



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

224 South Arthur • Pocatello, Idaho 83204-3202 • (208) 236-6160

Dirk Kempthorne, Governor  
C. Stephen Allred, Director

June 15, 2001

Del Butler, Plant Manager  
J.R. Simplot Company, Don Plant  
Agribusiness Group  
P.O. Box 912  
Pocatello, ID 83204

RE: Permit Number 077-00006, J.R. Simplot Company, Don Plant, Pocatello, Idaho  
(Final Permit to Construct for the 300 Sulfuric Acid Plant Restoration Project, P-000318)

Dear Mr. Butler:

The Idaho Department of Environmental Quality (DEQ) is issuing the final Permit to Construct (PTC) Number 077-00006 for the J.R. Simplot Don Plant 300 Sulfuric Acid Plant Restoration Project in accordance with IDAPA 58.01.01.200, et seq. (*Rules for the Control of Air Pollution in Idaho*). This PTC is effective June 13, 2001 and is based on your permit application received on November 13, 2000. A public comment period and public hearing were held for this permit. The comment period closed June 11, 2001. No public comments were received.

This permit does not release the permittee from complying with all other applicable federal, state, or local regulations or ordinances. Since this is a source subject to the federal New Source Performance Standards (NSPS), please be advised that the terms and conditions listed in the permit and in the federal NSPS requirements may require notification and reporting to both DEQ and the Environmental Protection Agency.

You are strongly encouraged to attend a meeting with DEQ to discuss the permit terms and requirements with which your facility must comply. Rick Elkins of the Pocatello Regional Office will contact you regarding this meeting. DEQ strongly recommends that the plant manager, your environmental contact, and any operations staff responsible for day-to-day compliance with permit conditions attend the meeting.

You, as well as any other entity, may have the right to appeal this final agency action pursuant to the Idaho Department of Health and Welfare Rules, Title 5, Chapter 3, "Rules Governing Contested Case Proceedings and Declaratory Rulings," by filing a petition with the Hearings Coordinator, Department of Environmental Quality, 1410 N. Hilton, Boise, ID 38706-1255, within thirty-five (35) days of the date of this decision. However, DEQ encourages you to contact the Air Quality Permit Program to address any concerns you may have with the enclosed permit prior to filing a petition for a contested case.

If you have any questions regarding the terms or conditions of the enclosed permit, please contact Tiffany Floyd, at (208) 236-6160 or Marjorie MartzEmerson at (208) 373-0447.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Dietrich".

Mark Dietrich  
Regional Administrator  
Pocatello Regional Office

MD/MME/ms P170 G:\AHW\MARTZEMJRSPTCfp.doc

Enclosures

cc: Leon Pruett, J.R. Simplot Company  
Marilyn Seymore, DEQ State Office  
Rick Elkins, Pocatello Regional Office

Tiffany Floyd, Pocatello Regional Office  
L. Kral, EPA – Region 10  
Source File (077-00006)



**Air Pollution  
PERMIT TO CONSTRUCT**

State of Idaho  
Department of Environmental Quality

PERMIT NO.: 077-00006

AQCR: 061

CLASS: A1

SIC: 2874

ZONE: 12

UTM COORDINATE (km): 375 . 6 , 4751 . 6

**1. PERMITTEE**

J.R. Simplot, Don Plant

**2. PROJECT**

300 Sulfuric Acid Plant Restoration Project

**3. MAILING ADDRESS**

P.O. Box 912

**CITY**

Pocatello

**STATE**

Idaho

**ZIP**

83204

**4. FACILITY CONTACT**

Leon Pruett

**TITLE**

Environmental Support Manager

**TELEPHONE**

(208) 234-5370 ext.

**5. RESPONSIBLE OFFICIAL**

Del Butler

**TITLE**

Plant Manager

**TELEPHONE**

(208) 234-5410 ext.

**6. EXACT PLANT LOCATION**

Section 18 R-34-E, T-6-S; 5 1/2 Section 7 R-34-E T-6-S

**COUNTY**

Power

**7. GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**

Manufacture Sulfuric Acid, Anhydrous Ammonia, Phosphoric Acid, and Nitrogen, Phosphate and Sulfate Fertilizers

**8. GENERAL CONDITIONS**

This permit is issued according to IDAPA 58.01.01.200 (*Rules for the Control of Air Pollution in Idaho*), and pertains only to emissions of air contaminants that are regulated by the state of Idaho and to the sources specifically allowed to be constructed by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Idaho Department of Environmental Quality (Department) or its officers, agents, or employees, assumes any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit is not transferable to another person, place, or piece or set of equipment. This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented with its application. Changes of design or equipment may require Department approval pursuant to the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01.200, et seq.

MARK DIETRICH, ADMINISTRATOR  
POCATELLO REGIONAL OFFICE

DATE ISSUED: JUNE 15, 2001

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: 077-00006**

PERMITTEE: J.R. SIMPLOT, DON PLANT

LOCATION: POCATELLO, IDAHO

DATE ISSUED: JUNE 15, 2001

**SOURCE: 300 Sulfuric Acid Plant**

**1. PROJECT DESCRIPTION**

**1.1 General Description of the Proposed Action**

The proposed project will replace aging equipment in the 300 (#3) sulfuric acid plant at the J.R. Simplot Don Plant near Pocatello, Idaho. The units to be replaced are important components of the sulfuric acid manufacturing process, including: the converter, drying tower, 98% acid pump tank, the #2 superheater, boiler-feed water pumps, scrubber packing, scrubber demister mesh pad, and scrubber mist eliminators.

**1.2 Emissions Units**

<b>#3 SULFURIC ACID PLANT PROCESS EQUIPMENT</b>		
<b>Emissions Units</b>	<b>Design Capacity or Limit</b>	<b>Affected by Proposed Action</b>
Sulfur unloading and hot pit		No
Sulfur storage tank		No
Drying tower		Yes
Acid storage tanks		Yes
Sulfur furnace	1750 tons/day	No
Waste heat boiler		No
Converter with superheater & heat exchangers	1750 tons/day	Yes
Economizers and cold reheat exchanger		No
Absorbing towers	1750 tons/day	No

**2. EMISSION LIMITS**

**2.1 Emission Limits**

Sulfur dioxide (SO<sub>2</sub>), sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers (PM<sub>10</sub>), and ammonia (NH<sub>3</sub>) emissions from the #3 sulfuric acid plant stack shall not exceed any corresponding emission rate limits listed below and summarized in Appendix A of this permit.

- 2.1.1 Sulfur dioxide. Emissions of SO<sub>2</sub> shall not exceed one hundred seventy (170) pounds per hour calculated as a 3-hour rolling average and shall not exceed seven hundred fifty (750) tons per any consecutive twelve (12) month period. Per 40 CFR 60.82, emissions of SO<sub>2</sub> shall not exceed four (4) pounds per ton of sulfuric acid produced.
- 2.1.2 Sulfuric acid vapor/mist. Emissions of sulfuric acid mist (as total H<sub>2</sub>SO<sub>4</sub>) shall not exceed three (3) pounds per hour calculated as a 24-hour rolling average and shall not exceed thirteen (13) tons per any consecutive twelve (12) month period.
- 2.1.3 Oxides of Nitrogen. Emissions of NO<sub>x</sub> shall not exceed sixty-four (64) tons per any consecutive twelve (12) month period.
- 2.1.4 Particulate matter. A source test will be required to determine the emissions rate for PM<sub>10</sub>.
- 2.1.5 Ammonia. Emissions of NH<sub>3</sub> shall not exceed two and one half (2.5) pounds per hour and shall not exceed eleven (11) tons per any consecutive twelve (12) month period.

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#### 2.2 Opacity Limit

Emissions from the #3 sulfuric acid plant stack shall not exceed ten percent (10%) opacity (40 CFR 60.83) as determined by following EPA Reference Method 9 (40 CFR 60.11). For purposes of initial compliance, the minimum total time of observations shall be three (3) hours (a total of 30 six-minute averages) using EPA Reference Method 9 as cited in 40 CFR 60.11.

#### 2.3 Visible Emission Limits

Emissions from the #3 sulfuric acid plant stack, or any other stack, vent, or functionally equivalent opening associated with the #3 sulfuric acid plant, shall not exceed twenty percent (20%) opacity for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period as required by IDAPA 58.01.01.625 (*Rules for the Control of Air Pollution in Idaho*).

Visible fugitive emissions shall not be observed leaving the property boundary for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period. Visible emissions from fugitive sources shall be determined by EPA Reference Method 22, as described in 40 CFR 60, Appendix A, or DEQ-approved alternative method.

### 3. OPERATING REQUIREMENTS

#### 3.1 Throughput Limits

The maximum production rate of the #3 sulfuric acid plant shall not exceed 1,750 tons of 100% sulfuric acid calculated as a rolling twenty-four (24) hour average.

#### 3.2 Scrubber Operation

The two-stage scrubber system shall be used to control pollution from the #3 sulfuric acid plant process at all times the plant is operating. The two stages shall include the packed-bed scrubber and the DynaWave reverse jet scrubber operated in series. Within sixty days following startup, Simplot will develop an Operations and Maintenance manual for the two-stage scrubber. The Operations and Maintenance manual shall be submitted to DEQ for information and shall be kept on site.

#### 3.3 Reasonable Control of Fugitive Emissions

All reasonable precautions shall be taken to prevent particulate matter from becoming airborne as required in IDAPA 58.01.01.651. In determining what is reasonable, considerations will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions which might affect the movement of particulate matter. Some of the reasonable precautions include, but are not limited to, the following:

- 3.3.1 Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands;
- 3.3.2 Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust;
- 3.3.3 Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations;
- 3.3.4 Covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts;

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3.3.5 Paving of roadways and their maintenance in a clean condition, where practical; or

3.3.6 Prompt removal of earth or other stored material from streets, where practical.

#### 4. MONITORING AND RECORDKEEPING REQUIREMENTS

##### 4.1 Continuous Emissions Monitoring

A continuous emissions monitoring system shall be installed, calibrated, maintained, and operated to demonstrate compliance on a continual basis with the applicable standard for sulfur dioxide. The continuous emissions monitoring system shall be operated in accordance with 40 CFR 60.13, 40 CFR 60.84, 40 CFR 60 Appendix B, and the quality assurance requirements of 40 CFR 60 Appendix F. The continuous emissions monitoring system shall be installed and operational prior to conducting performance tests required under Section 4.2.

##### 4.2 Performance and Annual Compliance Tests

The permittee shall conduct performance tests to demonstrate that the pollution control equipment is capable of achieving pollutant-specific emission limits. The initial performance test, and any subsequent performance tests conducted to demonstrate compliance, shall be performed in accordance with IDAPA 58.01.01.157, General Provision F of this permit, and the requirements outlined in the following subsections. The initial performance test shall be conducted within sixty (60) days after achieving maximum production rate at which the source will operate, but not later than one hundred eighty (180) days after plant modification. The annual compliance tests shall be conducted within thirteen (13) months after the previous initial performance or compliance test.

- 4.2.1 Sulfur dioxide. The performance test for SO<sub>2</sub> shall be conducted in accordance with 40 CFR 60.8 and 60.85. The test shall use as the reference methods and procedures the test methods described in 40 CFR 60 Appendix A. Method 8 (or an alternative method approved by both the Department in accordance with IDAPA 58.01.01.157 and the Environmental Protection Agency) shall be used to determine the concentration of SO<sub>2</sub>. The performance tests shall also include a performance evaluation of the continuous emissions monitoring system.
- 4.2.2 Sulfuric acid mist. The performance test for H<sub>2</sub>SO<sub>4</sub> mist shall be conducted in accordance with 40 CFR 60.8 and 60.85. The test shall use as the reference methods and procedures the test methods described in 40 CFR 60 Appendix A. Method 8 (or an alternative method approved by both the Department in accordance with IDAPA 58.01.01.157 and the Environmental Protection Agency) shall be used to determine the concentration of H<sub>2</sub>SO<sub>4</sub>.
- 4.2.3 Oxides of Nitrogen. The performance test for NO<sub>x</sub> shall be conducted in accordance with IDAPA 58.01.01.157. The test shall use as the reference methods and procedures the test methods described in 40 CFR 60 Appendix A. Method 7 (or an alternative method approved by the Department in accordance with IDAPA 58.01.01.157) shall be used to determine the concentration of NO<sub>x</sub>.
- 4.2.4 Particulate matter. A performance test shall be conducted to evaluate total PM<sub>10</sub> from the #3 sulfuric acid plant and to establish an emissions factor for setting an emissions limit. The test shall use as the reference methods and procedures the test methods described in 40 CFR 51 Appendix M. Method 201A and Method 202 (or alternative methods approved by the Department in accordance with IDAPA 58.01.01.157) shall be used to determine the concentration of PM<sub>10</sub>.
- 4.2.5 Ammonia. The performance test for NH<sub>3</sub> shall be conducted in accordance with IDAPA 58.01.01.157.
- 4.2.6 Visible emissions. Visible emissions shall be observed during each performance test run using the methods specified in EPA Reference Method 9 and IDAPA 58.01.01.625.
- 4.2.7 Throughput. The production rate in pounds per hour (lbs/hr) and tons per day (T/day) and the operating parameters shall be recorded during each performance test.

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### 4.3 Visible Emissions Monitoring

Opacity shall be determined using the Method 9 procedures contained in IDAPA 58.01.01.625. The permittee shall monitor monthly and record in a log the visible emissions observations, complete with conditions of time of observation. The log shall be kept at the facility for the most recent two (2) year period and shall be made available to DEQ representatives upon request.

### 4.4 Operating Parameters Monitoring

The permittee shall monitor and record the following information. The most recent two (2) years compilation of records shall be kept on site, in a log, and shall be made available to DEQ representatives upon request.

4.4.1 The production rate of the #3 sulfuric acid plant in tons per hour (T/hr) and tons per any consecutive twelve (12) month period (T/yr).

4.4.2 Any deviations of scrubber operations from the standard operating procedures recorded in the Operations and Maintenance Manual shall be recorded in a log and kept at the site and shall be made available to DEQ representatives upon request.

## 5. REPORTING REQUIREMENTS

### 5.1 Performance Test Report

The permittee shall submit reports of the results of the performance tests required in Section 4.2 of this permit, including all required process data, to DEQ within thirty (30) days after the date on which the performance tests are concluded.

### 5.2 Excess Emissions

The person responsible for, or in charge of a facility during, an excess emissions event shall, with all practicable speed, initiate and complete appropriate and reasonable action to correct the conditions causing such excess emissions event, to reduce the frequency of occurrence of such events, to minimize the amount by which the emissions standard is exceeded, and notify the Department (IDAPA 58.01.01.132). The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the plant, any malfunction of the air pollution control equipment, and/or any periods during which the continuous emissions monitoring system is inoperative. Excess emissions reports shall be submitted to the Department in accordance with IDAPA 58.01.01.133 through 136 and to the Environmental Protection Agency in accordance with 40 CFR 60.7(b), (c), (d), and (e).

### 5.3 NSPS Notifications

The permittee shall follow the notification and recordkeeping requirements for NSPS as outlined in 40 CFR 60.7. Notification requirements to the Environmental Protection Agency include, but are not limited to:

5.3.1 Notification of the date reconstruction commenced, postmarked no later than thirty (30) days after such date.

5.3.2 Notification of the actual date of initial startup of the modified facility, postmarked no later than fifteen (15) days after such date.

5.3.3 Notification of any physical or operational change which may increase the emissions rate of any regulated pollutant, postmarked at least sixty (60) days before the change occurs.

5.3.4 Notification of the date upon which demonstration of the continuous monitoring system performance commences.

5.3.5 Notification of the anticipated date for conducting the opacity observations.

5.3.6 Notification of any performance tests at least thirty (30) days prior to the test.

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5.4 Certification of Documents

All documents submitted to DEQ, including but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certifications, shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

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**APPENDIX A**

**APPENDIX A**

**J.R. SIMPLOT DON PLANT  
300 (#3) SULFURIC ACID PLANT**

**Emission Limits<sup>a</sup> - Hourly (lb/hr) and Annual<sup>b</sup> (T/yr)**

SOURCE DESCRIPTION	PM <sub>10</sub>		SO <sub>2</sub>		NO <sub>x</sub>		H <sub>2</sub> SO <sub>4</sub>		NH <sub>3</sub>	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	Lb/hr	T/yr
Sulfuric acid plant stack			170	750		64	3	13	2.5	11

- a. As determined by a pollutant-specific U.S. EPA reference method, or DEQ-approved alternative, or as determined by DEQ's emission estimation methods used in this permit analysis.
- b. As determined by multiplying the actual or allowable (if actual is not available) lb/hr emission rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates.

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**GENERAL PROVISIONS**

**PERMIT TO CONSTRUCT GENERAL PROVISIONS**

- A. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the *Rules for the Control of Air Pollution in Idaho*. The emission of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the *Rules for the Control of Air Pollution in Idaho*, and the Environmental Protection and Health Act, Idaho Code 39-101, et seq.
- B. The permittee shall at all times (except as provided in the *Rules for the Control of Air Pollution in Idaho*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.
- C. The permittee shall allow the Director, and/or an authorized Department representative(s), upon the presentation of credentials:
1. To enter at reasonable times upon the premises where an emission source is located, or in which any records are required to be kept under the terms and conditions of this permit; and
  2. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring methods required in this permit, and require stack emission testing in conformance with IDAPA 58.01.01.157 when deemed appropriate by the Director.
- D. Nothing in this permit is intended to relieve or exempt the permittee from compliance with any applicable federal, state, or local law or regulation, except as specifically provided herein.
- E. The permittee shall notify the Department, in writing, of the required information for the following events within five working days after occurrence:
1. Initiation of Construction - Date
  2. Completion/Cessation of Construction - Date
  3. Actual Production Startup - Date
  4. Initial Date of Achieving Maximum Production Rate - Production Rate and Date
- F. If emission testing is specified, the permittee must schedule such testing within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup. Such testing must **strictly** adhere to the procedures outlined in IDAPA 58.01.01.157 and shall not be conducted on weekends or state holidays without prior written DEQ approval. Testing procedures and specific time limitations may be modified by the Department by prior negotiation if conditions warrant adjustment. The Department shall be notified at least 15 days prior to the scheduled compliance test. Any records or data generated as a result of such compliance test shall be made available to the Department upon request.

The maximum allowable operating rate shall be limited to 120 percent of the average operating rate attained during any performance test period, for which a test protocol has been granted prior approval by the Department, unless (1) the test demonstrates noncompliance, (2) a more restrictive operating limit is specified elsewhere in this permit, or (3) at such an operating rate, emissions would exceed any emission limit(s) set forth in this permit.

- G. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.