Source Potential to Emit (SSPE1):**

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Permit Number	SSPE1 (lb/yr) <sup>(1)</sup>				
	NOx	CO	VOC	SOx	PM10
N-767-1-8	0	0	0	3,650	8,760
N-767-2-3	0	0	0	0	0
N-767-3-3	0	0	0	0	0
N-767-5-5	0	0	0	0	3,541
N-767-6-14 (ATC Permit)	16,827	32,230	986	986	30,458
N-767-9-10	0	0	0	898,265	67,343
N-767-11-9 (ATC Permit)	0	0	0	0	25,900

<sup>1</sup> Unless otherwise noted the annual emissions from these permit units are obtained from Project #N-1101616.

N-767-12-5	0	0	0	0	3,541
N-767-13-4	0	0	0	0	11,498
N-767-14-5	0	0	0	0	1,205
N-767-16-2	0	0	0	0	4,500
N-767-17-2	0	0	0	0	19,800
N-767-18-2	0	0	0	0	19,800
N-767-20-4	0	0	0	0	438
N-767-23-4	0	0	0	0	876
N-767-24-3	0	0	0	0	9,000
N-767-25-2	0	0	0	0	0
N-767-26-2	0	0	0	0	200
N-767-27-2	0	0	0	0	200
N-767-28-2	0	0	0	0	250
N-767-32-2	0	0	0	0	1,800
N-767-33-2	0	0	0	0	1,800
N-767-36-5	0	0	0	0	780
N-767-39-1 <sup>(2)</sup>	0	0	0	0	0
N-767-40-1 <sup>(2)</sup>	0	0	0	0	0
N-767-41-1 <sup>(2)</sup>	0	0	0	0	0
N-767-42-1 <sup>(2)</sup>	0	0	0	0	0
N-767-56-2	0	0	677	0	0
N-767-58-6	1,800	1,830	90	85	420
N-767-59-10	900	3,240	120	86	228
N-767-60-4	0	0	0	0	73
N-767-61-3	0	0	0	0	3,650
N-767-62-5	0	0	0	0	1,168
N-767-70-4	0	0	0	0	7,118
N-767-71-2	0	0	0	0	138,700
N-767-73-3	0	0	0	0	365
N-767-74-2	0	0	0	0	0
N-767-75-3	0	0	0	0	146
N-767-76-2	0	0	0	0	657
N-767-77-3	0	0	1,054	0	1,606
N-767-79-0	0	0	0	0	0
N-767-80-0	0	0	0	0	0
N-767-81-1	198	20	46	0	5
N-767-82-0 <sup>(2)</sup>	0	0	0	0	0
N-767-83-0 (ATC Permit)	0	0	0	0	1,220
<b>Total PE1</b>	<b>19,725</b>	<b>37,320</b>	<b>2,973</b>	<b>903,072</b>	<b>367,046</b>
<b>Major Source Thresholds</b>	<b>50,000</b>	<b>200,000</b>	<b>50,000</b>	<b>140,000</b>	<b>140,000</b>
<b>Major Source</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>
ERC N-74-5	0	0	0	6,240	0
ERC N-75-5	0	0	0	1,751,692	0
<b>Total SSPE1</b>	<b>19,725</b>	<b>37,320</b>	<b>2,973</b>	<b>2,661,004</b>	<b>367,046</b>

<sup>2</sup> Abrasive blasting units are exempt from the District's NSR rule and therefore do not contribute to the stationary source emissions.

## 2. Post Project Stationary Source Potential to Emit (SSPE2):

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/yr)					
Permit Number	NOx	CO	VOC	SOx	PM10
N-767-1-8	0	0	0	3,650	8,760
N-767-2-3	0	0	0	0	0
N-767-3-3	0	0	0	0	0
N-767-5-5	0	0	0	0	3,541
N-767-6-14 (ATC Permit)	16,827	32,230	986	986	30,458
<b>N-767-9-13 (ATC Permit)</b>	<b>1,260</b>	<b>735</b>	<b>63</b>	<b>898,325</b>	<b>67,448</b>
N-767-11-9 (ATC Permit)	0	0	0	0	25,900
N-767-12-5	0	0	0	0	3,541
N-767-13-4	0	0	0	0	11,498
N-767-14-5	0	0	0	0	1,205
N-767-16-2	0	0	0	0	4,500
N-767-17-2	0	0	0	0	19,800
N-767-18-2	0	0	0	0	19,800
N-767-20-4	0	0	0	0	438
N-767-23-4	0	0	0	0	876
N-767-24-3	0	0	0	0	9,000
N-767-25-2	0	0	0	0	0
N-767-26-2	0	0	0	0	200
N-767-27-2	0	0	0	0	200
N-767-28-2	0	0	0	0	250
N-767-32-2	0	0	0	0	1,800
N-767-33-2	0	0	0	0	1,800
N-767-36-5	0	0	0	0	780
N-767-39-1 <sup>(3)</sup>	0	0	0	0	0
N-767-40-1 <sup>(2)</sup>	0	0	0	0	0
N-767-41-1 <sup>(2)</sup>	0	0	0	0	0
N-767-42-1 <sup>(2)</sup>	0	0	0	0	0
N-767-56-2	0	0	677	0	0
<b>N-767-58-8 (ATC Permit)</b>	<b>328</b>	<b>549</b>	<b>25</b>	<b>25</b>	<b>126</b>
N-767-59-10	900	3,240	120	86	228
N-767-60-4	0	0	0	0	73
N-767-61-3	0	0	0	0	3,650
N-767-62-5	0	0	0	0	1,168
N-767-70-4	0	0	0	0	7,118
N-767-71-2	0	0	0	0	138,700
N-767-73-3	0	0	0	0	365

<sup>3</sup> Abrasive blasting units are exempt from the District's NSR rule and therefore do not contribute to the stationary source emissions.

N-767-74-2	0	0	0	0	0
N-767-75-3	0	0	0	0	146
N-767-76-2	0	0	0	0	657
N-767-77-3	0	0	1,054	0	1,606
N-767-79-0	0	0	0	0	0
N-767-80-0	0	0	0	0	0
N-767-81-1	198	20	46	0	5
N-767-82-0 <sup>(2)</sup>	0	0	0	0	0
N-767-83-0 (ATC Permit)	0	0	0	0	1,220
<b>Total PE2</b>	<b>19,513</b>	<b>36,774</b>	<b>2,971</b>	<b>903,072</b>	<b>366,857</b>
<b>Major Source Thresholds</b>	<b>50,000</b>	<b>200,000</b>	<b>50,000</b>	<b>140,000</b>	<b>140,000</b>
<b>Major Source</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>	<b>YES</b>
ERC N-74-5	0	0	0	6,240	0
ERC N-75-5	0	0	0	1,751,692	0
<b>Total SSPE2</b>	<b>19,513</b>	<b>36,774</b>	<b>2,971</b>	<b>2,661,004</b>	<b>366,857</b>

### 3. Baseline Emissions (BE):

Pursuant to Rule 2201, Section 3.7, the Baseline Emissions (BE) for a given pollutant is the sum of the following:

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

Otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Rule 2201, Section 3.23

Based on the SSPE1 and SSPE2 calculations in the above section, the facility is a major source for PM<sub>10</sub> and SO<sub>x</sub>.

Pursuant to Rule 2201, Section 3.7.1.4, for a major source, the Baseline Emissions (BE) for a given pollutant is equal to the sum of the pre-project Potential to Emit for any Clean Emissions Unit, provided that if the unit has a Specific Limiting Condition (SLC), all units combined under the SLC also qualify as Clean Emission Units.

#### BE for PM<sub>10</sub> and SO<sub>x</sub> Emissions from the existing Sulfuric Acid Plant:

Section 3.12.1 defines a clean emissions unit as a unit equipped with an emission control technology with a minimum control efficiency of at least 95%. According to AP-42, Section 8.10 (Sulfuric Acid Manufacturing Plants), SO<sub>2</sub> and sulfuric acid mist (PM<sub>10</sub>) emissions controlled with the use of a dual absorption system with a mist eliminator will result in a control efficiency of 99.7%. The existing sulfuric acid plant utilizes a dual absorption system with a mist eliminator. Therefore, this unit is a Clean

Emissions Unit, per section 3.12.1 of Rule 2201, and BE for SOx and PM<sub>10</sub> can be set equal to PE1.

BE for PM<sub>10</sub> and SOx Emissions from the Sur-Lite Furnace Igniter Burner and Coen Micro-NOx Start-Up Burner:

Section 3.12.2 defines a clean emissions unit as a unit equipped with emissions control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

Based on a search of the District's current BACT Clearinghouse for external combustion devices, the use of natural gas or propane is the typical achieved-in-practice control method for PM<sub>10</sub> and SOx emissions. The Sur-Lite furnace igniter burner and Coen Micro-NOx start-up burner are fired exclusively on natural gas. Therefore, these units are Clean Emission Units, per section 3.12.2 of Rule 2201, and BE for SOx and PM<sub>10</sub> can be set equal to PE1.

**4. Stationary Source Increase in Permitted Emissions (SSIPE):**

SSIPE is used to determine if a project triggers public notification (District Rule 2201, Section 5.4.5). For the proposed project:

SSIPE (for any one pollutant) = SSPE2 – SSPE1

SSIPE			
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
NOx	19,513	19,725	0 <sup>(4)</sup> (-212)
CO	36,774	37,320	0 <sup>(4)</sup> (-546)
VOC	2,971	2,973	0 <sup>(4)</sup> (-2)
PM <sub>10</sub>	366,857	367,046	0 <sup>(4)</sup> (-189)
SOx	2,661,004	2,661,004	0

**G. Major Modification:**

The purpose of Major Modification calculations is to determine the following:

- If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Title I Modification (District Rule 2201, Section 4.1.3); and
- If a public notification is triggered (District Rule 2201, Section 5.4.1).

<sup>4</sup> Per District practice, negative values for SSIPE are set equal to zero.

Based on the pre and post-project stationary source potential to emit calculations (less onsite Emission Reduction Credit's) in Sections VII.F.1. and 2. of this document, the facility is a Major Source for PM<sub>10</sub> and SO<sub>x</sub> emissions. To determine if a project triggers a Major Modification, Net Emissions Increase (NEI) is calculated for each pollutant, and is compared with the Major Modification threshold limit for each pollutant.

It is the District's position, when determining if a Major Modification is triggered, to only consider the emissions from the units under the proposed project. As shown above, the facility is an existing Major Source for PM<sub>10</sub> and SO<sub>x</sub> emissions.

The Major Modification trigger thresholds are 30,000 lb-PM<sub>10</sub>/yr and 80,000 lb-SO<sub>x</sub>/year, respectively. The project by itself would need to be a significant increase in order to trigger a Major Modification. The post-project potential PM<sub>10</sub> emissions from the proposed modified furnace igniter burner and start-up burner are 105 lb/year and 126 lb/year, both of which are less than the trigger threshold of 30,000 lb/year. Therefore, the project does not constitute a Major Modification for PM<sub>10</sub> emissions.

The post-project potential SO<sub>x</sub> emissions from the modified furnace igniter burner and start-up burner are 60 lb/year and 25 lb/year, both of which are less than the trigger threshold of 80,000 lb/year. Therefore, the project does not constitute a Major Modification for SO<sub>x</sub> emissions.

#### **H. Federal Major Modification:**

As shown above, this project does not constitute a Major Modification. Therefore, in accordance with District Rule 2201, Section 3.17, this project does not constitute a Federal Major Modification and no further discussion is required.

### **VIII.COMPLIANCE**

#### **District Rule 2201 - New and Modified Stationary Source Review Rule**

##### **A. Best Available Control Technology (BACT):**

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. BACT is required for the following actions: (1) Any new emissions unit with a potential to emit exceeding two pounds in any one day, (2) The relocation of an existing emissions unit from one stationary source to another with a potential to emit exceeding two pounds in any one day, (3) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding two pounds in any one day, and (4) Major modifications. If the post project Stationary Source Potential to Emit (SSPE2) for Carbon Monoxide is less than 200,000 pounds per year, BACT is not required for Carbon Monoxide.

**Best Available Control Technology (BACT) for Permit Units N-767-9-13 and N-767-58-8:**

**1. BACT Applicability:**

As shown in Section VII.E.2. of this document, the applicant is proposing to modify the sulfuric acid plant, furnace igniter burner, and start-up burner with an AIPE of 0 lb/day for all pollutants. Therefore, BACT will not be triggered for any pollutant due to this proposed project.

**B. Offsets**

**1. Offset Applicability**

Pursuant to Rule 2201, Section 4.5.3, offset requirements shall be triggered on a pollutant-by-pollutant basis, unless exempt per Section 4.6. Offsets are required if the post-project SSPE2 totals equals or exceeds the following offset thresholds for any pollutant:

Pollutant	Offset Thresholds (lb/yr)	SSPE2 (lb/yr)	SSPE1 (lb/yr)	Offsets Triggered
NO <sub>x</sub>	20,000	19,513	19,725	No
CO <sub>2</sub>	200,000	36,774	37,320	No
VOC	20,000	2,971	2,973	No
PM <sub>10</sub>	29,200	366,857	367,046	Yes
SO <sub>x</sub>	54,750	2,661,004	2,661,004	Yes

**2. Quantity of Offsets Required**

The SSPE2 for PM<sub>10</sub> and SO<sub>x</sub> emissions exceed the offset threshold and offsets are triggered only for PM<sub>10</sub> and SO<sub>x</sub>. According to Section 4.7.1 and 4.7.3, for pollutants with a pre-project Stationary Source Potential to Emit (SSPE1) greater than the emission offset threshold levels, the quantity of emission offsets is calculated as follows:

$$\text{Offset Quantity (lb/yr)} = [\Sigma(\text{PE2} - \text{BE})] \times \text{Offset Ratio}$$

where, Offset Ratio = Distance or interpollutant ratio of Sections 4.8 and 4.13.3

PM<sub>10</sub> Offset Determination:

As indicated in Section VII.F.3. of this document, the BE for the existing emissions unit is equal to the pre-project PE (PE1). The offset threshold for PM<sub>10</sub> was exceeded prior to this project. Therefore, all increases in PM<sub>10</sub> from this project require offsets. Therefore, for this project:

$$\text{Offset Quantity (lb/yr)} = \text{Annual PE2} - \text{Annual PE1}$$

Pollutant	Annual PE2 (lb/yr)	Annual PE1 (lb/yr)	Offset Quantity (lb/yr)
PM <sub>10</sub> /Sulfuric Acid Plant	67,343	67,343	0
PM <sub>10</sub> /Furnace Igniter	105	150	0 (-45)
PM <sub>10</sub> /Start-Up Burner	126	420	0 (-294)

As determined above, the offset trigger level for PM<sub>10</sub> is exceeded, but offsets are not required.

**SOx Offset Determination:**

As indicated in Section VII.F.3. of this document, the BE for the existing emissions unit is equal to the pre-project PE (PE1). The offset threshold for PM<sub>10</sub> was exceeded prior to this project. Therefore, all increases in PM<sub>10</sub> from this project require offsets. Therefore, for this project:

$$\text{Offset Quantity (lb/yr)} = \text{Annual PE2} - \text{Annual PE1}$$

Pollutant	Annual PE2 (lb/yr)	Annual PE1 (lb/yr)	Offset Quantity (lb/yr)
SOx/Sulfuric Acid Plant	2,461	2,461	0
SOx/Furnace Igniter	60	85	0 (-25)
SOx/Start-Up Burner	25	85	0 (-60)

As determined above, the offset trigger level for SOx is exceeded, but offsets are not required.

**C. Public Notification**

**1. Applicability**

District Rule 2201, section 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Major Modifications
- New emission units with a PE > 100 lb/day of any one pollutant
- Modifications with SSPE1 below an offset threshold and SSPE2 above an offset threshold on a pollutant by pollutant basis  
(Existing Facility Offset Threshold Exceedance Notification)
- New stationary sources with SSPE2 exceeding offset thresholds  
(New Facility Offset Threshold Exceedance Notification)
- Any permitting action with a SSPE exceeding 20,000 lb/yr for any one pollutant. (SSPE Notice)

**a. New Major Source**

A New Major Source is a new facility, which is also a major source. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

**b. Major Modification**

As demonstrated in Section VII.G above, this project does not constitute a Major Modification; therefore, public noticing for Major Modification purposes is not required.

**c. PE > 100 lb/day**

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project; therefore public noticing is not required for this project for Potential to Emit exceeding the 100 lb/day limit.

**d. Existing Facility - Offset Threshold Notification**

Existing facilities with the SSPE1 below the offset threshold resulting in an SSPE2 exceeding the offset threshold due to the proposed project for one or more pollutants will require public noticing. As shown in Section VIII., Rule 2201, Section B.1. of this document, the SSPE1 for PM<sub>10</sub> and SO<sub>x</sub> is above the offset threshold prior to this project. Therefore, public noticing is not required for offset threshold exceedance purposes.

**e. New Facility - Offset Threshold Notification**

This is an existing facility. This section does not require a public notification.

**f. SSIPE > 20,000 lb/year**

A notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/yr of any affected pollutant. As shown in section VII.F.4. of this document, the SSIPE for any affected pollutant will be less than 20,000 pounds per year. Therefore, a SSIPE notification is not required.

**2. Public Notice Action**

As indicated above the public noticing requirements are not triggered for this project. Therefore, public notification and publication requirements as indicated in section 5.5 of this rule are not required.

#### **D. Daily Emission Limits (DELs)**

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis.

##### **N-767-9-13:**

The DELs for this permit unit will be stated in the form of daily emission limits or emission factors as shown below:

- *The overall oxides of sulfur emissions as SO<sub>2</sub> from the sulfuric acid plant shall not exceed 4 pounds per ton of 100% sulfuric acid produced except during periods of start-up and shutdown. [District Rule 2201]*
- *The overall oxides of sulfur emissions as SO<sub>2</sub> from the sulfuric acid plant shall not exceed 21.5 pounds per ton of 100% sulfuric acid produced during periods of start-up and shutdown. This performed based limit is to enforce the SO<sub>x</sub> emission reductions granted by certificate N-74-5. [District Rule 2201]*
- *Emissions of oxides of sulfur as SO<sub>2</sub> from the entire sulfuric acid plant shall not exceed 2,461 pounds during any one day. This performed based limit is to enforce the SO<sub>x</sub> emission reductions granted by certificate N-75-5. [District Rule 2201]*
- *Emissions from the Sur-Lite Corp. furnace igniter burner shall not exceed any of the following limits: 0.061 lb-NO<sub>x</sub>/MMBtu, 0.035 lb-CO/MMBtu, 0.003 lb-VOC/MMBtu, 0.005 lb-PM<sub>10</sub>/MMBtu, or 0.00285 lb-SO<sub>x</sub>/MMBtu. [District Rule 2201]*

In addition the following permit conditions will appear on the permit:

- *The Sur-Lite Corp. furnace igniter burner shall only be fired on natural gas. [District Rule 2201]*
- *Heat input to the Sur-Lite Corp. furnace igniter burner shall not exceed 21,000 MMBtu in any one rolling 12 month period. [District Rule 2201]*

##### **N-767-58-8:**

The DELs for this permit unit will be stated in the form of daily emission limits or emission factors as shown below:

- *Emissions from the Coen Micronox start-up burner shall not exceed any of the following limits: 0.0365 lb-NO<sub>x</sub>/MMBtu, 0.061 lb-CO/MMBtu, 0.0028 lb-VOC/MMBtu, 0.014 lb-PM<sub>10</sub>/MMBtu, or 0.00285 lb-SO<sub>x</sub>/MMBtu. [District Rule 2201]*

In addition the following permit conditions will appear on the permit:

- *The Coen Micronox start-up burner shall only be fired on natural gas. [District Rule 2201]*
- *Heat input to the Coen Micronox start-up burner shall be less than 9 billion in any one calendar year. [District Rule 2201, 4305, and 4306]*

## **E. Compliance Assurance**

### **1. Source Testing**

#### N-767-9-13:

The facility is currently required to perform an annual source test for the determination of SOx emissions, expressed as SO<sub>2</sub>, from the sulfuric acid plant. No changes to the current source testing requirements are required or proposed due to this project.

Per District Policy APR 1705 (Source Testing Frequency), Section IV, source testing for the Sur-Lite Corp furnace igniter burner will not be required because the uncontrolled emissions will be less than 30 lb/day for any one pollutant. Therefore, source testing to verify the emissions from the furnace igniter burner will not be required.

#### N-767-58-8:

The Coen Micro-NOx start-up burner is subject to District Rule 4305 (Boilers, Steam Generators and Process Heaters, Phase 2), District Rule 4306 (Boilers, Steam Generators and Process Heaters, Phase 3), and District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr). However, the start-up burner is not subject to any source testing requirements. Please refer to Section VIII under Rules 4306 and 4320 for a discussion of the non-requirement for source testing.

### **2. Monitoring**

#### N-767-9-13:

The facility is currently required to continuously monitor and record SOx emissions through the use of a continuous monitoring and recording system. No changes to the current monitoring and recording system is required or proposed due to this project.

There are no specific District, State or Federal monitoring requirements for the Sur-Lite Corp furnace igniter burner. Therefore, monitoring of the furnace igniter burner will not be required.

N-767-58-8:

As required by District Rule 4305 (Boilers, Steam Generators and Process Heaters, Phase 2), District Rule 4306 (Boilers, Steam Generators and Process Heaters, Phase 3), and District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr), the Coen Micro-NOx start-up burner is subject to monitoring requirements. Refer to Section VIII under Rules 4306 and 4320 for a discussion of the monitoring requirements.

**3. Record Keeping**

N-767-9-13:

The facility is currently required to continuously record SOx emissions through the use of a continuous recording system. No changes to the current recording system is required or proposed due to this project.

For the Sur-Lite Corp furnace igniter burner to verify compliance with the proposed annual heat input limit, the applicant will be required to maintain a cumulative annual heat input record based on a rolling 12 month period updated at least monthly.

N-767-58-8:

As required by District Rule 4305 (Boilers, Steam Generators and Process Heaters, Phase 2), District Rule 4306 (Boilers, Steam Generators and Process Heaters, Phase 3), and District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr), the Coen Micro-NOx start-up burner is subject to recordkeeping requirements. Refer to Section VIII under Rules 4306 and 4320 for a discussion of the recordkeeping requirements.

**4. Reporting**

N-767-9-13:

For the sulfuric acid plant the facility is currently required to submit a written report each calendar quarter. No changes to the current reporting requirements is required or proposed due to this project.

For the Sur-Lite Corp furnace igniter burner there are no District rules or policies that require reporting.

N-767-58-8:

There are no District rules or policies that require reporting for the Coen Micro-NOx start-up burner.

## **District Rule 2520 - Federally Mandated Operating Permits**

### N-767-9-13 & N-767-58-8:

This facility was issued their Title V Operating Permit. The applicant is proposing to modify the start-up burner to comply with Rule 4306 and move the pre-heater burner to permit unit N-767-9. The proposed project constitutes a **Minor** Modification to the Title V Permit pursuant to Section 3.20 of this Rule. The applicant has proposed to receive the ATC permits with Certificates of Conformity in accordance with the requirements of 40 CFR 70.6(c), 70.7 and 70.8. Therefore, the 45-day EPA notice will be conducted prior to the issuance of the ATC.

In accordance with Rule 2520, the application meets the procedural requirements of Section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permits (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix III of this document).

Per section 5.3.2 of this rule, the applicant must submit an application for a Title V permit modification prior to implementing the requested changes. The following federally enforceable conditions will be placed on each of these ATC permits to ensure compliance with this rule:

- *{1830} This Authority to Construct serves as a written Certificate of Conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Y*
- *{1831} Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an administrative amendment to its Title V permit, in accordance with District Rule 2520, Section 11.4.2. [District Rule 2520] Y*

Compliance with this rule is expected.

## **District Rule 4001 - New Source Performance Standards**

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

#### N-767-9-13:

Section 60.80(a) states that the provisions of Subpart H are applicable to each sulfuric acid production unit, which is the affected facility. The applicant's sulfuric acid plant meets the definition of a sulfuric acid production unit. Section 60.80(b) states that any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of Subpart H.

A modification is defined by Section 60.2 as “any physical change in, or change in method of operation of, an existing facility which increases the amount of air pollutants (to which this standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which this standard applies) into the atmosphere not previously emitted”.

Subpart H applies to sulfuric acid mist emissions and sulfur dioxide emissions from the sulfuric acid plant. Pursuant to the Title V engineering evaluation, presented for project N960569, the sulfuric acid plant was constructed prior to 1971 and there has been no modifications to the sulfuric acid plant to date, as defined by Section 60.2.

This project will not result in an increase in SO<sub>2</sub> or sulfuric acid mist emissions, and therefore is not a modification of the sulfuric acid plant. Therefore, Subpart H does not apply and no further discussion is required.

#### **40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Industrial Steam Generating Units**

##### N-767-58-8:

The Code of Federal Regulations, Chapter 40 (40 CFR), Part 60, Subpart Dc lists SO<sub>x</sub>, PM<sub>10</sub>, and NO<sub>x</sub> emission standards for steam generating units with a maximum heat input of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr that are constructed, reconstructed, or modified after 6/9/89.

40 CFR Part 60, Subpart A, section 14, defines the meaning of modification to which the standards are applicable. §60.14, paragraph (a) states that the following will not be considered as a modification: *“any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere”.*

The start-up heater system does not have any newly constructed or reconstructed units, nor is any unit being modified (as defined above). Since the permittee is only proposing to include permit conditions for compliance with District rules and regulations without an increase in emissions for any pollutant, the requirements of these sections are not triggered due to this proposed project.

#### **District Rule 4101 - Visible Emissions**

##### N-767-9-13 & N-767-58-8:

As long as the equipment is properly maintained and operated the emission unit will not discharge into the atmosphere any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated as No. 1 on the Ringelmann Chart or equivalent to 20% opacity. A permit condition will be listed on each of these ATC permits as follows:

- *{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]*

Therefore, compliance with this rule is expected.

### **District Rule 4102 - Nuisance**

#### N-767-9-13 & N-767-58-8:

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. A permit condition will be listed on these ATC permits as follows:

- *{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]*

Therefore, compliance with this rule is expected.

### **California Health & Safety Code 41700 (Health Risk Assessment)**

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

There will be no increases in fuel usage or emissions as a result of the proposed modifications. Therefore, a health risk assessment is not necessary and no further risk analysis is required.

### **District Rule 4201 - Particulate Matter Concentration**

#### N-767-9-13 & N-767-58-8:

Section 3.1 of this rule prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

#### For the Sulfuric Acid Plant:

The particulate matter (PM) concentration from the exhaust of the control device serving the sulfuric acid plant is calculated using the following formula:

$$\text{PM Concentration (gr/scf)} = \frac{(\text{PM emission rate}) \times (7,000 \text{ gr/lb})}{(\text{Exhaust flow rate}) \times (60 \text{ min/hr}) \times (24 \text{ hr/day})}$$

#### For the Sur-Lite Corp Furnace Igniter Burner & the Coen Micro-NOx Start-Up Burner:

The particulate concentration from these burners may be calculated as follows:

$$\begin{aligned} \text{PM Concentration} &= 0.0076 \text{ lb-PM}_{10}/\text{MMBtu} \times \text{MMBtu}/8,578 \text{ dscf} \times 7,000 \text{ gr/lb} \\ &= 0.006 \text{ gr/dscf} < 0.1 \text{ gr/dscf} \end{aligned}$$

Permit Number	PM Emission Rate (lb-PM/day) <sup>(5)</sup>	Exhaust Flow Rate (dscfm)	PM Concentration (gr/dscf)
N-767-9-13 (Sulfuric Acid Plant)	184.5	21,602	0.042
N-767-9-13 (Sur-Lite Corp Furnace Igniter Burner)	1.8	---	0.006
N-767-58-8 (Coen Micro-NOx Start-Up Burner)	5.4	---	0.006

Therefore, compliance with District Rule 4201 requirements is expected and a permit condition will be listed on each ATC permit as follows:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

#### District Rule 4202 - Particulate Matter Emission Rate

##### N-767-9-13:

The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates. The maximum allowable emissions rate is calculated using the following formula:

$$E_{Max} = 3.59 P^{0.62}$$

where: E = Emissions in lb/hr

P = Process weight in ton/hr (P ≤ 30 tons/hr)

Permit Number	P (lb/ton)	E <sub>Proposed</sub> (lb-PM/hr)	E <sub>Max</sub> (lb/hr)
N-767-9-13 <sup>(6)</sup>	25.6	7.7	26.8

Since the proposed PM Emission rates are less than the allowable maximum emission rates, the permit unit is expected to operate in compliance with this rule.

#### District Rule 4301 - Fuel Burning Equipment

##### N-767-9-13:

Pursuant to Section 3.1 of this rule, this rule applies only to units that produce heat or power via indirect heat transfer. The Sur-Lite Corp furnace igniter burner is a direct-fired unit utilized to ignite the molten sulfur in the furnace. Thus, this rule does not apply to this permit unit.

<sup>5</sup> Assuming 100% of the PM is emitted as PM<sub>10</sub>.

<sup>6</sup> For this permit unit the maximum process rate is 25.6 tons/hr based on a sulfuric acid production rate of 615 tons/day and operating 24 hrs/day. The E<sub>Proposed</sub> is 7.7 lb/hr based on an emission rate of 184.5 lb/day and operating 24 hrs/day.

N-767-58-8:

This rule specifies maximum emission rates in lb/hr for SO<sub>2</sub>, NO<sub>2</sub>, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. The emissions rates from the Coen Micro-NOx start-up burner is shown in the table below.

District Rule 4301 Limits			
Pollutant	NO <sub>2</sub> (lb/hr)	Total PM (lb/hr)	SO <sub>2</sub> (lb/hr)
ATC Permit N-767-58-8	0.58	0.23	0.046
Rule Limit	140	10	200

The above table indicates compliance with the maximum lb/hr emissions in this rule; therefore, continued compliance is expected.

**District Rule 4304 - Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters**

N-767-9-13:

The Sur-Lite Corp furnace igniter burner is only utilized to ignite the molten sulfur in the sulfuric acid plant during restart of the plant after shutdown and is not a boiler, steam generator, or process heater as defined under District Rules 4305, 4306, and 4320. Therefore, this unit is not subject to District Rules 4304, 4305, 4306, and 4320 and no further discussion is required.

N-767-58-8:

Rule 4304 details the tuning procedure required for boilers, steam generators, and process heaters under Rules 4305, 4306, and 4320. The tune up requirements for the Coen Micro-NOx start-up burner are discussed in District Rule 4306, Section 5.2, discussion below.

**District Rule 4305 - Boilers, Steam Generators and Process Heaters – Phase 2**

N-767-58-8:

The Coen Micro-NOx start-up burner is natural gas-fired with a maximum heat input of 16.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

Since the requirements of District Rules 4306 and 4320 are either equivalent or more stringent than the requirements of District Rule 4305, compliance with District Rules 4306 and 4320 requirements will satisfy requirements of District Rule 4305. Therefore, no further discussion is required.

### **District Rule 4306 - Boilers, Steam Generators and Process Heaters – Phase 3**

#### N-767-58-8:

The Coen Micro-NO<sub>x</sub> start-up burner is natural gas-fired with a maximum heat input of 16.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4306, the unit is subject to District Rule 4306. The applicant has proposed to limit the maximum annual heat input of the unit to less than 9 billion Btu/year to comply with the requirements of Section 5.2 of this rule.

#### **Section 5.1, NO<sub>x</sub> and CO Requirements**

Since the maximum heat input of the unit will be limited to less than 9 billion Btu/year, the unit is subject to Section 5.2 of District Rule 4306, and will not be subject to the requirements of Section 5.1.

A permit condition will be listed on the permit as follows:

- *{Amended 2966} Maximum annual heat input to the Coen Micronox start-up burner shall not exceed 9 billion Btu per calendar year. [District Rules 2201, 4305, and 4306]*

#### **Section 5.2, Low Use**

For a unit that is limited to less than 9 billion Btu heat input per calendar year pursuant to a Permit to Operate, the operator shall comply with the requirement of Section 7.4 and one of the following:

- tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown; or
- operate the unit in a manner that maintains exhaust oxygen concentrations at less than or equal to 3.00 percent by volume on a dry basis; or
- operate the unit in compliance with the applicable emission limits of Sections 5.1.1 or 5.1.2.

Since the applicant has chosen the tune-up option listed above, the following permit conditions will be listed on the permit as follows:

- *{2969} Owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4306]*

- *{2970} If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306]*

### **Section 5.3, Start-up and Shut Down**

Since the unit is not subject to Sections 5.1, 5.2.2 or 5.2.3, the requirements of this section does not apply to the unit.

### **Section 5.4, Monitoring Provisions**

Pursuant to Section 5.4.1 and 5.4.2, since the unit is not subject to Sections 5.1, it is not subject to the requirements of these sections.

Pursuant to Section 5.4.4, the operator of any unit subject to Section 5.2.1 or 5.2.2 shall install and maintain an operational non-resettable, totalizing mass or volumetric flow meter in each fuel line to each unit. Volumetric flow measurements shall be periodically compensated for temperature and pressure. A master meter, which measures fuel to all units in a group of similar units, may satisfy these requirements if approved by the APCO in writing. The cumulative annual fuel usage may be verified from utility service meters, purchase or tank fill records, or other acceptable methods, as approved by the APCO.

Therefore, a permit condition will be listed as follows:

- *{2965} A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306]*

### **Section 5.5, Compliance Determination**

The applicant proposed to limit the total heat input to the unit to less than 9 billion Btu/yr. As discussed above, the unit is not subject to the requirements of Sections 5.1, and therefore is not subject to the requirements of this section.

### **Section 6.1, Recordkeeping**

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.3 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

A permit condition will be listed on the permit as follows:

- *{Modified 2983} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]*

Section 6.1.2 requires that the operator of a unit subject to Section 5.2 shall record the amount of fuel use at least on a monthly basis.

A permit condition will be listed on the permit as follows:

- *{2981} Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306]*

Section 6.1.3 requires that the operator of a unit subject to Section 5.2.1 or 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics have been performed.

A permit condition will be listed on the permit as follows:

- *Records of each tune-up performed on the unit shall be maintained. [District Rules 4305 and 4306]*

### **Section 6.3, Compliance Testing**

Since the unit is not subject to the requirements of Sections 5.1 or 5.2.3, it is not subject to the requirements of this section.

### **Section 6.4, Emission Control Plan (ECP)**

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4306.

As discussed above, the existing unit with a maximum annual heat input of less than 9 billion Btu/year will comply with the requirements of this rule. Therefore, this current application to modify the existing unit to set a maximum annual heat input of less than 9 billion Btu/year, satisfies the requirements of the Emission Control Plan, as listed in Section 6.4 of District Rule 4306, and no further discussion is required.

### **Conclusion**

Conditions will be incorporated into this permit in order to ensure compliance with each section of this rule. Therefore, compliance with District Rule 4306 requirements is expected.

## **Rule 4320 - Enhanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr**

### N-767-58-8:

The Coen Micro-NOx start-up burner is natural gas-fired with a maximum heat input of 16.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4320, the unit is subject to this rule.

### **Section 5.1, Requirement Options**

The applicant has proposed to comply with Section 5.1.2 of this rule by proposing to pay an annual emissions fee to the District as specified in Section 5.3 and comply with the control requirements specified in Section 5.3.

### **Section 5.2, NO<sub>x</sub> and CO Emission Limits**

Since the applicant is proposing to pay an annual emissions fee, the unit is subject to Section 5.3 of District Rule 4320, and will not be subject to the requirements of Section 5.2.

### **Section 5.3, Annual Fee Calculation**

Section 5.3 details the annual emissions fee that can be paid as an alternative to complying with the NO<sub>x</sub> emission limits in Section 5.2. Since the applicant is proposing to pay an annual emissions fee, the unit is subject to Section 5.3. The annual fee calculations are performed by the District based on the actual fuel usage records provided by the facility. Therefore, the following condition will be included on this permit to ensure compliance with Section 5.3:

- *Beginning in 2010 the operator shall pay an annual emission fee to the District for NO<sub>x</sub> emissions from the Coen Micronox burner for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO<sub>x</sub> emission limit listed in Rule 4320. [District Rule 4320]*

### **Section 5.4, Particulate Matter Control Requirements**

Section 5.4.1 of this rule requires the operator to comply with one of the following requirements:

- Fire the boiler exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;
- Limit fuel sulfur content to no more than five grains of total sulfur per 100 standard cubic feet; or
- Install and properly operate an emission control system that reduces SO<sub>2</sub> emissions by at least 95% by weight; or limit exhaust SO<sub>2</sub> to less than or equal to 9 ppmv corrected to 3.0% O<sub>2</sub>.
- Refinery units, which require modification of refinery equipment to reduce sulfur emissions, shall be in compliance with the applicable requirement in Section 5.4.1 no later than July 1, 2012.

Section 5.4.2 requires liquid fuel shall be used only during PUC quality natural gas curtailment periods, provided the requirements of Sections 4.2 and 6.1.5 are met and the fuel contains no more than 15 ppm sulfur as determined by the test method specified in Section 6.2.

The Coen Micro-NO<sub>x</sub> burner is fired exclusively on PUC-quality natural gas. Therefore, the requirements of Section 5.4 for these boilers will be satisfied and no further discussion is required.

#### **Section 5.5, Low Use Unit**

This unit will not be limited to less than 1.8 billion Btu heat input per calendar year pursuant to a Permit to Operate. Therefore, the requirements of this section do not apply to this unit.

#### **Section 5.6, Startup and Shutdown Provisions**

Since the unit is not subject to Sections 5.2 or 5.5.2, the requirements of this section does not apply to the unit. Therefore, the requirements of this section do not apply to this unit.

#### **Section 5.7, Monitoring Provisions**

Pursuant to Section 5.7.1, since the unit is not subject to Sections 5.2, it is not subject to the requirements of these sections.

Since this unit is not subject to the requirements listed in Section 5.5.1 or 5.5.2, it is not subject to the requirements of Section 5.7.2 and 5.7.3.

Section 5.7.6 outlines requirements for monitoring SO<sub>x</sub> emissions. Section 5.7.6.1 requires the operator of any unit that proposes to comply with Section 5.4.1.1 (fire exclusively on PUC-quality natural gas, commercial propane, butane, LPG, or a combination of these fuel gases) or Section 5.4.1.2 (fuel sulfur content limit of 5 grains/100 scf) to provide an annual fuel analysis.

This unit is fired exclusively on PUC-Quality natural gas. Therefore, the following condition will be included on this permit to ensure compliance with Section 5.7.6:

- *{4356} Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]*

#### **Section 5.8, Compliance Determination**

The applicant proposed to pay an annual emissions fee and comply with Section 5.3 of this rule. As discussed above, the unit is not subject to the requirements of Sections 5.2, and therefore is not subject to the requirements of this section.

#### **Section 6.1, Recordkeeping**

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

A permit condition will be listed on the permit as follows:

- *{Modified 2983} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]*

### **Section 6.3, Compliance Testing**

Since the unit is not subject to the requirements of Sections 5.2, it is not subject to the requirements of this section.

### **Section 6.4, Emission Control Plan (ECP)**

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan (ECP) on later than January 1, 2010 according to the compliance schedule in Section 7.0. The applicant submitted an ECP on Dec. 10, 2009 to propose compliance with Section 5.3. Therefore, the applicant is in compliance with this section of the rule and no further discussion is required.

### **Conclusion**

Conditions will be incorporated into this permit in order to ensure compliance with each section of this rule. Therefore, compliance with District Rule 4320 requirements is expected.

## **District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase I**

### N-767-58-8:

This rule applies to boilers, steam generators, and process heaters at NOx Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. If applicable, the emission limits, monitoring provisions, and testing requirements of this rule are satisfied when the unit is operated in compliance with Rule 4320. This facility is not a Major Source for NOx emissions. Therefore, this rule is not applicable.

## **District Rule 4801 - Sulfur Compounds**

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO<sub>2</sub>, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission rates presented in Section VII above, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With: N = moles SO<sub>2</sub>

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

$$R (\text{Universal Gas Constant}) = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}}$$

N-767-9-13:

As stated on the current permit, the sulfuric acid plant has the potential to emit 2,461.0 lb-SO<sub>x</sub>/day or 1.71 lb-SO<sub>x</sub>/min (based on operating 24 hr/day or 1,440 min/day). Therefore, the volume of SO<sub>2</sub> can be calculated using the following formula:

$$\frac{1.71 \text{ lb} - \text{SO}_x}{\text{Min}} \times \frac{\text{Min}}{21,602 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 469.5 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = 469.5 ppmv < 2,000 ppmv (or 0.2%)

Natural Gas Combustion from the Sur-Lite Corp Furnace Igniter Burner:

EPA F-Factor for Natural Gas = 8,578 dscf/MMBtu at 60 °F

$$\frac{0.00285 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1.97 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = 1.97 ppmv < 2,000 ppmv (or 0.2%)

N-767-58-8:

Natural Gas Combustion from the Coen Micro-NO<sub>x</sub> Start-Up Burner:

EPA F-Factor for Natural Gas = 8,578 dscf/MMBtu at 60 °F

$$\frac{0.00285 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ\text{R}} \times \frac{520^\circ\text{R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 1.97 \frac{\text{parts}}{\text{million}}$$

Sulfur Concentration = 1.97 ppmv < 2,000 ppmv (or 0.2%)

Therefore, continued compliance with District Rule 4801 requirements is expected for these permit units.

**District Rule 4802 - Sulfuric Acid Mist**

This rule applies to any sulfuric acid production unit that was constructed or modified prior to August 17, 1971. Therefore, this rule applies to permit unit N-767-9-13. This rule requires the following:

1. The owner or operator of an existing sulfuric acid production unit shall not allow the discharge into the atmosphere of effluent process gas containing more than 0.3 pounds per short ton of acid produced, the production being expressed as 100 percent sulfuric acid.
2. The owner or operator of an existing sulfuric acid production unit which emits acid mist at a level less than the requirements of item 1. shall not allow an increase in the emissions from the unit above the level currently being emitted, and all acid mist emissions control equipment shall be utilized to reduce acid mist to the lowest possible emissions levels.

3. Sulfuric acid mist emissions shall be determined according to method 8 of 40 CFR Part 60 Appendix A.

This permit unit is limited by a permit condition to comply with the requirements of item 1. above. In addition, past source tests of the sulfuric acid mist emissions from this permit unit indicate compliance with this limit. Therefore, continued compliance with this rule is expected.

#### **California Health & Safety Code 42301.6 (School Notice)**

This facility is not located within 1,000 feet of a school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

#### **California Environmental Quality Act (CEQA)**

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

#### **Greenhouse Gas (GHG) Significance Determination**

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

### District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

### IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct permits N-767-9-13 and N-767-58-8 subject to the permit conditions on the attached draft Authority to Construct permits in Appendix I.

### X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
N-767-9-11	3020-01-H	Total Electric Motors: 1,765 hp	3020-01-H
N-767-58-8	3020-02-H	Total Heat Input Rate: 16 MMBtu/hr	3020-02-H

### XI. APPENDICES

- Appendix I: Draft Authority to Construct (ATC) Permits N-767-9-13 & N-767-58-8
- Appendix II: Current Permits To Operate (PTO) N-767-9-11 & N-767-58-6
- Appendix III: Title V Modification – Compliance Certification Form

## **APPENDIX I**

**Draft Authority to Construct Permits  
N-767-9-13 & N-767-58-8**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-767-9-13

LEGAL OWNER OR OPERATOR: J R SIMPLOT COMPANY  
MAILING ADDRESS: PO BOX 198  
LATHROP, CA 95330

LOCATION: 16777 S. HOWLAND ROAD  
LATHROP, CA 95330

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF SULFURIC ACID PRODUCTION PLANT CONSISTING OF A SULFUR FURNACE, TWO CONVERTERS, SIX WASTE HEAT RECOVERY BOILERS, A DRYING TOWER WITH AN ENTRAINMENT SEPARATOR, AN INTERSTAGE ABSORPTION TOWER WITH A MIST ELIMINATOR, A FINAL TOWER WITH A MIST ELIMINATOR, AND ASSOCIATED EQUIPMENT TO INCLUDE THE 15.0 MMBTU/HR SUR-LITE CORP. MODEL 6-H250 TT FURNACE IGNITER BURNER (CURRENTLY PERMITTED UNDER PERMIT UNIT N-767-58) UNDER THIS PERMIT UNIT.

**CONDITIONS**

1. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
2. {2306} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (11/15/01). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and 4202] Federally Enforceable Through Title V Permit
4. The overall oxides of sulfur emissions as SO<sub>2</sub> from the sulfuric acid plant shall not exceed 4 pounds per ton of 100% sulfuric acid produced except during periods of start-up and shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DRAFT**

DAVID WARNER, Director of Permit Services  
N-767-9-13 : Sep 15 2010 7:48AM - CHANK : Joint Inspection NOT Required

5. The overall oxides of sulfur emissions as SO<sub>2</sub> from the sulfuric acid plant shall not exceed 21.5 pounds per ton of 100% sulfuric acid produced during periods of start-up and shutdown. This performance based limit is to enforce the SO<sub>x</sub> emission reductions granted by certificate N-74-5. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Emissions of oxides of sulfur as SO<sub>2</sub> from the entire sulfuric acid plant shall not exceed 2,461 pounds during any one day. This performance based limit is to enforce the SO<sub>x</sub> emission reductions granted by certificate N-75-5. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The oxides of sulfur emissions as SO<sub>2</sub> from the sulfuric acid plant shall be determined using the procedures specified in 40 CFR 60.84. [District Rule 2201 & NSPS Subpart H] Federally Enforceable Through Title V Permit
8. The Sur-Lite Corp. furnace igniter burner shall only be fired on natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Heat input to the Sur-Lite Corp. furnace igniter burner shall not exceed 21,000 MMBtu in any one rolling 12 month period. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The Sur-Lite Corp. furnace igniter burner shall be equipped with an operational non-resettable totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the igniter burner or other District approved alternative. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from the Sur-Lite Corp. furnace igniter burner shall not exceed any of the following limits: 0.061 lb-NO<sub>x</sub>/MMBtu, 0.00285 lb-SO<sub>x</sub>/MMBtu, 0.005 lb-PM<sub>10</sub>/MMBtu, 0.035 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. A source test for oxides of sulfur shall be conducted on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The results of each test shall be submitted for District evaluation no later than 60 days following each test. [District Rule 1081] Federally Enforceable Through Title V Permit
14. A pretest plan indicating the methods, procedures and operational parameters shall be submitted for District approval no later than 30 days prior to each test. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Source testing to measure concentrations of oxides of sulfur shall be conducted using either CARB Method 6, CARB Method 8, CARB Method 100, EPA Method 6, or EPA Method 8. [District Rule 1081] Federally Enforceable Through Title V Permit
16. Source testing to measure stack gas flow rate, moisture content, and oxygen content shall be conducted using EPA Methods 1 thru 4. [District Rule 1081] Federally Enforceable Through Title V Permit
17. An hourly log of sulfuric acid produced by each process line shall be kept on the premises at all times and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
18. The permittee shall provide, properly install and maintain in proper working order, continuous monitoring and recording systems to measure oxides of sulfur emissions as SO<sub>2</sub>. [District Rule 1080, 5.2.1] Federally Enforceable Through Title V Permit
19. The averaging time for the SO<sub>2</sub> emission monitoring system shall not exceed 15 minutes. [District Rule 2080] Federally Enforceable Through Title V Permit
20. All continuous monitoring and recording instruments shall be installed, calibrated and operated in accordance with the requirements of 40 CFR 60.84. [District Rule 1080, 6.1.2] Federally Enforceable Through Title V Permit
21. The permittee shall submit a written report for each calendar quarter to the District no later than 30 days following the end of each calendar quarter. The report shall comply with all of the requirements of the District rules. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
22. The sampling probe of the Dupont 460 photometric analyzer system shall be replaced with a clean probe at least once per month to prevent emission data gaps due to probe failure. [District Rule 2080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Invalid SO<sub>2</sub> emission readings caused by the changing of the probe shall not exceed a period of two hours for each probe change. [District Rule 2080] Federally Enforceable Through Title V Permit
24. A written log indicating the date and time of each probe change shall be kept on the premise and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
25. The facility shall not discharge into the atmosphere any gases which contain acid mist, expressed as sulfuric acid, in excess of 0.3 pounds per ton of 100% sulfuric acid produced. [District Rule 4802] Federally Enforceable Through Title V Permit
26. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Rule 407 (San Joaquin)] Federally Enforceable Through Title V Permit
27. Source testing to measure sulfuric acid mist using EPA Method 8 of 40 CFR 60 Appendix A shall be conducted on an annual basis. [District Rule 2520, 9.3.2 and District Rule 4201] Federally Enforceable Through Title V Permit
28. A violation of emission standards of this permit, as shown by the stack-monitoring system, shall be reported to the district within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
29. The operator shall notify the district at least 24 hours prior to the shutting down of monitoring equipment. In the event of breakdown of monitoring equipment, the owner or the operator shall notify the district within 8 hours after the breakdown is detected. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit
30. The continuous SO<sub>2</sub> monitor shall meet the applicable performance specification requirements in 40 CFR Part 51, Appendix P, and Part 60, Appendix B or shall meet equivalent specifications established by mutual agreement of District, ARB, and the EPA. [District Rule 1080, 6.5] Federally Enforceable Through Title V Permit
31. Visible emissions shall be inspected weekly during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. The permittee shall maintain a record of the cumulative annual fuel heat input to the Sur-Lite Corp. furnace igniter burner. The cumulative total shall be updated at least monthly. The fuel heat input can be calculated by multiplying the amount of natural gas fuel combusted (in scf) by a heating value of 1,000 Btu/scf. [District Rules 1070 & 2201] Federally Enforceable Through Title V Permit
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
34. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
35. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-767-58-8

**LEGAL OWNER OR OPERATOR:** J R SIMPLOT COMPANY  
**MAILING ADDRESS:** PO BOX 198  
LATHROP, CA 95330

**LOCATION:** 16777 S. HOWLAND ROAD  
LATHROP, CA 95330

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF THERMAL TRANSFER CORP START-UP HEATER WITH A COEN MICRO-NOX 16 MMBTU/HR START-UP BURNER (4919-H-302) TO LIMIT THE ANNUAL HEAT INPUT TO LESS THAN 9.0 BILLION BTU/HR FOR RULE 4306 COMPLIANCE AND TO REMOVE THE SUR-LITE CORP. FURNACE IGNITER BURNER FROM THE EQUIPMENT DESCRIPTION ON THIS PERMIT UNIT AND INCLUDE IT UNDER PERMIT UNIT N-767-9.

**CONDITIONS**

1. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4201 and District Rule 4301] Federally Enforceable Through Title V Permit
2. {118} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {2306} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (11/15/01). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The start-up heater system shall only be fired on natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DAVID WARNER**, Director of Permit Services

N-767-58-8 : Sep 30 2010 8:26AM - CHANK : Joint Inspection NOT Required

6. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
7. Heat input of the unit shall be less than 9 billion Btu per calendar year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
8. Beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from the Coen Micronox burner for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
9. Emissions from this unit shall not exceed any of the following limits: 0.0365 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0146 lb-PM10/MMBtu, 0.061 lb-CO/MMBtu, or 0.0028 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
10. Owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4306] Federally Enforceable Through Title V Permit
11. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit
12. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
13. Records of each tune-up performed on this unit shall be maintained. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
15. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit
17. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

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## **APPENDIX II**

**Current Permits To Operate  
N-767-9-11 & N-767-58-6**

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-767-9-10

EXPIRATION DATE: 11/30/2009

## EQUIPMENT DESCRIPTION:

SULFURIC ACID PRODUCTION PLANT CONSISTING OF A SULFUR FURNACE, TWO CONVERTERS, SIX WASTE HEAT RECOVERY BOILERS, A DRYING TOWER WITH AN ENTRAINMENT SEPARATOR, AN INTERSTAGE ABSORPTION TOWER WITH A MIST ELIMINATOR, A FINAL TOWER WITH A MIST ELIMINATOR, AND ASSOCIATED EQUIPMENT.

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201 and 4202] Federally Enforceable Through Title V Permit
2. The overall oxides of sulfur emissions as SO<sub>2</sub> from the sulfuric acid plant shall not exceed 4 pounds per ton of 100% sulfuric acid produced except during periods of start-up and shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The overall oxides of sulfur emissions as SO<sub>2</sub> from the sulfuric acid plant shall not exceed 21.5 pounds per ton of 100% sulfuric acid produced during periods of start-up and shutdown. This performance based limit is to enforce the SO<sub>x</sub> emission reductions granted by certificate N-74-5. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Emissions of oxides of sulfur as SO<sub>2</sub> from the entire sulfuric acid plant shall not exceed 2,461 pounds during any one day. This performance based limit is to enforce the SO<sub>x</sub> emission reductions granted by certificate N-75-5. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The oxides of sulfur emissions as SO<sub>2</sub> from the sulfuric acid plant shall be determined using the procedures specified in 40 CFR 60.84. [District Rule 2201 & NSPS Subpart H] Federally Enforceable Through Title V Permit
6. A source test for oxides of sulfur shall be conducted on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
7. The results of each test shall be submitted for District evaluation no later than 60 days following each test. [District Rule 1081] Federally Enforceable Through Title V Permit
8. A pretest plan indicating the methods, procedures and operational parameters shall be submitted for District approval no later than 30 days prior to each test. [District Rule 1081] Federally Enforceable Through Title V Permit
9. Source testing to measure concentrations of oxides of sulfur shall be conducted using either CARB Method 6, CARB Method 8, CARB Method 100, EPA Method 6, or EPA Method 8. [District Rule 1081] Federally Enforceable Through Title V Permit
10. Source testing to measure stack gas flow rate, moisture content, and oxygen content shall be conducted using EPA Methods 1 thru 4. [District Rule 1081] Federally Enforceable Through Title V Permit
11. An hourly log of sulfuric acid produced by each process line shall be kept on the premises at all times and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. The permittee shall provide, properly install and maintain in proper working order, continuous monitoring and recording systems to measure oxides of sulfur emissions as SO<sub>2</sub>. [District Rule 1080, 5.2.1] Federally Enforceable Through Title V Permit
13. The averaging time for the SO<sub>2</sub> emission monitoring system shall not exceed 15 minutes. [District Rule 2080] Federally Enforceable Through Title V Permit
14. All continuous monitoring and recording instruments shall be installed, calibrated and operated in accordance with the requirements of 40 CFR 60.84. [District Rule 1080, 6.1.2] Federally Enforceable Through Title V Permit
15. The permittee shall submit a written report for each calendar quarter to the District no later than 30 days following the end of each calendar quarter. The report shall comply with all of the requirements of the District rules. [District Rule 1080, 8.0] Federally Enforceable Through Title V Permit
16. The sampling probe of the Dupont 460 photometric analyzer system shall be replaced with a clean probe at least once per month to prevent emission data gaps due to probe failure. [District Rule 2080] Federally Enforceable Through Title V Permit
17. Invalid SO<sub>2</sub> emission readings caused by the changing of the probe shall not exceed a period of two hours for each probe change. [District Rule 2080] Federally Enforceable Through Title V Permit
18. A written log indicating the date and time of each probe change shall be kept on the premise and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
19. The facility shall not discharge into the atmosphere any gases which contain acid mist, expressed as sulfuric acid, in excess of 0.3 pounds per ton of 100% sulfuric acid produced. [District Rule 4802] Federally Enforceable Through Title V Permit
20. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Rule 407 (San Joaquin)] Federally Enforceable Through Title V Permit
21. Source testing to measure sulfuric acid mist using EPA Method 8 of 40 CFR 60 Appendix A shall be conducted on an annual basis. [District Rule 2520, 9.3.2 and District Rule 4201] Federally Enforceable Through Title V Permit
22. A violation of emission standards of this permit, as shown by the stack-monitoring system, shall be reported to the district within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit
23. The operator shall notify the district at least 24 hours prior to the shutting down of monitoring equipment. In the event of breakdown of monitoring equipment, the owner or the operator shall notify the district within 8 hours after the breakdown is detected. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit
24. The continuous SO<sub>2</sub> monitor shall meet the applicable performance specification requirements in 40 CFR Part 51, Appendix P, and Part 60, Appendix B or shall meet equivalent specifications established by mutual agreement of District, ARB, and the EPA. [District Rule 1080, 6.5] Federally Enforceable Through Title V Permit
25. Visible emissions shall be inspected weekly during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-767-58-6

EXPIRATION DATE: 11/30/2009

## EQUIPMENT DESCRIPTION:

THERMAL TRANSFER CORP START-UP HEATER WITH A COEN MICRONOX 16 MMBTU/HR START-UP BURNER (4919-H-302) AND A SUR-LITE CORP MODEL 6-H250 TT 15 MMBTU/HR PRE-HEAT FURNACE BURNER (4919-H-303)

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4201 and District Rule 4301] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
4. The start-up heater system shall only be fired on natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this the Coen Micronox burner for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
6. NOx emissions from the Coen Micronox burner shall not exceed 0.0365 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
7. CO emissions from the Coen Micronox burner shall not exceed 0.061 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. SOx emissions from the Coen Micronox burner shall not exceed 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. PM10 emissions from the Coen Micronox burner shall not exceed 0.014 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC emissions from the Coen Micronox burner shall not exceed 0.0028 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. NOx emissions from the Sur-Lite burner shall not exceed 0.060 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. CO emissions from the Sur-Lite burner shall not exceed 0.035 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. SOx emissions from the Sur-Lite burner shall not exceed 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. PM10 emissions from the Sur-Lite burner shall not exceed 0.005 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

15. VOC emissions from the Sur-Lite burner shall not exceed 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The combined heat input into the Coen Micronox start-up burner and Sur-Lite Corp. pre-heat furnace burner shall be less than 30 billion BTU's per calendar year. [District Rule 4305, 5.2.1 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
17. The Coen Micronox start-up burner and the Sur-Lite Corp. pre-heat furnace burner shall each be tuned at least once each calendar year in which they operate in accordance with Rule 4304. [District Rule 4305 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
18. A non-resettable, totalizing fuel flow meter that records the quantity of fuel consumed by the start-up burner and the pre-heat furnace burner shall be installed in accordance with Rule 4305. [District Rule 4305]
19. The permittee shall maintain a record of the quantity of natural gas consumed per calendar year (in standard cubic feet); this record shall be updated daily. [District Rule 2201] Federally Enforceable Through Title V Permit
20. On and after July 1, 2012, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
21. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

## **APPENDIX III**

### **Title V Modification Compliance Certification Form**

# San Joaquin Valley Unified Air Pollution Control District

## TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                       AMENDMENT

COMPANY NAME: J. R. Simplot Company	FACILITY ID: N- 767
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: J. R. Simplot	
3. Agent to the Timothy Van Domelen	

**II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):**

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

  
 \_\_\_\_\_  
 Signature of Responsible Official

\_\_\_\_\_  
 Date 3/19/10

Timothy Van Domelen  
 \_\_\_\_\_  
 Name of Responsible Official (please print)

EHS&S Manager  
 \_\_\_\_\_  
 Title of Responsible Official (please print)