



JUL 19 2010

Frank Gaufin  
J. R. Simplot Company  
12688 South Colorado Ave  
Helm, CA 93627

**Re: Notice of Preliminary Decision - Emission Reduction Credits  
Project Number: C-1080496**

Dear Mr. Gaufin:

Enclosed for your review and comment is the District's analysis of J. R. Simplot Company's application for Emission Reduction Credits (ERCs) resulting from the modification of Ammonium Phosphate Unit 10-34-0, at 12688 South Colorado Ave, Helm, CA. The quantity of ERCs proposed for banking is 1<sup>st</sup> Qtr: 988 lb-PM10; 2<sup>nd</sup> Qtr: 1,900 lb-PM10; 3<sup>rd</sup> Qtr: 877 lb-PM10; 4<sup>th</sup> Qtr: 1,470 lb-PM10.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Stanley Tom of Permit Services at (559) 230-5900.

Sincerely,

David Warner  
Director of Permit Services

DW:st

Enclosures

**Seyed 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  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061  
[www.valleyair.org](http://www.valleyair.org) [www.healthyairliving.com](http://www.healthyairliving.com)

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 861-392-5585



JUL 19 2010

Mike Tollstrup, Chief  
Project Assessment Branch  
Stationary Source Division  
California Air Resources Board  
PO Box 2815  
Sacramento, CA 95812-2815

**Re: Notice of Preliminary Decision - Emission Reduction Credits**  
**Project Number: C-1080496**

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of J. R. Simplot Company's application for Emission Reduction Credits (ERCs) resulting from the modification of Ammonium Phosphate Unit 10-34-0, at 12688 South Colorado Ave, Helm, CA. The quantity of ERCs proposed for banking is 1st Qtr: 988 lb-PM10; 2nd Qtr: 1,900 lb-PM10; 3rd Qtr: 877 lb-PM10; 4th Qtr: 1,470 lb-PM10.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Stanley Tom of Permit Services at (559) 230-5900.

Sincerely,

David Warner  
Director of Permit Services

DW:st

Enclosure

**Seyed 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  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



JUL 19 2010

Gerardo C. Rios (AIR 3)  
Chief, Permits Office  
Air Division  
U.S. E.P.A. - Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

**Re: Notice of Preliminary Decision - Emission Reduction Credits  
Project Number: C-1080496**

Dear Mr. Rios:

Enclosed for your review and comment is the District's analysis of J. R. Simplot Company's application for Emission Reduction Credits (ERCs) resulting from the modification of Ammonium Phosphate Unit 10-34-0, at 12688 South Colorado Ave, Helm, CA. The quantity of ERCs proposed for banking is 1st Qtr: 988 lb-PM10; 2nd Qtr: 1,900 lb-PM10; 3rd Qtr: 877 lb-PM10; 4th Qtr: 1,470 lb-PM10.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Stanley Tom of Permit Services at (559) 230-5900.

Sincerely,

David Warner  
Director of Permit Services

DW:st

Enclosure

**Seyed 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  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061  
[www.valleyair.org](http://www.valleyair.org)

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585  
[www.healthyairliving.com](http://www.healthyairliving.com)

Fresno Bee  
Fresno Bee

**NOTICE OF PRELIMINARY DECISION  
FOR THE PROPOSED ISSUANCE OF  
EMISSION REDUCTION CREDITS**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Emission Reduction Credits to J. R. Simplot Company for the modification of Ammonium Phosphate Unit 10-34-0, at 12688 South Colorado Ave, Helm, CA. The quantity of ERCs proposed for banking is 1st Qtr: 988 lb-PM10; 2nd Qtr: 1,900 lb-PM10; 3rd Qtr: 877 lb-PM10; 4th Qtr: 1,470 lb-PM10.

The analysis of the regulatory basis for this proposed action, Project #C-1080496, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

# San Joaquin Valley Air Pollution Control District

## ERC Application Final Review

### Liquid Ammonium Phosphate Reactor Retrofit

Facility Name: J.R. Simplot Company	Preliminary Decision: July 14, 2010
Mailing Address: 12688 South Colorado Ave Helm, CA 93627	Engineer: Stanley Tom
Contact Person: Frank Gaufin	Lead Engineer: Joven Refuerzo
Telephone: (559) 866-5681	
Project #: C-1080496	
Received: February 26, 2008	
Deemed Complete: August 5, 2009	
ERC #'s: C-1039-4	

#### **I. Summary:**

The primary business of this facility is the manufacture and storage of chemical fertilizers. J.R. Simplot Company submitted an application to bank the emissions reduction credits (ERCs) generated from the modification of the Ammonium Phosphate Unit (Unit 10-34-0; also known as "10-34 Reactor") by decreasing emissions of PM<sub>10</sub> by eliminating forced air cooling inside the reactor of permit C-705-5.

Copy of the above permit is attached with this evaluation.

The following AERs have been found to qualify for ERC banking:

<b>Summary of ERC Amounts (lb/qtr)</b>				
<b>Pollutant</b>	<b>1<sup>st</sup> Qtr ERCs</b>	<b>2<sup>nd</sup> Qtr ERCs</b>	<b>3<sup>rd</sup> Qtr ERCs</b>	<b>4<sup>th</sup> Qtr ERCs</b>
<b>PM<sub>10</sub></b>	<b>988</b>	<b>1,900</b>	<b>877</b>	<b>1,470</b>

#### **II. Applicable Rules:**

Rule 2201    New and Modified Stationary Source Review Rule (9/21/06)  
 Rule 2301    Emission Reduction Credit Banking (12/17/92)

#### **III. Location of Reduction:**

The physical location of the equipment involved with this application is 12688 S. Colorado Ave in Helm, CA.

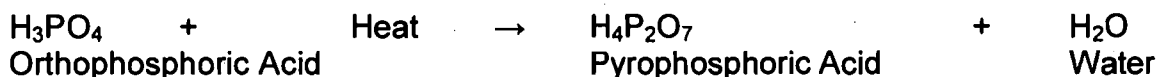
#### IV. Method of Generating Reductions:

The 10-34-0 plant produces ammonium poly-phosphate salt fertilizer by reacting ammonia vapor with phosphoric acid 72% (SPA grade – 27% to 30% poly count). This reaction produces a significant amount of heat, which is used to drive off the water created by the reaction and for polyphosphate formation in the pipe reactor. The reaction mechanisms that take place in the pipe reactor are shown below:

Ammonization of phosphoric acid



As shown, the ammonia reacts with both ortho-phosphoric and poly-phosphoric acid molecules. These reactions are very exothermic (i.e. the reactions creates a substantial amount of heat); the heat from these reactions pushes the formation of more poly-phosphoric acid from the available ortho-phosphoric acid by the following reaction mechanism:



The resulting poly-phosphoric acid then reacts with the ammonia to form ammonium poly-phosphate melt. The resulting temperature in the pipe reactor ranges from 575 to 675 °F at steady-state.

Previously, cooling was provided by evaporative means within the reactor tank. Following the reactor, the melt was discharged to the hot pool where water is added, and the pH adjusted. The hot solution was pumped and sprayed to the top of the reactor unto the scrubber packing while a substantial amount of air is blown counter-currently to induce evaporation and cooling. The cool solution was then distributed to both the hot pool and product flow. Part of the cooled product was further used to scrub the discharged fume/vapor from the reactor in the secondary scrubber tank, and then it was sent to the hot pool to help the cooling of the hot solution. As the final step, the cooled product (at temperature of approximately 115 to 127 °F) was sent to the storage tank.

As part of the modification permitted under Authority to Construct C-75-5-5, the cooling for the 10-34-0 Unit reaction process is now supplied with the Auxiliary Cooling System.

**V. Calculations:**

**A. Assumptions and Emission Factors.**

Actual Emissions Reductions (AERs) for use as emission offsets must be surplus. Per Rule 2201, section 3.2, surplus AERs shall be in excess, at the time the Emission Reduction Credit (ERC) application is deemed complete, of any emissions reduction which:

- Is required or encumbered by any laws, rules, regulations, agreements, orders, or
- Is attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation plan, or
- Is proposed in the APCOs adopted air quality plan pursuant to the California Clean Air Act.

The AERs will be conservatively discounted based on the above-described Rule 2201 section, and the District's emission factor (EF) hierarchy policy.

**Historic Actual Emissions**

Emission factor to be used for the historic actual emissions for the 10-34 Reactor is 0.1726 lb-PM/ton ammonium phosphate produced based on the source test results on March 6, 2006 (Attachment 1). The percentage of PM emitted as PM<sub>10</sub> from the 10-34 Reactor is calculated based on AP-42 speciation data. Filterable PM<sub>10</sub> emissions are calculated as 85% of total filterable PM emissions (as measured in source tests), listed as the cumulative percent less than or equal to the 10 um particle size in AP-42 Table B.2-2 for Category 4 emissions sources. Ammonium phosphate plants fall under Category 4, per AP-42 Table B.2-1. 100 percent of condensable PM emissions (as measured in source tests) are conservatively assumed to be PM<sub>10</sub>.

<b>Historic Actual Emission Factor</b>		
PM10	0.1726	lb/ton

**Post-Project Emissions**

The facility has submitted an Authority to Construct application to lower their Permit to Operate emission factor to 0.001 lb-PM<sub>10</sub>/ton produced and to limit their production to 10,000 ton/month. This Authority to Construct has been approved and the facility is currently operating under this Authority to Construct permit.

Emission factor to be used for the post-project emissions for the 10-34 Reactor is 0.001 lb-PM/ton ammonium phosphate produced based on the source test results on May 16, 2007 (Attachment 2). This emission factor is based on the PM<sub>10</sub> source test result multiplied by a factor of 2 to account for variations in operating parameters and to provide a margin of compliance.

<b>Post-Project Emission Factor</b>		
PM10	0.001	lb/ton

**B. Baseline Period Determination and Data**

In accordance with District Rule 2201, Section 3.8, the baseline period is the two consecutive years of operation immediately prior to the submission of the complete application; or another period of at least two consecutive years within the five years immediately prior to the submission of the complete application if it is more representative of normal source operations.

Construction of this modification started in January 2007. The baseline period determination is shown in Attachment 4 and presented in the following table.

<b>Baseline Period Data</b>	
Month	Tons Produced
3 <sup>rd</sup> Qtr 2003	4,763
4 <sup>th</sup> Qtr 2003	11,246
1 <sup>st</sup> Qtr 2004	7,032
2 <sup>nd</sup> Qtr 2004	13,860
3 <sup>rd</sup> Qtr 2004	6,178
4 <sup>th</sup> Qtr 2004	8,532
1 <sup>st</sup> Qtr 2005	5,846
2 <sup>nd</sup> Qtr 2005	11,645
3 <sup>rd</sup> Qtr 2005	6,515
4 <sup>th</sup> Qtr 2005	9,119
1 <sup>st</sup> Qtr 2006	6,718
2 <sup>nd</sup> Qtr 2006	11,704
Total	103,158
Annual Average	34,386



### C. Unadjusted Historical Actual Emissions (HAE)

Historical Actual Emissions (HAE) are emissions having actually occurred during the baseline period and are calculated per Rule 2201, Section 3.22.

The Historical Actual Emissions (HAE) from the 10-34 Reactor are calculated by multiplying the quarterly baseline tons of ammonium phosphate produced by the emission factor using the formula below.

$$\text{HAE} = (\text{tons produced/qtr})(\text{Emission Factor})$$

$$\text{HAE}_{\text{Ammonium Phosphate}} = \text{lb/qtr}$$

#### Example Calculations

$$\text{PM}_{10} = (4,763 \text{ tons produced/qtr})(0.1726 \text{ lb/ton}) = 822 \text{ lb/3}^{\text{rd}} \text{ qtr}$$

10-34 Reactor PM <sub>10</sub> Emissions (lb/qtr)				
Year	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter
3 <sup>rd</sup> Qtr 2003 – 2 <sup>nd</sup> Qtr 2004	822	1,941	1,214	2,392
3 <sup>rd</sup> Qtr 2004 – 2 <sup>nd</sup> Qtr 2005	1,066	1,473	1,009	2,010
3 <sup>rd</sup> Qtr 2005 – 2 <sup>nd</sup> Qtr 2006	1,124	1,574	1,160	2,020
Average	1,004	1,663	1,128	2,141

### D. Actual Emissions Reductions (AER)

Per Rule 2201, Section 4.12, the Actual Emissions Reductions due to shutdown of an emissions unit is equal to the HAE – PE2.

$$\text{AER} = \text{HAE} - \text{PE2}$$

The facility has submitted an Authority to Construct application to lower their Permit to Operate emission factor to 0.001 lb-PM<sub>10</sub>/ton produced and to limit their production to 10,000 ton/month. This Authority to Construct has been approved and the facility is currently operating under this Authority to Construct permit.

$$\text{PE2} = (0.001 \text{ lb-PM}_{10}/\text{ton})(10,000 \text{ ton/month})(12 \text{ month/year}) = 120 \text{ lb-PM}_{10}/\text{year}$$

#### Example 1<sup>st</sup> Quarter Calculations

$$\text{PE2} (0.001 \text{ lb-PM}_{10}/\text{ton})(10,000 \text{ ton/month})(12 \text{ month/year})(\text{year}/4 \text{ qtr}) = 30 \text{ lb-PM}_{10}/1^{\text{st}} \text{ qtr}$$

<b>Actual Emissions Reductions (lb/qtr)</b>				
	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
<b>HAE</b>	1,128	2,141	1,004	1,663
<b>PE2</b>	30	30	30	30
<b>Total PM10 AER</b>	1,098	2,111	974	1,633

<b>Actual Emissions Reductions (lb/qtr)</b>				
Pollutant	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
<b>PM10</b>	1,098	2,111	974	1,633

**E. Air Quality Improvement Deduction**

The Air Quality Improvement Deduction (AQID) is 10% of the AER per Rule 2201, Sections 3.5 and 4.12.1, and is summarized as follows:

<b>Air Quality Improvement Deduction (lb/qtr)</b>				
Pollutant	1 <sup>st</sup> Qtr. AQID	2 <sup>nd</sup> Qtr. AQID	3 <sup>rd</sup> Qtr. AQID	4 <sup>th</sup> Qtr. AQID
<b>PM<sub>10</sub></b>	110	211	97	163

**F. Bankable Emissions Reductions Credits**

The bankable emissions reductions credits, presented in following table, are determined by subtraction of the Air Quality Improvement Deduction (discussed in Section V.F) from the AER.

<b>Bankable Emissions Reductions Credits (lb/qtr)</b>				
Pollutant	1 <sup>st</sup> Qtr ERCs	2 <sup>nd</sup> Qtr ERCs	3 <sup>rd</sup> Qtr ERCs	4 <sup>th</sup> Qtr ERCs
<b>PM<sub>10</sub></b>	988	1,900	877	1,470

## **VI. Compliance:**

To comply with the definition of Actual Emissions Reductions (Rule 2201, Section 3.2.1), the reductions must be:

### **A. Real**

The actual emission reductions were calculated from actual ammonium phosphate production, hours of operations, and source tested emission factors. Therefore, the reductions are real.

### **B. Enforceable**

The application to modify the Permit to Operate has been submitted. The Authority to Construct permit has been issued and the facility is currently operating under the Authority to Construct (ATC) permit (C-705-5-7). The facility has submitted a Title V application to incorporate ATC C-705-5-7 into their Title V permit. Therefore, the reductions are enforceable.

### **C. Quantifiable**

Based on the actual production figures and emission calculations using the source tested emission factors as stated in Section V, the reductions are quantifiable.

### **D. Permanent**

The applicant has modified the permit and is currently operating under the issued Authority to Construct permit. Therefore, the reductions are permanent.

### **E. Surplus**

To be considered surplus, Actual Emission Reductions shall be in excess, at the time the application for an Emission Reduction Credit or an Authority to Construct authorizing such reductions is deemed complete, of any emissions reduction which:

- Is required or encumbered by any laws, rules, regulations, agreements, orders, or
- Is attributed to a control measure noticed for workshop, or proposed or contained in a State Implementation Plan, or
- Is proposed in the APCO's adopted air quality plan pursuant to the California Clean Air Act.

The shutdown of the operations was voluntary. The resulting emission reductions were not mandated by any law, rule, regulation, agreement, or order of the District, State, or Federal Government, nor attributed to a control measure noticed for workshop, or proposed or contained in the District's Air Quality Attainment Plan. Therefore, the reductions are surplus.

**F. Not used for the Approval of an Authority to Construct or as Offsets**

The emission reduction credits generated by the shutdown of the operations were not used for the approval of any Authority to Construct or as offsets.

**G. Timely submittal**

Section 5.5 of Rule 2301 – Emissions Reduction Credit Banking (12/17/92) states that ERC certificate applications for reductions shall be submitted within 180 days after the emission reduction occurs.

The ERC banking application was submitted on November 12, 2007. Therefore, submittal of the application was timely, and the AERs comply with Rule 2301.

**VII. Recommendation:**

It is recommended based on the preceding analysis that ERC Certificate be issued for the following applicable amounts in Section V.F as shown above.

**Attachments:**

- Attachment 1: Source test results for PM emissions of the Ammonium Phosphate plant on March 6, 2006.
- Attachment 2: Source test results for PM emissions of the Ammonium Phosphate plant on May 16, 2007.
- Attachment 3: Current Permit to Operate C-705-5-6 and Authority to Construct C-705-5-7 (copies)
- Attachment 4: Baseline Period Determination Calculations
- Attachment 5: Draft ERC Certificate

**ATTACHMENT 1**

**Source Test Results for PM Emissions of the Ammonium Phosphate Plant on  
March 6, 2006**

**TABLE #1**  
**Total Particulate, Ammonia & Nitric Acid Emission results**  
**J R Simplot-Helm**  
**10-34 Reactor**

RUN #	1	2	3	AVERAGE	LIMITS
TEST DATE	3/6/06	3/6/06	3/6/06		
TEST TIME	939-1044	1104-1207	1225-1328		
PRODUCTION RATE, TPH	22.36	22.36	22.36		
SAMPLE VOLUME (DSCF)	41.628	41.374	40.364		
ISOKINETIC (%)	100.2	100.9	100.8		
DUCT TEMP., (°F)	155.8	157.0	159.3	157.4	
VELOCITY (ft/sec)	75.68	75.90	75.51	75.70	
FLOW RATE (ACFM)	14,257	14,300	14,225	14,261	
FLOW RATE (DSCFM)	8,543	8,436	8,233	8,404	
H <sub>2</sub> O (volume %)	28.79	29.75	30.82	29.79	
O <sub>2</sub> (volume %)	20.9	20.9	20.9	20.9	
CO <sub>2</sub> (volume %)	0.05	0.05	0.05	0.05	
F.H. Particulate Conc. (gr/DSCF)	0.0249	0.0585	0.0501	0.0445	
F.H. Particulate Emissions (Lbs/hr)	1.8234	4.2265	3.5385	3.1961	
Organic Particulate Conc. (gr/DSCF)	0.0006	0.0002	0.0002	0.0003	
Organic Particulate Emissions (Lbs/hr)	0.0450	0.0181	0.0116	0.0249	
Inorganic Particulate Conc. (gr/DSCF)	0.0202	0.0109	0.0154	0.0155	
Inorganic Particulate Emissions (Lbs/hr)	1.4790	0.7903	1.0870	1.1188	
Tot. Particulate Conc. (gr/DSCF)	0.0457	0.0696	0.0657	0.0604	
Tot. Particulate Emission Rate (Lbs/hr)	3.3475	5.0348	4.6370	4.3398	
NH <sub>3</sub> Conc. (ppm)	2667.532	2502.418	2485.713	2551.888	
NH <sub>3</sub> Emission Rate (lbs/hr)	61.3315	56.8162	55.0780	57.7419	
H <sub>3</sub> PO <sub>4</sub> Conc. (ppm)	0.850	1.387	1.541	1.259	
H <sub>3</sub> PO <sub>4</sub> Emission Rate (lbs/hr)	0.1127	0.1816	0.1968	0.1637	

**WHERE** DSCF = Sample Volume in Dry Standard Cubic Feet  
 ACFM = Actual Cubic Feet per Minute  
 DSCFM = Dry Standard Cubic Feet per Minute  
 H<sub>2</sub>O, volume % = Stack gas percent water vapor  
 gr/DSCF = Particulate concentration in grains per DSCF  
 F.H. Particulate = Filterable Particulates  
 Organic Particulate = Condensible Organic Particulate (solvent extract)  
 Inorganic Particulate = Condensible Inorganic Particulate (Acids & Sulfates)  
 TPH = Tons per Hour  
 NH<sub>3</sub> = Ammonia (MW = 17)  
 H<sub>3</sub>PO<sub>4</sub> = Phosphoric Acid (MW = 98)

**CALCULATIONS**

Lbs/hr Emission Rate (Particulate) = 0.00857 \* gr/DSCF \* DSCFM  
 Lbs/hr Emission Rate (Gaseous) = ppm \* 8.223 E-5 \* DSCFM \* MW / Tstd. °R

$$(3.1961 \times 0.85) + 0.0249 + 1.1188$$

$$= 22.36$$

$$= 0.1726$$

**ATTACHMENT 2**

**Source Test Results for PM Emissions of the Ammonium Phosphate Plant on May  
16, 2007**

**TABLE #1**  
**Total Particulate, Ammonia & Nitric Acid Emission results**  
**J R Simplot-Helm**  
**10-34-0 Reactor**

RUN #	1	2	3	AVERAGE	LIMITS
TEST DATE	5/16/07	5/16/07	5/16/07		
Method 5 TEST TIME	759-900	920-1021	1048-1059		
PRODUCTION RATE, TPH	28	28	28		
SAMPLE VOLUME (DSCF)	40.154	42.050	41.521		
ISOKINETIC (%)	92.0	98.4	96.8		
DUCT TEMP., (°F)	54.7	70.9	75.0	66.9	
VELOCITY (ft/sec)	3.96	4.03	4.04	4.01	
FLOW RATE (ACFM)	746	759	761	755	
<b>FLOW RATE (DSCFM)</b>	739	724	726	<b>730</b>	
H <sub>2</sub> O (volume %)	1.37	2.05	1.21	1.54	
O <sub>2</sub> (volume %)	20.9	20.9	20.9	20.9	
CO <sub>2</sub> (volume %)	0.05	0.05	0.05	0.05	
F.H. Particulate Conc. (gr/DSCF)	0.0024	0.0014	0.0022	0.0020	
F.H. Particulate Emissions (Lbs/hr)	0.0149	0.0088	0.0136	0.0124	
Organic Particulate Conc. (gr/DSCF)	0.0002	<0.0002	0.0002	0.0002	
Organic Particulate Emissions (Lbs/hr)	0.0012	<0.0011	0.0012	0.0012	
Inorganic Particulate Conc. (gr/DSCF)	<0.0003	<0.0002	<0.0004	<0.0003	
Inorganic Particulate Emissions (Lbs/hr)	<0.0017	<0.0011	<0.0025	<0.0018	
<b>Tot. Particulate Conc. (gr/DSCF)</b>	0.0028	0.0018	0.0028	<b>0.0025</b>	
Tot. Particulate Emission Rate (Lbs/hr)	0.0178	0.0111	0.0173	0.0154	
<b>NH<sub>3</sub> Conc. (ppm)</b>	13.61	12.79	15.37	<b>13.92</b>	
NH <sub>3</sub> Emission Rate (lbs/hr)	0.0271	0.0249	0.0300	0.0273	

**WHERE** DSCF = Sample Volume in Dry Standard Cubic Feet  
 ACFM = Actual Cubic Feet per Minute  
 DSCFM = Dry Standard Cubic Feet per Minute  
 H<sub>2</sub>O, volume % = Stack gas percent water vapor  
 gr/DSCF = Particulate concentration in grains per DSCF  
 F.H. Particulate = Filterable Particulates  
 Organic Particulate = Condensable Organic Particulate (solvent extract)  
 Inorganic Particulate = Condensable Inorganic Particulate (Acids & Sulfates)  
 TPH = Tons per Hour  
 NH<sub>3</sub> = Ammonia (MW = 17)

$$2 \times \frac{(0.0124 \times 0.85) + 0.0012 + 0.0018}{28} = 0.001$$

**CALCULATIONS**

Lbs/hr Emission Rate (Particulate) = 0.00857 \* gr/DSCF \* DSCFM

Lbs/hr Emission Rate (Gaseous) = ppm \* 8.223 E-5 \* DSCFM \* MW / Tstd. "R



**ATTACHMENT 3**

**Current Permit to Operate C-705-5-6 and Authority to Construct C-705-5-7**

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** C-705-5-6

**EXPIRATION DATE:** 11/30/2004

**EQUIPMENT DESCRIPTION:**

LIQUID AMMONIUM PHOSPHATE UNIT INCLUDING REACTOR VESSEL WITH SCRUBBER, SECONDARY SCRUBBER, HEAT EXCHANGERS, STORAGE TANKS, ASSOCIATED PUMPS AND PERMIT EXEMPT COOLING TOWER (LESS THAN 10,000 GALLONS PER MINUTE)

## PERMIT UNIT REQUIREMENTS

---

1. 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
2. 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 NSR Rule] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Primary scrubber sprays shall have a minimum water flow rate of 5 gallon per minute and a minimum recirculation flow rate of 200 gallon per minute during unit operation. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Secondary scrubber sprays shall have a minimum product flow rate of 50 gallon per minute during unit operation. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Cooling tower water circulation rate shall not exceed 5,000 gallon per minute [District NSR Rule] Federally Enforceable Through Title V Permit
8. Production rate shall be limited to 600 tons per day of liquid fertilizer solution. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Emissions from the liquid ammonium phosphate fertilizer operation shall not exceed 0.0368 lb-PM10 per ton of liquid fertilizer solution produced. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Daily records of liquid fertilizer solution produced shall be maintained in order to verify compliance with the production rate limit. [District NSR Rule and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E = 3.59 \times P^{0.62}$ ; P is less than or equal to 30 tons per hour, or  $E = 17.37 \times P^{0.16}$ ; P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
12. Weekly records of the flow rates of scrubber liquids shall be maintained and kept on the premises at all times. Operator shall perform weekly visual qualitative check to make sure that the scrubber liquid is adequately maintained. [District Rule 2520, 9.4.2] 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.

13. Visible emissions shall be inspected quarterly 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, 9.4.2] Federally Enforceable Through Title V Permit

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



## AUTHORITY TO CONSTRUCT

PERMIT NO: C-705-5-7

ISSUANCE DATE: 11/19/2008

LEGAL OWNER OR OPERATOR: J R SIMPLOT COMPANY

MAILING ADDRESS: PO BOX 128  
HELM, CA 93627

LOCATION: 12688 S COLORADO AVE  
HELM, CA 93627

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF LIQUID AMMONIUM PHOSPHATE UNIT INCLUDING REACTOR VESSEL WITH SCRUBBER, SECONDARY SCRUBBER, HEAT EXCHANGERS, STORAGE TANKS, ASSOCIATED PUMPS AND PERMIT EXEMPT COOLING TOWER (LESS THAN 10,000 GALLONS PER MINUTE); LOWER PM10 EMISSION LIMIT FROM 0.0366 LB-PM10/TON TO 0.001 LB-PM10/TON AND LOWER ANNUAL AMMONIUM PHOSPHATE PRODUCTION LIMIT FROM 219,000 TON/YEAR TO 120,000 TON/YEAR

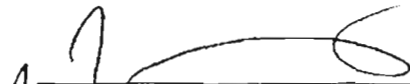
### CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. Authority to Construct (ATC) C-705-5-5 shall be implemented concurrently, or prior to the modification and startup of the equipment authorized by this Authority to Construct. [District Rule 2201]
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. 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
5. 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 NSR Rule] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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

C-705-5-7 Nov 19 2008 10 28AM HARRISH Joint Inspection NOT Required

8. Primary scrubber sprays shall have a minimum water flow rate of 5 gallon per minute and a minimum recirculation flow rate of 200 gallon per minute during unit operation. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Secondary scrubber sprays shall have a minimum product flow rate of 50 gallon per minute during unit operation. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Cooling tower water circulation rate shall not exceed 5,000 gallon per minute [District NSR Rule] Federally Enforceable Through Title V Permit
11. Production rate shall be limited to 600 tons per day or 120,000 tons per year of liquid fertilizer solution. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Emissions from the liquid ammonium phosphate fertilizer operation shall not exceed 0.001 lb-PM10 per ton of liquid fertilizer solution produced. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Daily records of liquid fertilizer solution produced shall be maintained in order to verify compliance with the production rate limit. [District NSR Rule and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
14. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E = 3.59 \times P^{0.62}$ ; P is less than or equal to 30 tons per hour, or  $E = 17.37 \times P^{0.16}$ ; P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
15. Weekly records of the flow rates of scrubber liquids shall be maintained and kept on the premises at all times. Operator shall perform weekly visual qualitative check to make sure that the scrubber liquid is adequately maintained. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
16. Visible emissions shall be inspected quarterly 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, 9.4.2] Federally Enforceable Through Title V Permit

**ATTACHMENT 4**

**Baseline Period Determination Calculations**

Month	Throughput (tons/month)	Throughput (tons/qtr)						
July-01	633							
August-01	372							
September-01	1,448	2,453						
October-01	2,185							
November-01	3,367							
December-01	2,402	7,954						
January-02	1,626							
February-02	2,905							
March-02	4,506	9,037						
April-02	3,936							
May-02	3,553							
June-02	3,177	10,666						
July-02	2,140							
August-02	960							
September-02	2,368	5,468						
October-02	3,849							
November-02	5,848							
December-02	2,534	12,231						
January-03	1,032							
February-03	2,930							
March-03	3,750	7,712						
April-03	4,623							
May-03	5,259							
June-03	3,653	13,535						
July-03	577							
August-03	1,396							
September-03	2,790	4,763						
October-03	2,677							
November-03	4,509							
December-03	4,060	11,246						
January-04	0							
February-04	3,800							
March-04	3,232	7,032						
April-04	4,464							
May-04	5,593							
June-04	3,803	13,860						
July-04	2,463							
August-04	1,215							
September-04	2,500	6,178						
October-04	2,955							
November-04	2,397							
December-04	3,180	8,532						
January-05	1,651							
February-05	2,629							
March-05	1,566	5,846						
April-05	3,644							
May-05	4,712							
June-05	3,289	11,645						
July-05	2,721							
August-05	3,208							
September-05	586	6,515						
October-05	2,508							
November-05	3,615							
December-05	2,996	9,119						
January-06	614							
February-06	4,547							
March-06	1,557	6,718						
April-06	2,299							
May-06	5,322							
June-06	4,083	11,704						
July-06	1,253							
August-06	2,099							
September-06	2,676	6,028						
October-06	2,953							
November-06	4,468							
December-06	3,495	10,916						
<b>NSO Average</b>		<b>8,598</b>						





**ATTACHMENT 5**  
**Draft ERC Certificate**

San Joaquin Valley  
Air Pollution Control District

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726

**Emission Reduction Credit Certificate**  
**C-1039-4**

ISSUED TO: J R SIMPLOT COMPANY  
ISSUED DATE: <DRAFT>  
LOCATION OF REDUCTION: 12688 S COLORADO AVE  
HELM, CA 93627

**For PM10 Reduction In The Amount Of:**

Quarter 1	Quarter 2	Quarter 3	Quarter 4
988 lbs	1,900 lbs	877 lbs	1,470 lbs

Conditions Attached

**Method Of Reduction**

- Shutdown of Entire Stationary Source  
 Shutdown of Emissions Units  
 Other

**Decrease PM10 emissions by eliminating forced air cooling inside the reactor by installing Auxiliary Cooling System**

Use of these credits outside the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) is not allowed without express written authorization by the SJVUAPCD.

Seyed Sadredin, Executive Director / APCO

**DRAFT**  
\_\_\_\_\_  
David Warner, Director of Permit Services