

# **Statement of Basis**

**Tier I Operating Permit No. T1-2007.0109**

**Project ID 0109**

**J. R. Simplot Company - Don Siding**

**Pocatello, Idaho**

**Facility ID 077-00006**

**Draft for Public Comment**

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The purpose of this Statement of Basis is to set forth the legal and factual basis for the Tier I operating permit terms and conditions, including references to the applicable statutory or regulatory provisions for the terms and conditions, as required by IDAPA 58.01.01.362

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## Acronyms, Units and Chemical Nomenclature

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal unit
CAM	Compliance Assurance Monitoring
CAA	Clean Air Act
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
CI	compression ignition
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
FR	federal register
FIP	Federal Implementation Plan
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hp	horsepower
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
IEU	insignificant emissions unit
km	kilometer
lb/hr	pounds per hour
lbs/T	pounds per ton
m	meter(s)
MACT	Maximum Achievable Control Technology
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
MMBtu/hr	million British thermal units per hour
MRRR	Monitoring, Recordkeeping and Reporting Requirements
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NPK	nitrogen, phosphorus, and potassium
NSPS	New Source Performance Standard
O&M	Operations and Maintenance
PC	permit condition
PM	particulate matter
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit

PW	process weight
PWR	process weight rate
RACT	Reasonably Available Control Technology
RACM	Reasonably available control measures
RICE	reciprocating internal combustion engine
RMP	Risk Management Plan required under 40 CFR 68 subpart G
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SI	spark ignition
SIC	Standard Industrial Classification
Simplot	J.R. Simplot Company, Don Siding Plant
SIP	State Implementation Plan
SM	Synthetic Minor
SOB	Statement of Basis
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
TAP	toxic air pollutant
Tier I	Tier I operating permit
Tier II	Tier II operating permit
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

## **1. INTRODUCTION AND APPLICABILITY**

J.R. Simplot Company, Don Siding Plant (Simplot) is a manufacturer of integrated phosphate fertilizer and is located at Section 18 R-34-E, T-6-S; 5½ Section 7 R-34-E T-6-S. The facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit PM<sub>10</sub>, CO, NO<sub>x</sub>, and SO<sub>2</sub> above the major source threshold of 100 tons per year respectively. The facility is also classified as a major facility, as defined by Subsection 008.10.a, because it emits or has the potential to emit hydrofluoric acid above the major source threshold of 10 tons per year. Simplot is required to apply for a Tier I operating permit pursuant to IDAPA 58.01.01.301. The application for a Tier I operating permit must contain a certification from Simplot as to its compliance status with all applicable requirements (IDAPA 58.01.01.314.09).

IDAPA 58.01.01.362 requires that as part of its review of the Tier I application, DEQ shall prepare a technical memorandum (i.e., statement of basis) that sets forth the legal and factual basis for the draft Tier I operating permit terms and conditions including reference to the applicable statutory provisions. This document provides the basis for the draft Tier I operating permit for Simplot.

Simplot Tier I operating permit is organized into sections. They are as follows:

### **Section 1 – Tier I Operating Permit Scope**

The scope describes this permitting action.

### **Section 2 – Facility-Wide Conditions**

The Facility-wide Conditions section contains the applicable requirements (permit conditions) that apply facility-wide. Where required, monitoring, recordkeeping and reporting requirements sufficient to assure compliance with each permit condition follows the permit condition.

### **Sections 3 through 17 – Respective Emissions Units/Processes**

The emissions unit-specific sections of the permit contain the applicable requirements that specially apply to each regulated emissions unit. Some requirements that apply to an emissions unit (e.g. opacity limits) may be contained in the facility-wide conditions. As with the facility-wide conditions, monitoring, recordkeeping and reporting requirements sufficient to assure compliance with each applicable requirement immediately follows the applicable requirement.

### **Section 18 – Compliance Schedule**

A compliance schedule will be in the permit to address any sources not in compliance with an applicable requirement at the time of permit issuance.

### **Section 19 – General Provisions**

The final section of the permit contains standard terms and conditions that apply to all major facilities subject to IDAPA 58.01.01.300. This section is the same for all Tier I sources. These conditions have been reviewed by EPA and contain all terms required by IDAPA 58.01.01 et al as well as requirements from other air quality laws and regulations. Each general provision has been paraphrased so it is more easily understood by the general public; however, there is no intent to alter the effect of the requirement. Should there be a discrepancy between a paraphrased general provision in this statement of basis and the rule or permit, the rule or permit shall govern.

## 2. FACILITY INFORMATION

### 2.1 Facility Description

Simplot owns and operates an integrated phosphate fertilizer manufacturing plant in Power County near Pocatello, Idaho. The plant produces phosphoric acid, sulfuric acid, several grades of solid and liquid fertilizers, and other commercial chemical products. A detailed process description can be found under each emissions unit group in the Tier I operating permit, as well as in the Tier I operating permit applications.

### 2.2 Facility Permitting History

#### 2.2.1 Tier I Operating Permit History – Previous 5-year permit term December 24, 2002 to December 24, 2007

The following information is the permitting history of this Tier I facility during the previous five-year permit term which was from December 24, 2002 to December 24, 2007. This information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

November 8, 2005	T1-040313, accommodated settlement agreement, signed on June 10, 2004, reached on the appeal of Tier I Operating Permit No. 077-00006 issued on December 24, 2002. (A, will be S after the issuance of this Tier I renewal.)
April 5, 2004	T1-9507-114-1A, addressed appeal items to Tier I Operating Permit No. T1-9507-114-1 issued on December 24, 2002. (S)
December 24, 2002	T1-9507-114-1, initial Tier I (S)

#### 2.2.2 Underlying Permit History – Includes every underlying permit issued to this facility

The following information is the comprehensive permitting history of all underlying applicable permits issued to this Tier I facility. This information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

November 05, 2009	PTC No. P-2009.0053, initial PTC for addition of 10-acre decant pond (A)
December 12, 2001	PTC No. P-010312A, Granulation No.3 Plant upgrade (A)
October 16, 2001	PTC No. P-010312, Granulation No.3 Plant upgrade (S)
June 15, 2001	PTC No. P-000318, the 300 Sulfuric Acid Plant Restoration Project (A)
December 11, 2000	PTC No. P-000318, 15-day pre-permit construction for 300 Sulfuric Acid Plant restoration project. A dated 12/11/00 cover letter with the PTC issued on September 16, 1996 permit (S)
December 3, 1999	Tier II Permit No. 077-00006, addressed an appeal to CEM calibration requirements in Tier II issued on July 13, 1999. Though expiration date is June 29, 2000, the permit is still active at the time of Tier I renewal (A)

September 20, 2000	PTC No. 077-00006, Boiler replacement (A)
November 12, 1999	PTC No. 077-00006, Granulation No.3 Plant Defluorination Project (A)
July 13, 1999	Tier II No. 077-00006, Clarified CEM calibration requirements in Tier II issued on June 29, 1995 (S)
August 14, 1998	Tier II No. 077-00006, revised affected permit conditions in Tier II OP issued on June 29, 1995 - to remove the Cyclonic Scrubber from Granulation III operating unit (S)
September 16, 1996	PTC No. 077-00006, Sulfuric Acid Plant 300, incorporated the Sulfuric Acid Plant 300 PTC No. 077-00006 issued on May 3, 1996. This permitting action was as a result of the 11/6/96 consent order (S)
May 3, 1996	PTC No. 077-00006, #3 Sulfuric Acid Plant. Equipment modification & process revisions to #3 Sulfuric Acid Plant (S)
September 13, 1995	PTC No. 077-00006, East Dry Bulk Station-Granulation No. 3 Plant Loadout. Revision of the PTC for the East Dry Bulk Station-Granulation No. 3 Plant Loadout issued on June 28, 1995 (A)
June 29, 1995	Tier II OP No. 077-00006, carrying over all permit conditions from Prevention of Significant Deterioration (PSD) OP except for PM <sub>10</sub> requirements that were reanalyzed to satisfy PM <sub>10</sub> State Implementation Plan (SIP) requirements, expiration date: June 29, 2000 (S)
June 28, 1995	PTC No. 077-00006, installing east dry bulking station – granulation No. 3 plant loadout (S)
June 16, 1995	PTC No. P-950066, installing Babcock and Wilcox Boiler to replace the existing damaged boiler (A)
August 29, 1994	Interim operating permit (S)
August 21, 1991	PSD OP partial revision to update air pollution control devices in the monoammonium phosphate plant (S)
March 25, 1991	PSD OP partial revision to update air pollution control devices in the diammonium phosphate plant (S)
August 23, 1990	PSD OP partial revision to waive PM testing requirement for the ammonia plant stack. The ammonia plant no longer exists. (S)
April 17, 1990	PTC No. 1260-0060, constructing an extended absorption scrubber for the process treating SPA through oxidation. However, the cover letter was dated 4/10/90. (A)
December 18, 1989	OP No. 1260-0060 (should be 0006, a typo in the original operating permit), PSD OP for plant expansion (S)
January 20, 1986	PTC No. 1260-0006, constructing Wet Process Phosphoric Acid Plant No. 4 (S)

January 20, 1986	OP No. 13-1260-0006, a facility-wide OP that includes requirements in OPs issued January 28, 1985, March 9, 1981, December 15, 1980, etc. (S)
May 3, 1985	PTC No. 1260-0006, Addition to Super Phosphoric Acid Plant 3 (S)
January 25, 1985	PTC No. 1260-0006 Sulfuric Acid Plant No.4 (S)

2.2.3 Other Underlying Documents for the Applicable Requirements in Tier I – consent orders, settlement agreement, etc.

Only the consent orders containing requirements that need to be incorporated into Tier I are listed here:

- Consent Order, signed May 29, 2012 (A)
- Consent Order, signed January 21, 2009 (A)
- Consent Order signed on September 1, 2004 (A)
- Compliance Agreement and Voluntary Order signed on April 16, 2004 (A)
- Settlement agreement dated June 10, 2004 (A)
- Settlement agreement dated October 15, 2003 (A)

### 3. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

#### 3.1 Application Scope

This permitting action is for the renewal of the facility’s currently effective Tier I issued on November 8, 2005. This permit has addressed Compliance Assurance Monitoring (CAM) for the first time. This permit has also included 40 CFR 63, Subpart ZZZZ for the emergency generators in Section 3 of the permit and 40 CFR 60, Subpart PP for the ammonium sulfate dryer in Section 4 of the permit.

#### 3.2 Application Chronology

June 21, 2007	DEQ received the application
August 20, 2007	DEQ determined the application incomplete
October 19, 2007	DEQ received application supplement
December 11, 2007	DEQ determined the application complete
November 15, 2010	DEQ made available the facility draft permit and statement of basis for peer and regional office review.
June 22, 2011	DEQ made available the facility draft permit and statement of basis for applicant review.
January 3, 2011	DEQ made available the 2nd facility draft permit and statement of basis for applicant review.

### 4. EMISSIONS UNITS, PROCESS DESCRIPTION(S), AND EMISSIONS INVENTORY

This section lists the emissions units, describes the production or manufacturing processes, and provides the emissions inventory for this facility. The information presented was provided by the applicant in its permit application and the comments on the 1<sup>st</sup> and 2<sup>nd</sup> facility draft permits received on October 3, 2011 and January 27, 2012. Also listed in this section are the insignificant activities based on size or

production rate.

#### 4.1 EMISSIONS UNIT GROUP 1 – Generators

In the comments on the facility draft permit, received October 3, 2011, Simplot provided the information for the five emergency generators.

Simplot owns and operates five emergency stationary reciprocating internal combustion engines (RICE). Two generators are compression ignition (CI), each with a site rating of greater than 500 brake horsepower (hp). The remaining three are spark ignition (SI), each with a rating of less than 500 brake hp.

Table 4.1 lists the emissions units and control devices associated with the emergency generators.

**Table 4.1 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit(s) / Process(es)	Ignition	Fuel	Manufactured date	Horsepower	Emissions Control Device	Emission Point
Caterpillar Boiler Generator	Compression	Diesel	<1980	755	None	Engine stack
Cummins Ore Receiving Generator	Compression	Diesel	1994	535		Engine stack
TG Turning Gear	Spark	Natural Gas	1987	42.5		Engine stack
Sub 3400	Spark	Natural Gas	1997	90		Engine stack
PPA Generator (Phone system)	Spark	Natural Gas	1995	58		Engine stack

#### 4.2 EMISSIONS UNIT GROUP 2 – AMMONIUM SULFATE PLANT

Table 4.2 lists the emissions units and control devices associated with the Ammonium Sulfate Plant.

**Table 4.2 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit(s) / Process(es)	Source ID	Emissions Control Device	Emission Point
Dryer	500	Dryer Venturi scrubber	Dryer stack
Cooler	501	Cooler Venturi scrubber	Cooler stack
Cooler elevator	504.1		
Reactor (crystallizer)	503	Barometric condenser	Vacuum pump vent
Product stockpile and associated materials transfer to and from product stockpile	550, 551, 552	Building enclosure	Fugitive
Bucket elevator material transfer	553, 554	Wind protection	

This process involves making crystalline ammonium sulfate and transferring it to storage and to loadout.

Recycled Ammsox® scrubber liquor from sulfuric acid plant No.300 is transferred to the reactor where sulfuric acid and ammonia are added. The product, crystallized ammonium sulfate, is formed in the reactor, removed from the mother liquor by a centrifuge, and transferred to a dryer and then a cooler. Emissions from the dryer, cooler, cooler elevator, and reactor are controlled as specified in Table 4.1 of the permit.

Product is transferred from the cooler to the product belt conveyors, which dump to the product stockpile. Product is then transferred by loader from the product stockpile to the reclaim hopper, which feeds a bucket elevator. The bucket elevator chute feeds product into trucks.

According to the information provided in the comments on the facility draft permit, the facility replaced

the dryer at the Ammonium Sulfate Plant in 1998 at a fixed capital cost of approximately \$350,000. The replaced date of 1998 is included in Table 1.1 of the permit.

### 4.3 EMISSIONS UNIT GROUP 3 - HPB&W BOILER

Table 4.3 lists the emissions units and control devices associated with HPB&W boiler.

**Table 4.3 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Source ID	Emissions Unit	Emissions Control Device	Emissions Point
1000.0	HPB&W boiler	N/A	Boiler stack

The HPB&W boiler, Model No. FM 106-97, is a natural gas-fired boiler equipped with a LoNO<sub>x</sub><sup>®</sup> burner. It has a steam capacity of 120,000 lb of steam per hour and heat input rating of 175 MMBtu/hr. The boiler is used to maintain the steam needs of the facility. The HPB&W boiler was installed in 2000 to replace the Foster-Wheeler and Combustion Engineering boilers.

### 4.4 EMISSIONS UNIT GROUP 4 - BABCOCK AND WILCOX BOILER

Table 4.4 lists the emissions units and control devices associated with Babcock and Wilcox boiler.

**Table 4.4 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Source ID	Emissions Unit(s) / Process(es)	Emissions Control Device	Emission Point
1002.0	Babcock and Wilcox boiler	N/A	Boiler stack

The natural gas-fired boiler is equipped with a COEN QLN, low NO<sub>x</sub> spud-type burner. The boiler has a design capacity of 58,000 lb of steam per hour and a burner capacity of 63.8 MMBtu/hr.

### 4.5 EMISSIONS UNIT GROUP 5 - GRANULATION NO. 1 PROCESS

Table 4.5 lists the emissions units and control devices associated with Granulation No. 1 process.

**Table 4.5 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

<b>Emissions Point Identification</b>	<b>Emissions Unit(s) / Process(es)</b>	<b>Emissions Control Device</b>	<b>Emissions Point</b>
400.0	Dryer	Cyclone and dryer scrubber in series	Granulation No. 1 dryer stack
401.0	Granulator	Reactor/granulator scrubber	Granulation No. 1 reactor/ granulator stack
403.0	Reactor		
406.0	Cooler	Cooler baghouse	Dryer burner
407.1	Polishing screen	Granulation No. 1 baghouse (also called vent baghouse)	Granulation No. 1 baghouse stack
411.1	Fines drag		
412.1	Elevator to granulator		
413.1	Elevator to screens		
414.2	Reject conveyor to fines drag		
419.0	Product dump from overhead	Reasonable control of fugitive emissions (enclosure)	Fugitive
420.0	Front-end loader operation		
421.0	Underground conveyor		
422.0	Elevator		
423.0	Crossover belt		
423.1	Screens for crossover belt		
424.0	Bulking loadout		

Granulation No. 1 normally produces mono-ammonium phosphate (MAP, 11-52-0) and ammonium phosphate sulfate (16-20-0) granulated products. The Granulation No. 1 process involves reacting phosphoric acid with ammonia and, in some products, sulfuric acid to produce ammonium phosphate or ammonium phosphate-sulfate slurry. The slurry is sprayed onto a recycle stream of product in the granulator. Depending on the product, phosphoric acid is also added at this time or ammonia is sparged into the recycle bed. Process gases from both the reactor and granulator are combined in a common stream before passing through the reactor/granulator Venturi scrubber. A blowdown stream of scrubber liquor is transferred to the reactor and the cleaned air stream is discharged to the atmosphere. The product from the granulator is transferred to the dryer where it is dried. A cyclone dust collector removes the larger dust particles entrained in the off-gases exiting the dryer. This dust returns directly to the drag conveyer below the cyclones outlet. Finer dust particles and gaseous pollutants are removed as they pass through the dryer venturi separator scrubber, with the exhaust exiting through the dryer stack.

The product stream is screened into three fractions: oversized, product, and fines. The fines report directly to the recycle while the oversize first passes through a cage mill where it is crushed. A slip stream off the product stream undergoes a second screening to further reduce the percentage of fines. The size of this stream is regulated by the motor amp draw on the granulator elevator. Fines from the polishing screen are returned to the recycle drag. The product collected in the recycle drag returns to the granulator and the process is repeated. Dust from the screening process passes through the Granulation No. 1 vent baghouse dust collector where it is separated from the air. The dust removed in the vent baghouse is transported to the recycle drag conveyor.

The product stream is transferred to the fluidized bed cooler, cooled, and then coated with wax for dust control before being sent out to the warehouse. The dust laden offgas stream from the fluidized bed cooler passes through the cooler baghouse dust collector where the particulates are separated from the air. The dust removed in the baghouse is transported to the recycle drag via a screw conveyor. The cleaned air stream is ducted to the dryer burner, where its heat value is reclaimed.

#### **4.6 EMISSIONS UNIT GROUP 6 - GRANULATION NO. 2 PROCESS**

Table 4.6 lists the emissions units and control devices associated with Granulation no. 2 process.

**Table 4.6 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

<b>Emission Point Identification</b>	<b>Emissions Unit(s) / Process(es)</b>	<b>Emissions Control Device</b>		<b>Emissions Point</b>
450.0	Reactor	High-mole spray scrubber separator and a low-mole scrubber in series.	Tailgas scrubber	Tailgas scrubber stack
451.0	Granulator			
453.0	Dryer			
461.1	Recycle drag conveyor	Granulation No.2 baghouse		Granulation No.2 baghouse(and cooler baghouse stack)
464.1	Screens			
464.2	Polishing screen			
465.1	Elevator to granulator			
466.1	Elevator to screens			
467.1	Product elevator			
470.3	Cooler	Cooler baghouse		
471.0	Product dump from overhead	Reasonable control of fugitive emissions (enclosure)		Fugitive
472.0	Front-end loader operation			
473.0	Underground conveyor			
474.0	Elevator			
475.0	Crossover belt			
476.0	Bulking loadout			
477.0	Screens			

Granulation No. 1 normally produces mono-ammonium phosphate (MAP, 11-52-0) and ammonium phosphate sulfate (16-20-0) granulated products. The Granulation No. 1 process involves reacting phosphoric acid with ammonia and, in some products, sulfuric acid to produce ammonium phosphate or ammonium phosphate sulfate slurry. The slurry is sprayed onto a recycle stream of the product in the granulator. Depending on the product, phosphoric acid is also added at this time or ammonia is sparged into the recycle bed. Process gases from both the reactor and granulator are combined in a common stream before passing through the reactor/granulator Venturi scrubber. A blowdown stream of scrubber liquor is transferred to the reactor, and the cleaned air stream is discharged to the atmosphere.

The product from the granulator is transferred to the dryer where it is dried. A cyclone dust collector removes the larger dust particles entrained in the off-gases exiting the dryer. This dust returns directly to the drag conveyor below the cyclones outlet. Finer dust particles and gaseous pollutants are removed as they pass through the dryer Venturi separator scrubber. The exhaust of the dryer Venturi separator scrubber exits through the dryer stack.

The product stream is screened into three fractions: oversized, product, and fines. The fines report directly to the recycle while the oversize first passes through a cage mill where it is crushed. A slip stream off the product stream undergoes a second screening to further reduce the percentage of fines. The size of this stream is regulated by the motor amp draw on the granulator elevator. Fines from the polishing screen are returned to the recycle drag. The product collected in the recycle drag is then returned to the granulator and the process is repeated. Dust from the screening process passes through the Granulation No. 2 baghouse dust collector where it is separated from the air. The dust removed in

the baghouse is transported to the recycle drag conveyor by a screw conveyor.

The product stream is transferred to the rotary cooler, cooled, and then coated with wax for dust control before being sent out to the warehouse. The dust laden off-gas stream from the cooler passes through the cooler baghouse dust collector where the particulates are separated from the air. The dust removed in the baghouse is transported to the recycle drag via a screw conveyor. The cleaned air stream is then combined with the air off the dust baghouse and discharged to the atmosphere.

#### 4.7 EMISSIONS UNIT GROUP 7 - GRANULATION NO. 3 PROCESS, EAST BULKING STATION, AND DEFLUORINATION PROCESS

Table 4.7 lists the emissions units and control devices associated with Granulation No. 3 Process, East Bulking Station, and Defluorination Process.

**Table 4.7 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emission Point Identification	Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
700.0	Mixer	Entoleter scrubber	Granulation No. 3 stack
703.0	Blunger		
720.0	Dryer		
	Two defluorination reactors	Defluorination scrubber	
708.2	Screens	(material handling) Baghouse	
708.3	Rotex screen (Conveyors)		
709.1	Fines loadout (Recycle Drag)		
710.1	Production elevator (screen feed elevator)		
712.1	Reject elevator		
	Reject Hopper		
705.0	Limestone bins	Limestone baghouse	Limestone baghouse stacks
	Diatomaceous earth silo	Diatomaceous earth baghouse <sup>1</sup>	Diatomaceous earth baghouse stack/vent
750.0	Conveying	Reasonable control of fugitive emissions	Fugitive
751.0	Conveyor drop		
752.0	Front-end loader operations		
753.0	Bulking elevator		
754.0	Crossover belt		
755.0	East dry-bulking		
770.0	Conveying		
771.0	Conveyor drop		
772.0	Front-end loader operations		
773.0	Bulking elevator		
774.0	Crossover belt		

The Granulation No. 3 process normally makes low fluoride, mono-calcium phosphate product or di-calcium phosphate product. The Granulation No. 3 process is also capable of making triple

superphosphate (0-45-0). For mono-calcium phosphate product or di-calcium phosphate product, low fluoride phosphoric acid from the defluorination process is used. For triple superphosphate (0-45-0,) 42% acid from the adjacent phosphoric acid plant is used.

The Granulation No. 3 process involves reacting phosphoric acid with ground limestone in the mixer and blunger to produce calcium phosphate slurry. The calcium phosphate slurry is then added to recycled granules to produce larger product granules. The granules are fed to the dryer. According to the information provided in the Simplot's comments on the facility draft permit, the dryer is fired by natural gas with a heat input capacity of 35 MMBtu/hr and a maximum rated material input capacity of 195 tons of slurry per hour. The mixer, blunger, dryer, and granulator have a rated production capacity of 31.3 T/hr. The dried granules are screened into three sizes: product, oversize, and fines. A small portion of the product size is sent to storage area for shipping while the remainder is recycled through the system with the fines and crushed oversized material.

East Dry Bulking Station - Granulation No.3 Loadout is an almost completely enclosed loadout station, used to loadout triple superphosphate and livestock feed supplement into train cars and trucks for transport out of the facility. The only appreciable opening is the loadout bays, which must remain open to the atmosphere, allowing rail cars and trucks to enter and exit the bays.

Emissions from the mixer and blunger are controlled by the Entoleter scrubber, a Centrifield® Vortex Model 0906 scrubber. The Centrifield Vortex scrubber is a high efficiency liquid/gas contactor utilizing Entoleter's patented centripetal Vortex contactor to clean gases before they exhaust to the atmosphere. Emissions from the dryer are controlled by a cyclone dust collector followed by the Entoleter scrubber. Emissions from the screening process are controlled by the material handling baghouse.

Low fluoride phosphoric acid used to make low fluoride, mono-calcium phosphate product or di-calcium phosphate product is produced in two batch defluorination reactors by heating the phosphoric acid in the defluorination reactor tanks and then adding diatomaceous earth as a silica source. The fluoride in the phosphoric acid volatilizes as silica tetrafluoride. A crossflow defluorination scrubber is used to control emissions from this process. Emissions from diatomaceous earth silo are controlled by diatomaceous earth baghouse. The air stream of the baghouse vents to the atmosphere according to the information in the comments on the facility draft permit received on October 3, 2011.

Granulated limestone is dry fed. Limestone bins are controlled by limestone baghouse.

The gases from the Entoleter scrubber, material handling baghouse, and the defluorination scrubber are exhausted through the Granulation No.3 stack.

The Granulation No.3 process is not capable of making diammonium and/or monoammonium phosphate by introducing ammonia into the process.

Table 9.1 describes the emissions points related to each emissions unit of the Granulation No. 3 process and the devices used to control emissions.

#### **4.8 EMISSIONS UNIT GROUP 8 - GYPSUM STACK (PILE)**

Table 4.8 lists the emissions units and control devices associated with Gypsum Stack (pile).

**Table 4.8 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit	Source ID	Control Device	Emissions Point
Gypsum stack pond	1701	Reasonable control of fugitive emissions	Fugitive
Dike building activities	1712		
Wind-blown dust	1713		

Slurried gypsum from the phosphoric acid plant is combined with process water and flows to the gypsum thickener. Dewatered gypsum slurry is pumped to the gypsum stack (pile). The gypsum stack consists of three primary ponds/cells separated by dikes and levees. Gypsum slurry is collected in one cell while the other cells are allowed to dry. Backhoes move the gypsum up around the edges of the dry cell(s), and bulldozers spread and compact the material to increase the capacity of the stack. With the new edges in place, the slurried gypsum feed line(s) are then diverted to the dry cell(s) and the slurried cell is allowed to dry. Water used to transport gypsum to the gypsum stack is decanted and recycled back to the process to be used as process water.

The sources in the gypsum stack are the gypsum stack pond, dike-building activities and wind-blown dust.

#### **4.9 EMISSIONS UNIT GROUP 9 - 10-ACRE DECANT POND**

Table 4.9 lists the emissions units and control devices associated with the 10-Acre decant pond.

**Table 4.9 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emissions Unit / Process	Emissions Control Device
10- acre Decant Pond	None

Gypsum stack decant return water has been routed directly to the gypsum thickener. Occasionally the gypsum thickener system, which contains decant water, will overflow during upset operating conditions. The 10-acre decant pond can be used to hold the overflow from the gypsum thickener to avoid the overflow reporting to the east overflow pond, which currently returns to the phosphoric acid plant cooling towers.

The 10-acre decant pond is located north of the existing lower gypsum compartment, as part of the phosphogypsum stack lining project. The phosphogypsum stack lining project is to contain the by-product gypsum, associated stack system process waters, and any runoff from the active gypsum storage area within the lined limits of the stack vertical expansion, thereby minimizing future ground water impacts.

#### **4.10 EMISSIONS UNIT GROUP 10 - PHOSPHORIC ACID MANUFACTURING PLANTS - PHOSPHORIC ACID PLANT NO. 400 / WET PROCESS PHOSPHORIC ACID PROCESS LINE**

Table 4.10 lists the emissions units and control devices associated with the Phosphoric Acid Plant No. 400 / Wet Process Phosphoric Acid Process Line.

**Table 4.10 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Source ID	Emissions Unit(s)/Process(es)	Emissions Control Device	Emissions Point
212.0	Phosphoric acid reactor	Digester scrubber (Davy-McKee scrubber)	Belt filter scrubber stack
202.0	Digester hotwell		
226.0	Digester flash cooler pre-condensers		
203.1	Digester flash cooler vacuum pumps		
200.0	No. 2 Hot pit	Belt filter scrubber	
204.0	Belt filter filtrate cans		
209.0	Belt filters		
215.0	Evaporator hotwells		
203.2	Belt filter vacuum pumps		

The following is a narrative description of the phosphoric acid plant No. 400 regulated in this Tier I operating permit. This description is for informational purposes only.

Phosphoric acid is produced by the reaction of sulfuric acid with phosphate ore. The sulfuric acid is generally produced on site at one of the two sulfuric acid plants (No. 300 and No. 400) and the phosphate ore is pumped in from the Smoky Canyon mine as slurry. The ore slurry is partially dewatered in the ore thickener and excess water can be stored in one of the three slurry water storage silos. The thickened phosphate ore slurry is pumped into the main reactor at the phosphoric acid plant and mixed with high concentration sulfuric acid (typically 93%), water, and recycled acid from the belt filters. This reaction produces phosphoric acid and phosphogypsum (calcium sulfate, CaSO<sub>4</sub>). The gypsum is removed by pumping the slurry onto belt filters where the phosphoric acid is removed. The solid gypsum is washed on the filters and the resulting gypsum slurry is sent to the gypsum thickener, and then to the gypsum stack. The phosphoric acid filtrate is concentrated using clarifiers and evaporators. The phosphoric acid is sent either to product storage tanks or on to the superphosphoric acid manufacturing process.

Emissions from the phosphoric acid reactor are contained inside the phosphoric acid plant No. 400 building, vented to a Davy-McKee scrubber, and then vented through one stack. According to the information in the files of 1990-general correspondence, the Davy-McKee scrubber is a spray-crossflow packed bed scrubber.

The plant uses the following equipment according to the information in the technical memorandum for the initial Tier I OP issued December 24, 2002:

- Digester/reactor – the ore slurry, sulfuric acid, and recycled acid are fed into the digester/reactor. The chemical reaction yields phosphoric acid (approximately 27% P<sub>2</sub>O<sub>5</sub> content) and calcium sulfate crystals known as phosphogypsum.
- Vacuum belt filter – separates the slurry of phosphoric acid and phosphogypsum, allowing the gypsum to be delivered to the thickener and the phosphoric acid to proceed for further refining. (The precipitated gypsum is pumped to the ‘gypsum stack’.)
- Vacuum evaporator – concentrates incoming feed phosphoric acid to approximately 50% P<sub>2</sub>O<sub>5</sub>.
- Contact barometric condenser – draws the vacuum on the evaporator. The condenser requires a hot well to maintain the necessary vacuum and collect the condensate. The

condensate is then transferred into the hot pit. The effluent from the hot pit is fed to the evaporative cooling tower.

- Hot wells (which may also be called seal cans, hot pits, and filtrate cans) – retain the vacuum in critical equipment, collect effluent, and process fluids from the evaporation processes.

According to the information in the technical memorandum for the initial Tier I OP issued December 24, 2002, the structure surrounding the equipment, particularly above the belt filters, has unobstructed windows. In Simplot’s September 30, 2002 public comments to the facility draft permit, Simplot stated “openings in the building were considered in the context of the relatively large volume of air ventilated from the building. This consideration is part of the PM<sub>10</sub> SIP.”

#### 4.11 EMISSIONS UNIT GROUP 11: PLANT ROADS

Table 4.11 lists the emissions units and control devices associated with plant roads.

**Table 4.11 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Paved roads	Reasonable methods as needed	Fugitive
Unpaved roads	Reasonable methods as needed	

Light-and heavy-duty vehicles use plant roads to transport personnel and materials within the facility.

#### 4.12 EMISSIONS UNIT GROUP 12 - RECLAIM COOLING TOWER CELLS PLANT (DIRECT CONTACT) /EVAPORATIVE COOLING TOWERS

Table 4.12 lists the emissions units and control devices associated with reclaim cooling tower cells plant (direct contact) /evaporative cooling towers.

**Table 4.12 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit(s) / Process(es)	Source ID	Control Device	Emissions Point
North reclaim cooling tower	908	Mist-eliminator (primary function as process equipment)	Exhaust fans
West reclaim cooling tower	909	Mist-eliminator (primary function as process equipment)	Exhaust fans
East reclaim cooling tower	910	Mist-eliminator (primary function as process equipment)	Exhaust fans

This process cools process water from the Phosphoric Acid Plant and Purified Phosphoric Acid Plant Evaporator Condensers in direct-contact cooling towers. There are three cooling towers containing a total of eight cooling tower cells. The north reclaim cooling tower contains two cells (Cell Nos. 7 and 8), the east reclaim cooling tower contains three cells (Cell Nos. 1, 2, and 3), and the west reclaim cooling tower contains three cells (Cell Nos. 4, 5, and 6.)

The Purified Phosphoric Acid Plant uses membrane technology to remove residual ore impurities to produce a technical grade product. A step in this process requires dewatering an intermediate stream via evaporation. An evaporator similar to the phosphoric acid evaporators is used.

Mist-eliminator’s primary function is as process equipment. Detailed discussions can be found under Section 6.7 CAM Applicability (40 CFR 64), Non-Applicable, Emissions Unit Group 12: Reclaim Cooling Tower Cells Plant (Direct Contact) /Evaporative Cooling Towers.

#### 4.13 EMISSIONS UNIT GROUP 13 - SUPERPHOSPHORIC ACID PLANT / SUPERPHOSPHORIC ACID PROCESS LINE

Table 4.13 lists the emissions units and control devices associated with Superphosphoric Acid Plant / Superphosphoric Acid Process Line.

**Table 4.13 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Source ID	Emissions Unit(s) / Process(es)	Source Description	Emissions Control Device	Emissions Point
1102.0	Product tank	SPA plant/storage	Primary control scrubber	Scrubber stack
1108.1	Evaporators	SPA plant/process equipment	Non-contact condenser and primary control scrubber	
1108.2	Sump No.6	SPA plant/ process equipment	Primary control scrubber	
1109.0	Oxidizer	SPA plant/purification	Extended absorber system and primary control scrubber	
1111.0	Second and third stage aging tanks	SPA plant/purification	Primary control scrubber	
1112.0	Evaporator feed tank	SPA plant storage	Primary control scrubber	
1113.0	Effluent tank	SPA plant	Primary control scrubber	
1506.0	Deflo-dilution tank	SPA plant/storage	None	

Simplot provided a more accurate process description in the comments on the facility draft permit received October 3, 2011. The process description is as follows:

Phosphoric acid from the wet-phosphoric acid production line is heated and concentrated into super phosphoric acid (SPA, with nominal 69% of P<sub>2</sub>O<sub>5</sub> content by weight) in evaporators under vacuum. The SPA is oxidized in the reaction vessel, aged in aging tanks, and filtered. NO<sub>x</sub> produced during oxidation of SPA is pressurized and processed in the extended absorber system (i.e., extended absorption scrubbers, two in series.) The final SPA is piped to product storage tanks, and is then loaded into trucks or railcars.

Emissions from the evaporators, hot wells, acid sumps, cooling tanks, the extended absorber system, and other sources of the process are vented to the primary control scrubber. The scrubber water of the primary control scrubber is sent to the gypsum thickener and then to the gypsum stack.

A detailed description of the SPA process is included as follows:

- Acid evaporation - phosphoric acid from the wet-phosphoric acid production line is heated and concentrated into SPA in the evaporators under vacuum. The vapors from this process are condensed in a non-contact condenser. The remaining vapors and the vapors from the evaporator feed tank are vented to the primary control scrubber to capture fluoride emissions prior to discharging to the atmosphere.
- Acid oxidation - SPA is sent to a reaction vessel where residual impurities are oxidized by nitric acid. The oxidation of the impurities restores an inherent brilliant green color of phosphoric acid. The NO<sub>x</sub> produced during oxidation, in both the reactor vessel and the first stage aging tank, is collected, pressurized, and then processed in the extended absorber system. The emissions from the extended absorption system are vented to the primary control scrubber prior to discharging to the atmosphere.
- Acid aging and cooling - SPA is aged in multiple aging tanks and cooled in heat exchangers. The aging allows time for residual reactions to complete. Fumes from the first and second stage aging tank are vented to the primary control scrubber prior to discharging to the atmosphere.

- Acid Filtration - cooled SPA is delivered to filters where the acid is separated from the solids under pressure. The SPA is piped to the product storage tanks.

#### 4.14 EMISSIONS UNIT GROUP 14 - SULFURIC ACID PLANT NO. 300

Table 4.14 lists the emissions units and control devices associated with Sulfuric Acid Plant No. 300.

**Table 4.14 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Sulfuric acid plant No. 300	DynaWave reverse-jet scrubber followed by Ammsox packed-bed ammonia scrubber	No. 300 sulfuric stack

The single-contact process in the sulfuric acid plant No. 300 begins when elemental sulfur is indirectly heated to liquefy the sulfur that is dumped into underground pits. The liquid sulfur is burned in a furnace to produce SO<sub>2</sub>. The SO<sub>2</sub> is oxidized to SO<sub>3</sub> in a converter. The SO<sub>3</sub> gas stream is passed through an absorber unit where it is absorbed in less concentrated sulfuric acid (approximately 93%) which allows absorption of the SO<sub>3</sub> to form more concentrated sulfuric acid. The exhaust from the absorbing tower is treated with a DynaWave® reverse-jet scrubber followed by an Ammsox packed-bed ammonia scrubber to remove SO<sub>2</sub>.

The DynaWave® SO<sub>2</sub> scrubber is a vertical gas/liquid contact barrel and spray jet, connected to a disengagement vessel. The disengagement vessel is a vertical, cylindrical vessel. Process gas from the absorbing tower enters the top of the vertical DynaWave® barrel and collides with a jet of circulating liquid, which is injected upward through a large bore nozzle. A region of highly turbulent flow and mixing is created at the point the liquid is reversed by the gas. The gas and scrubbing solution enter the disengagement vessel where the gas and liquid are separated. A circulation pump circulates the scrubbing liquid back to the DynaWave® nozzle and pumps the product liquor to the existing acidifier and stripping tower. Process gas passes through the Chevron demister and out of the disengagement vessel. The DynaWave® scrubber removes most of the SO<sub>2</sub> from the process gas before entering the AmmSOx scrubber.

Gas leaving the DynaWave® scrubber enters the AmmSOx packed tower scrubber where further scrubbing is performed. The AmmSOx scrubber consists of a packed scrubbing tower, retention chamber, scrubber circulation pumps, and demister section. The scrubber system also consists of a stripping system that recovers the scrubbed SO<sub>2</sub> for recycling to the drying tower. The gas exits the packed tower through the mist eliminator elements and proceeds to the plant stack.

#### 4.15 EMISSIONS UNIT GROUP 15 - SULFURIC ACID PLANT NO. 400

Table 4.15 lists the emissions units and control devices associated with Sulfuric Acid Plant No. 400.

**Table 4.15 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION**

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Sulfuric acid plant No. 400 with double-contact SO <sub>2</sub> removal	mist-eliminator (an inherent process equipment)	No. 400 sulfuric stack

The process at sulfuric acid plant No. 400 begins with solid elemental sulfur being indirectly heated to liquid sulfur and then being dumped into underground pits. The liquid sulfur is burned in a furnace to produce SO<sub>2</sub>. The SO<sub>2</sub> is oxidized to SO<sub>3</sub> in a converter. The SO<sub>3</sub> gas stream passes through an absorber unit where it is absorbed in less concentrated sulfuric acid (approximately 93%) that allows absorption of the SO<sub>3</sub> to form more concentrated sulfuric acid. The process up to this point is called

the “single-contact process”. Sulfuric acid plant No. 400 uses a “double-contact process” that passes the SO<sub>3</sub> gas stream through a second converter to oxidize additional SO<sub>2</sub> and then to the final absorber. Product sulfuric acid from the process is transferred by pipe to the product storage tanks.

#### **4.16 PTC Exempt Units, Specialty Liquids Reactor and Ammonium Polyphosphate Reactor**

The PTC exempt units are subject to facility-wide permit conditions and general provisions.

##### Specialty Liquid Fertilizer Reactor

In 2011, Simplot obtained a PTC exemption for operating a demonstration-scale nitrogen, phosphorus, and potassium (NPK) reactor at the Don Siding Plant in Pocatello, Idaho, to make specialty liquid fertilizers of various grades of NPK. Operation of a demonstration plant is necessary to determine whether a market exists for the fertilizer products that may be produced. It will also provide information necessary to facilitate the design of a permanent NPK reactor operation at the facility or elsewhere.

During the demonstration-scale reactor process, purified phosphoric acid, potassium hydroxide, urea, and small amounts of ammonia will be mixed in a closed reactor system. The concentrations of each component will be dependent on the type of product produced. Product types will be market driven.

Purified phosphoric acid and potassium hydroxide will be delivered by truck to feed tanks designated for each chemical. Each tank is at ambient temperature. For this reason, fluoride is not expected to be emitted while loading/unloading feed tanks. The project will use anhydrous ammonia, which is readily available at the Don Plant.

The fertilizer product will be cooled in a non-contact heat exchanger which will use cooling water from a cooling tower at the facility.

##### Ammonium Polyphosphate Reactor

The Don Siding Plant leases an ammonium polyphosphate reactor, on an as needed basis, to create specialty fertilizer product. Additional product from the existing ammonium polyphosphate reactor operation may be blended with product from the demonstration plant in order to make certain blends. Product blending will not generate any air pollutants. In 2011, Simplot obtained a PTC exemption for operating an ammonium polyphosphate reactor.

#### **4.17 Insignificant Emissions Units Based on Size or Production Rate**

No emissions unit or activity subject to an applicable requirement may qualify as an insignificant emissions unit or activity. As required by IDAPA 58.01.01.317.01.b, insignificant emissions units (IEU's) based on size or production rate must be listed in the permit application. Appendix D lists the IEU's identified in the permit application and Simplot's comments on the facility draft permit received on October 3, 2011. Also summarized is the regulatory authority or justification for each IEU.

#### **4.18 Emissions Inventory**

The Table 4.16 summarizes the emissions inventory for this major facility. All values are expressed in units of tons-per-year and represent the facility's potential to emit. Potential to emit is defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hour of operation or

on the type or amount of material combusted, stored or processed shall be treated as part of its design if the limitation or the effect it would have on emission is state or federally enforceable.

Detailed emissions inventory can be found in Appendix C of the application. The application can be found at DEQ’s website when the facility draft permit is out for public comment period.

**Table 4.16 EMISSIONS INVENTORY – POTENTIAL TO EMIT (T/yr)**

Facility-wide emissions	PM <sub>10</sub>	NO <sub>x</sub>	SO <sub>2</sub>	CO	VOC	Lead	Fluorides	HAP <sup>a</sup>
	465	214	2,277	150	8	Negligible	336	338

<sup>a</sup> Fluoride count as HAPs. Refer to Section 6.2 for details.

## 5. EMISSIONS LIMITS AND MRRR

This section contains the applicable requirements for this major facility. Where applicable, monitoring, recordkeeping and reporting requirements (MRRR) follow the applicable requirement and state how compliance with the applicable requirement is to be demonstrated.

This section is divided into several subsections. The first subsection lists the requirements that apply facility wide. The follow subsections list the emissions units- and emissions activities-specific applicable requirements. The final subsection contains the general provisions that apply to all major facilities subject to Idaho DEQ’s Tier I operating permit requirements.

This section contains the following subsections:

- Facility-Wide Conditions
- Generators
- Ammonium Sulfate Plant
- HPB&W Boiler
- Babcock And Wilcox Boiler
- Granulation No. 1 Process
- Granulation No. 2 Process
- Granulation No. 3 Process, East Bulking Station, And Defluorination Process
- Gypsum Stack (Pile)
- 10-Acre Decant Pond
- Phosphoric Acid Manufacturing Plants - Phosphoric Acid Plant No. 400 / Wet Process Phosphoric Acid Process Line
- Plant Roads
- Reclaim Cooling Tower Cells Plant (Direct Contact) /Evaporative Cooling Towers
- Superphosphoric Acid Plant / Superphosphoric Acid Process Line
- Sulfuric Acid Plant No. 300
- Sulfuric Acid Plant No. 400
- Compliance Schedule
- Tier I Operating Permit General Provisions

## ***MRRR***

Immediately following each applicable requirement (permit condition) is the periodic monitoring regime upon which compliance with the underlying applicable requirement is demonstrated. A periodic monitoring regime consists of monitoring, recordkeeping and reporting requirements for each applicable requirement. If an applicable requirement does not include sufficient monitoring, recordkeeping and reporting to satisfy IDAPA 58.01.01.322.06, 07, and 08, then the permit must establish adequate monitoring, recordkeeping and reporting sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit. This is known as gap filling.

The discussion of each permit condition includes the legal and factual basis for the permit condition. If a permit condition was changed due to facility draft or public comments, describe why and how the condition was changed.

### ***State Enforceability***

An applicable requirement that is not required by the federal CAA and has not been approved by EPA as a SIP-approved requirement is identified as a "State-only" requirement and is enforceable only under state law. State-only requirements are not enforceable by the EPA or citizens under the CAA. State-only requirements are identified in the permit within the citation of the legal authority for the permit condition.

### ***Federal Enforceability***

Unless identified as "State-only", all applicable requirements, including MRRR, are state and federally enforceable. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying applicable requirement (e.g. emissions limit).

To minimize the length of this document, the MRRR for the facility-wide permit conditions has been paraphrased. Refer to the permit for the complete requirement.

## **5.1 Facility-wide Conditions**

### **Permit Condition 2.1 – Fugitive Dust**

All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650-651, 3/30/07]

### **MRRR (Permit Conditions 2.2 through 2.4)**

- Monitor and maintain records of the frequency and the methods used to control fugitive dust emissions;
- Maintain records of all fugitive dust complaints received and the corrective action taken in response to the complaint;
- Conduct a monthly facility-wide inspection of all sources of fugitive emissions. If any of the sources of fugitive dust are not being reasonably controlled, corrective action is required.
- Records of each fugitive dust inspection and corrective action taken are to be maintained at the permitted facility.

[IDAPA 58.01.01.322.06, 07, 08, 4/5/2000]

Permit Condition 2.4 – monthly facility-wide fugitive inspection applies to entire facility except for Granulation No.3 plant because the underlying PTC issued on December 12, 2001 specifies the weekly fugitive inspection for Granulation No.3 plant (i.e., PC 9.21). This is addressed in PC 2.4. It

reads as follows:

“2.4 **Except for Granulation No.3 plant**, the permittee shall conduct a monthly facility-wide inspection of potential sources of fugitive dust emissions, during daylight hours and under normal operating conditions to ensure ...

**Permit Condition 2.5 – Odors**

The permittee shall not allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776 (State-only), 5/1/94]

**MRRR (Permit Condition 2.6)**

- Maintain records of all odor complaints received and the corrective action taken in response to the complaint;
- Take appropriate corrective action if the complaint has merit, and log the date and corrective action taken.

[IDAPA 58.01.01.322.06, 07 (State-only), 5/1/94]

**Permit Condition 2.7 – Visible Emissions**

The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

**MRRR (Permit Condition 2.8)**

- Conduct a monthly facility-wide inspection during daylight hours and under normal operating conditions for the purposes of observing points of visible emissions from all emissions units subject to the visible emissions standards.
- Sources that are monitored using a continuous opacity monitoring system (COMS) are not required to comply with this permit condition.
  - Each inspection shall be conducted as follows:
    - Initial see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either:
      - Take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions, and conduct another see/no see evaluation within 24 hours. If the visible emissions are not eliminated, the permittee shall comply with b).

**OR**

- Perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. If the measured opacity is greater than 20% for the time period specified in Section 625, the permittee shall take corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136.
- Records of each visible emission inspection and each opacity test and corrective action taken are to be maintained at the permitted facility.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

The PC 2.8 is revised and reads as follows:

~~“In addition to the specific requirements in Permit Conditions 15.11, 15.16, 16.12, and 17.9, T~~the permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions...”

The following provides the justification for the changes:

- Old PC 15.11 was developed under the authority of IDAPA 58.01.01.322.06 & .07. It duplicates facility-wide PC 2.8. It is removed.
- Old PC 15.16 was removed as a result of removing old PC 15.11. Old PC 15.16 was developed under the authority of IDAPA 58.01.01.625. It duplicates PCs 2.7 and 2.8. The citation of “Tier II Permit No. 077-00006, 12/3/99” in old PC 15.16 was a mistake. The requirement in old PC 15.16 was not found in the underlying Tier II issued on December 3, 1999.
- The PCs 16.12 and 17.9 are taken from the underlying PTC No. 077-00006, 6/15/01. They are consistent with the requirements in PC 2.8.

### **Permit Condition 2.9 – Excess Emissions**

On August 11, 2009, Simplot requested an administrative amendment to old PC 2.9.2.1 because old PC 2.9.2.1 contains a requirement that is different from the underlying rule cited (IDAPA 58.01.01.133.01.a.) The change has been made. It reads as follows:

**“No scheduled startup, shutdown, or maintenance resulting in excess emissions shall occur during any period in which an Atmospheric Stagnation Advisory and/or a Wood Stove Curtailment Advisory has been declared by the Department within an area designated by the Department as a PM<sub>10</sub> nonattainment area, unless the permittee demonstrates that such is reasonably necessary to facility operations and cannot be reasonably avoided and the Department approves such activity in advance, to the extent advance approval by the Department is feasible. This prohibition on scheduled startup, shutdown or maintenance activities during Advisories does not apply to situations where shutdown is necessitated by urgent situations, such as imminent equipment failure, power curtailment, worker safety concerns or similar situations. A prohibition of any scheduled startup, shutdown, or maintenance resulting in excess emissions shall occur during any period in which an Atmospheric Stagnation Advisory or a Wood Stove Curtailment Advisory has been declared by DEQ.**

The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between Permit Condition 2.9 and the regulations of IDAPA 58.01.01.130-136.

### **MRRR**

Monitoring, recordkeeping and reporting requirements for excess emissions are provided in Sections 131 through 136.

### **Permit Condition 2.10 – Performance Testing**

New PCs 2.10, 2.10.1, and 2.10.2 are old PCs 2.16, 2.15, and 2.17, respectively.

If performance testing is required, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent

decree, or by DEQ approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any performance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

- The type of method to be used
- Any extenuating or unusual circumstances regarding the proposed test
- The proposed schedule for conducting and reporting the test

The permittee shall submit a compliance test report for the respective test to DEQ within 30 days following the date in which a compliance test required by this permit is concluded. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to the following address:

Air Quality Permit Compliance  
Department of Environmental Quality  
Pocatello Regional Office  
444 Hospital Way, Suite 300  
Pocatello, ID 83201

Phone: (208) 236-6160 Fax: (208) 236-6168

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/94]

## **MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

However, if performance testing is required, it is to be conducted in accordance with IDAPA 58.01.01.157, including any and all monitoring, recordkeeping and reporting requirements. Emissions-unit specific MRRR will be listed within the permit condition requiring performance testing permit condition.

## **Permit Condition 2.11 – Monitoring and Recordkeeping**

The permittee shall maintain sufficient records to assure compliance with all of the terms and conditions of this operating permit. Records of monitoring information shall include, but not be limited to, the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.322.07, 5/1/94]

**MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 2.12 – Reports and Certifications**

PC 2.12 is old PC 2.10.

All periodic reports and certifications required by this permit shall be submitted to DEQ within 30 days of the end of each specified reporting period. Excess emissions reports and notifications shall be submitted in accordance with IDAPA 58.01.01.130-136. Reports, certifications, and notifications shall be submitted to:

Air Quality Permit Compliance  
Department of Environmental Quality  
Pocatello Regional Office  
444 Hospital Way, Suite 300  
Pocatello, ID 83201  
Phone: (208) 236-6160  
Fax: (208) 236-6168

The periodic compliance certification required by General Provision 21 shall also be submitted within 30 days of the end of the specified reporting period to:

EPA Region 10  
Air Operating Permits, OAQ-107  
1200 Sixth Ave.  
Seattle, WA 98101

[IDAPA 58.01.01.322.08, 11, 5/1/94]

**MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 2.13 – Fuel Burning Equipment PM Standards**

PC 2.13 is old PC 2.21.

The permittee shall not discharge PM to the atmosphere from any fuel-burning equipment in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas, 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid.

[IDAPA 58.01.01.676-677, 5/1/94]

**MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 2.14 – Distillate Fuel Oil Sulfur Content Limits**

PC 2.14 is old PC 2.18.

The permittee shall not sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:

- ASTM Grade 1 fuel oil - 0.3% by weight.
- ASTM Grade 2 fuel oil - 0.5% by weight.

[IDAPA 58.01.01.728, 5/1/94]

**MRRR – (Permit Condition 2.14.1)**

The permittee shall maintain documentation of supplier verification of distillate fuel oil sulfur content on an as-received basis.

[IDAPA 58.01.01.322.06, 5/1/94]

**Permit Condition 2.15 – Open Burning**

PC 2.15 is old PC 2.12.

The permittee shall comply with the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-623.

[IDAPA 58.01.01.600-623, 5/8/09]

**MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 2.16 – Renovation/Demolition**

PC 2.16 is old PC 2.13.

The permittee shall comply with all applicable portions of 40 CFR 61 Subpart M when conducting any renovation or demolition activities at the facility.

[40 CFR 61, Subpart M]

**MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

**Permit Condition 2.17 – Regulated Substances for Accidental Release Prevention**

The PC 2.17 is old PC 2.14 for the subject. It is taken from the current Tier I template. The wording is different from old PC 2.14.

This facility is subject to 40 CFR Part 68 and shall certify compliance with all requirements of 40 CFR Part 68, including the registration and submission of the RMP, as part of the annual compliance certification required by 40 CFR 70.6(c)(5).

[40 CFR 68.215(a)(2); IDAPA 58.01.01.322.11, 4/6/05; 40 CFR 68.215(a)(ii)]

**MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

According to the information in Simplot's Tier I renewal application, Table 2, Simplot submitted RMP in 1999.

### **Permit Condition 2.18 – Recycling and Emissions Reductions**

The PC 2.18 is old PC 2.20.

The permittee shall comply with applicable standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, Recycling and Emissions Reduction.

[40 CFR 82, Subpart F]

#### **MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 2.19 – Documentation for Exemptions under IDAPA 58.01.01.200**

The PC 2.19 is old PC 2.22.

The permittee is required to keep documentation of exemptions made to this facility.

#### **MRRR**

No monitoring is required for this facility-wide condition. As with all permit conditions, Simplot must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

### **Permit Condition 2.20 – Special Studies on Fluoride in Vegetation**

PC 2.20 replaces old PC 2.23 with new content. It is taken from the consent order signed on September 1, 2004.

#### **MRRR**

PC 2.21 is old PC 2.24. It is a reporting requirement for ambient fluoride monitoring required in PC 2.20.

### **New Permit Condition 2.22 – CAM**

PC 2.22 states that requirements specified in PCs 2.23 through 2.25 apply to each emissions unit subject to CAM.

**New Permit Conditions 2.23 through 2.25 are taken from 40 CFR 64. They are requirements on**

- Operation of approved monitoring
- Quality improvement plan
- Reporting and recordkeeping requirements

### **New Permit Condition 2.26**

New PC 2.26 is 40 CFR 60, Subpart A – General Provisions. The General Provisions apply to sections 4, 5, 6, and 16 of the permit because the processes of these sections are subject to 40 CFR 60, Subparts PP, Db, Dc, and H, respectively.

The language of the new PC 2.26 is taken from DEQ's internal guidance regarding how to incorporate federal regulations into the permit.

40 CFR 63, Subpart A – General Provisions are not included in the Facility-wide Condition section because they are addressed in each affected sections of the permit. The affected sections are sections 7, 8, 12, and 15 of the permit.

### **New Permit Condition 2.27**

New PC 2.27 is taken from the current template for Tier I. It reads as follows:

#### **“2.27 Incorporation of Federal Requirements by Reference**

**Unless expressly provided otherwise, any reference in this permit to any document identified in IDAPA 58.01.01.107.03 shall constitute the full incorporation into this permit of that document for the purposes of the reference, including any notes and appendices therein. Documents include, but are not limited to:**

- **Standards of Performance for New Stationary Sources (NSPS), 40 CFR Part 60**
- **National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61**
- **National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP), 40 CFR Part 63**

**For permit conditions referencing or cited in accordance with any document incorporated by reference (including permit conditions identified as NSPS or NESHAP), should there be any conflict between the requirements of the permit condition and the requirements of the document, the requirements of the document shall govern, including any amendments to that regulation.”**

## **5.2 Emissions Unit-specific Emissions Limits and MRRR**

### **Emissions Unit Group 1 – Generators**

In the comments on the facility draft permit, received October 3, 2011, Simplot provided the information for the five emergency generators.

Simplot owns and operates five emergency stationary reciprocating internal combustion engines (RICE). Two generators are compression ignition (CI) with a site rating of greater than 500 brake hp, the remaining three are spark ignition (SI), each with a site rating of less than 500 brake hp.

In accordance with 40 CFR 63.6590(b)(iii), the two CI RICEs (i.e., Caterpillar Boiler Generator and Cummins Ore Receiving Generator) do not have to meet any requirements in 40 CFR 63, Subpart ZZZZ and in 40 CFR 63, Subpart A as long as they are only for emergency use, and the emergency use consists with the description provided in 40 CFR 63.6640(f)(2). The three SI RICEs are subject to the requirements in 40 CFR 63, Subpart ZZZZ.

Permit Conditions in this section are taken from 40 CFR 63, Subpart ZZZZ. They are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

### **Permit Condition 3.1**

The PC 3.1 explains the applicability of the five RICEs at Simplot. The three SI RICEs among these five emergency RICEs are subject to the requirements in this subpart.

In Simplot's comments on the 1<sup>st</sup> facility draft permit submitted on 10/3/2011, Simplot stated that the two CI RICEs (i.e., Caterpillar Boiler Generator and Cummins Ore Receiving Generator) with a site rating of greater than 500 brake hp was for emergency use only consistent with the description provided in 40 CFR 63.6640(f)(2). In accordance with 40 CFR 63.6590(b)(iii), these two CI RICEs will not be subject to 40 CFR 63 Subpart ZZZZ and Subpart A. A permit condition is added to state this operational limit.

### **Permit Condition 3.2**

The PC 3.2 states that the compliance date for the three SI RICEs is October 19, 2013.

### **Permit Conditions 3.3 to 3.5**

The PCs 3.3 through 3.5 are operating requirements taken from 40 CFR 63, Subpart ZZZZ. The three SI RICEs are subject to operating requirements but not subject to numerical emissions limits in the subpart.

### **MRRR – (Permit Conditions 3.6 through 3.9)**

The PCs 3.6 through 3.9 are MRRR taken from 40 CFR 63, Subpart ZZZZ.

## **Emissions Unit Group 2 - AMMONIUM SULFATE PLANT**

### **Permit Conditions 4.1 through 4.3**

The PM and PM<sub>10</sub> emissions limits were taken from the Tier II operating permit issued December 3, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

The process weight rate limitation applies to the dryer and the cooler, respectively. It is an applicable requirement in accordance with IDAPA 58.01.01.008.03. According to Simplot's comments on the facility draft permit received on October 3, 2011, the dryer was replaced after October 1, 1979 (i.e., in 1998); therefore, IDAPA 58.01.01.701 New Equipment Process weight Limitations apply to the process equipment.

### **Permit Condition 4.2**

EPA commented on process weight rate (PWR) limitation in the old permit. It is summarized in DEQ's issues list, item 8, sub-item 2(e) as follows:

“PWR was not written as permit condition when there was a more stringent standard which is more conservative (such as a lb/hr limit). This may not be conservative at low process levels because the PWR limit is variable depending on the process weight. Must address this, include citation after more stringent standard (i.e. lb/hr limit) to include PWR rule.”

The PC 4.2 is revised to address EPA's comments. The new text is in bold; and the deleted text is stricken out. The revised PC 4.2 reads as follows:

**“No person shall emit PM to the atmosphere from any process or process equipment commencing**

operating on or after October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in lb/hr, and PW is the process weight in lb/hr:

a. If PW is less than 9,250 lb/hr,

$$E = 0.045(PW)^{0.60}$$

b. If PW is equal to or greater than 9,250 lb/hr,

$$E = 1.10(PW)^{0.25}$$

~~Based on the process weight rate equation, the limit is 12.5 lb/hr. Because Condition 4.1 is more stringent, compliance with Permit Condition 4.1 shall be deemed compliance with Permit Condition 4.2.~~

#### **MRRR – (Permit Conditions 4.9 through 4.11, and 4.15 through 4.17)**

Demonstrating compliance with PM and PM<sub>10</sub> emissions limits was either specified in the Tier II Permit No. 077-00006 issued on December 3, 1999 or established in accordance with IDAPA 58.01.01.322.01, 06, and 07. The following summarizes the compliance demonstration methods:

- Operate each scrubber system in accordance with the O&M manual, a requirement established in accordance with IDAPA 58.01.01.322.01 (PC 4.10)
- Conduct annual source testing as specified in the Tier II Permit No. 077-00006 issued on December 3, 1999 and established in accordance with IDAPA 58.01.01.322.01.06 (PC 4.11)
- Monitor the scrubbing fluid flow rate as specified in the Tier II Permit No. 077-00006 issued December 3, 1999 and established in accordance with IDAPA 58.01.01.322.01, 06, and 07 (PC 4.15)
- Monitor the scrubber pressure drop as specified in the Tier II Permit No. 077-00006 issued on December 3, 1999 and established in accordance with IDAPA 58.01.01.322.01, 06, and 07 (PC 4.16)
- Perform maintenance to the corresponding scrubber and process when VE is greater than 15% (PC 4.9)
- Keep maintenance log (PC 4.17)
- Calculate emissions rate as specified in PC 4.3

Simplot has requested to change annual source test frequency specified in PC 4.11. Because the test frequency is taken from the underlying Tier II issued on December 3, 1999, it is an applicable requirement in accordance with IDAPA 58.01.01.008.03, the change cannot be made until the underlying permit is changed.

According to the information in Simplot's June 2000 Tier I/II application, the maximum hourly production rate is 8.3 T/hr or 16,600 lb/hr for the dryer and the cooler, respectively.

The permitted limit of 2.44 lb/hr applies to the emissions from both the dryer and the cooler. The permitted limit is more restrictive than PWR limitation when the total production rate of the dryer and the cooler is greater than 776 lb/hr or 0.388 T/hr (i.e., When PW = 776 lb/hr,  $E = 0.045(PW)^{0.60} = 0.045(776)^{0.60} = 2.44$  lb/hr).

However, the permitted limit of 2.44 lb/hr is less stringent when the total production rate of the dryer and the cooler is less than 776 lb/hr or 0.388 T/hr, 4.7% of the maximum production rate.

New PC 4.18 in the facility draft permit required the permittee to develop a compliance method, within 60 days of permit issuance, to demonstrate compliance with PWR limitation when the total production

rate of the dryer and the cooler was less than 776 lb/hr or 0.388 T/hr.

Simplot commented on the new PC 4.18 in the facility draft. It stated *“it is not possible to achieve a production rate less than 776 lb/hr for a sustained period of time. The facility is not designed to operate at a rate that low. Therefore it will be difficult/impossible to develop a means to demonstrate compliance at a rate of 776 lb/hr.”* New PC 4.18 in the facility draft permit is removed based on the above information provided by Simplot.

#### Permit Condition 4.10

PC 4.10 is revised. The new text is in bold. The deleted text is stroked out.

~~“Prior to December 24, 2003,~~**Within 60 days of permit issuance,** the permittee shall **have developed** an O&M manual for each wet scrubber system which describes the procedures that will be followed to comply with Permit Conditions 4.1 ~~and~~ through 4.3. **The O&M manual shall include, but not be limited to, operating ranges for fluid flow rate to each scrubber, pressure drop across each scrubber, and maintenance procedures and schedule.** The O&M manual shall be developed based on manufacturer specifications and the compliance test data obtained in Permit Condition 4.11.  
...”

Simplot’s comment on the facility draft permit stated that *“it is not clear if this requirement has been satisfied through previous permits. Is another O & M manual required?”*

This requirement requires Simplot to revise the O&M manual to include additional new information.

The PCs 4.15 and 4.16 require the permittee to monitor flow rate to each scrubber and pressure drop across each scrubber, but no parameter ranges were specified in the existing permit. PC 4.17 requires the permittee to keep maintenance log, but no maintenance procedures and schedule were specifically required in the O&M manual. The changes made to PC 4.10 are for addressing these concerns.

As required in the permit, the range shall be established based on manufacturer specifications and source test that demonstrated compliance with the limit.

Following DEQ’s internal guidance of standard permit conditions, PC 4.10 is revised as above. If the current O&M manual does not include the required information, the permittee shall add the information into the O&M manual within 60 days of permit issuance.

#### New Permit Condition 4.10.1

Simplot’s comments on the facility draft permit stated that the consent order signed on January 23, 2009 regarding Ammonium Sulfate Plant was not referenced in Permit Condition 1.2.

The aforementioned consent order was signed by the facility and DEQ’s Director on January 21, 2009 when the consent order became effective. The consent order requires Simplot to pay penalty and to submit auditing procedures for the modified operating procedures within 15 days of the effective date of the consent order. The consent order is now added to PC 1.2. The requirements of operating procedures and the auditing procedures from the consent order are added to PC 4.10.1 as follows:

**“The permittee shall follow the modified operating procedures specified as follows:**

- **2-02 Manual Product Size Test**
- **2-24 Bypassing the Cooler and Shutting Cooler Screw Down**

**The permittee shall follow the auditing procedures for the above modified operating procedures. [Consent Order 1/21/2009]”**

Permit Condition 4.11

The source test required to be conducted “within 12 months of, or 12 months prior to, December 24, 2002” was conducted on 7/10/2002 according to the information provided by staff at Pocatello Regional Office through email on 4/25/2011. The source test requirements for 2003 -2005 are fulfilled according to the information provided by staff at Pocatello Regional office through email on 12/8/2010.

DEQ received Simplot’s Tier I minor modification application on September 30, 2005. In the submittal, Simplot proposed not to revise the existing PM<sub>10</sub> emissions limit in the Tier I and to continue multiplying 0.82 with PM emissions rate measured by EPA Method 5 to estimate PM<sub>10</sub> emissions. DEQ is not able to grant Simplot’s request, and the source test methods specified in Permit Condition 2.10 in the existing Tier I permit, issued November 8, 2005 is kept as it is.

The following table summarizes the source test data in lb/hr from Simplot’s 2005 application and DEQ’s emissions test review letters. The source tests were conducted using EPA Methods 5 and 202. The emissions rates from these source tests are below PM<sub>10</sub> emissions limit in the existing Tier I issued November 8, 2005.

Permit Limit (from the combined dryer and cooler stacks)	From Simplot’s 2005 Submittal		From DEQ’s Emission Test Review Letters					
	2004	2005	2006	2007	2008	2009	2010	2011
2.0 lb/hr	0.99	1.99	0.78	0.88	0.44	0.49	0.84	0.35

With above information, PC 4.11 is revised and reads as follows:

~~“The permittee shall conduct compliance tests within 12 months of, or 12 months prior to, December 24, 2002 to demonstrate compliance with the PM and PM<sub>10</sub> hourly emissions limits in Permit Conditions 4.1 and 4.3. After the first compliance test, the permittee shall conduct a compliance test once per annum to demonstrate compliance with hourly PM and PM<sub>10</sub> emissions limits in Permit Conditions 4.1 and 4.3.~~

~~During calendar years 2003, 2004, and 2005, compliance with the PM<sub>10</sub> emissions limit in Permit Condition 4.3 shall be determined by conducting a Method 5 performance test. The PM<sub>10</sub> fraction of the PM emission rate measured during the test shall be determined by multiplying the PM emission rate by a 0.82 conversion factor.~~

~~During calendar years 2004 and 2005, Method 5 and 202 performance tests shall be conducted in addition to the Method 5 test. All performance testing shall be conducted in accordance with Permit Condition 2.16.~~

~~No later than September 30, 2005, the permittee shall submit a permit application to revise the PM<sub>10</sub> emissions limits to reflect the results of the Method 5 and 202 performance tests. The permit application shall contain justification for each emission limit proposed. Once DEQ issues a permit with revised PM<sub>10</sub> emissions limits, compliance with Permit Condition 4.3 shall be determined by source testing using Methods 5 and 202.”~~

Permit Condition 4.11.2

The PC 4.11.2 is revised so that it is consistent with the permit condition in the underlying Tier II. It reads as follows:

“The permittee shall conduct a visible emissions evaluation during each **PM/PM<sub>10</sub>** compliance test. The visible emissions evaluation shall be conducted in accordance with the procedures contained in IDAPA 58.01.01.625.”

#### **Permit Conditions 4.4 through 4.6**

The CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions limits were taken from the Tier II Permit No. 077-00006 issued December 3, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Condition 4.12)**

Demonstrating compliance with CO, NO<sub>x</sub>, and SO<sub>2</sub> emissions limits was either specified in the existing Tier II operating permit issued December 3, 1999 or established in accordance with IDAPA 58.01.01.322.06 and 07. The following summarizes the methods used to demonstrate compliance:

- Monitoring and recording the natural gas usage and dryer operating hours. This requirement is developed under the authority of IDAPA 58.01.01.322.06 and 07. (PCs 4.12 and 4.12.1)
- Calculating emissions rates using the methods specified in the permit. This requirement is developed under the authority of IDAPA 58.01.01.322.06 and 07. (PC 4.12.2)

Simplot’s comments on PC 4.12.2 of the facility draft permit stated that “*Existing emission limits for NO<sub>x</sub>, SO<sub>2</sub>, and CO were not derived with AP-42 Section 1.4 (7/98) emission factors. Either the emission limits have to be adjusted to reflect the use of proposed emission factors or the emission factors used to determine existing emission limits have to be used. Correspondence submitted to DEQ in 2004 to address this issue.*”

According to the information in DEQ’s issues list, a letter was sent from DEQ on 3/9/06. The letter to Simplot allowed the use of the original emission factors which were used to develop the limits in the permit. When DEQ re-opens the underlying permits, DEQ will look into the emission factors that are in question.

“or a DEQ-approved alternative” in the existing Tier I, issued 11/8/2005, may be used to temporarily address this issue.

#### **Permit Conditions 4.7 and 4.8**

Fugitive emissions limits for PM and PM<sub>10</sub> were taken from the Tier II Permit No. 077-00006 issued December 3, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Conditions 4.13 and 4.14)**

Demonstrating compliance with fugitive emissions limits for PM and PM<sub>10</sub> was established in accordance with IDAPA 58.01.01.322.06 and 07. They are specified in PCs 4.13 and 4.14.

#### Permit Condition 4.13

The permittee shall **maintain the documentation that lists the methods to control fugitive emissions and** to demonstrate compliance with the fugitive PM emission limits in Permit Condition 4.76 ~~using the method specified in SIP inventory, which can be found in Simplot’s June 29, 2000 Tier I/II application, Appendix D.~~

#### Permit Condition 4.14

The permittee shall **maintain the documentation that lists the methods to control fugitive emissions and** to demonstrate compliance with the fugitive PM<sub>10</sub> emission limits in Permit Condition 4.87 ~~using the method specified in SIP inventory, which can be found in Simplot’s June 29, 2000 Tier I/II application, Appendix D.~~

Simplot has been using the method specified in SIP inventory to demonstrate compliance with the fugitive emissions limits. The SIP inventory can be found in Simplot's June 29, 2000 Tier I/II application, Appendix D. They are a few pages long.

Keeping the documentation of Appendix D of J.R. Simplot's June 29, 2000 Tier I/II application on site will satisfy PC 4.13 and 4.14 as long as no changes are made to the Ammonium Sulfate Plant.

#### **New Permit Conditions 4.18**

The ammonium sulfate dryer is subject to 40 CFR 60, Subpart PP as discussed under Section 6.4 of the SOB. The PM and opacity emissions limits are taken from 40 CFR 60 Subpart PP. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (New Permit Conditions 4.19 and 4.20)**

MRRR is specified in 40 CFR 60, Subpart PP. They are as follows:

- § 60.423 Monitoring of operations (PC4.19)
- § 60.424 Test methods and procedures (PC 4.20)

### **EMISSIONS UNIT GROUP 3 - HPB&W BOILER**

#### **Permit Conditions 5.1 through 5.6**

Emissions limits for CO, NO<sub>x</sub>, PM, PM<sub>10</sub>, and SO<sub>2</sub> were taken from PTC No. 077-00006 issued on September 20, 2000. The NO<sub>x</sub> emissions limits are also in Idaho SIP, 40 CFR 52.670 (d), 8/14/06. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

#### Permit Condition 5.3

Because the NO<sub>x</sub> emissions limits are in Idaho SIP, the citation of "40 CFR 52.670 (d), 8/14/06" is added to PC 5.3.

#### **MRRR – (Permit Conditions 5.7 through 5.16)**

The compliance demonstration methods were taken from the existing PTC issued on September 20, 2000. The following summarizes the methods to demonstrate compliance:

- Limit natural gas usage (PC 5.7)
- Limit fuel type to natural gas exclusively (PC 5.8)
- Develop an O&M manual for the boiler and LoNO<sub>x</sub> - EGR systems (PC 5.9)
- Record hours of operation per day in addition to the amount of natural gas used daily to demonstrate compliance with the hourly natural gas usage limitation (PCs 5.10 and 5.11)
- For VOC, SO<sub>2</sub>, CO, and NO<sub>x</sub>, besides above MRRR, calculate emissions monthly (PC 5.12)
- For NO<sub>x</sub> standard of 0.04 lb/MMBtu, besides above MRRR, use NO<sub>x</sub> CEMS to monitor NO<sub>x</sub> emissions (PC 5.15)
- Keep Records as required in 40 CFR 60 Db for emissions limit of 0.2 lb NO<sub>x</sub> /MMBtu (PCs 5.13, 5.16.3 and 5.16.4)
- Comply with reporting requirements required in the General Provision of the permit

#### Old Permit Condition 5.7 – removed

Old PC 5.7 is removed because it is covered in PC 2.13

~~5.7—The PM from the boiler stack shall not exceed a concentration of 0.015 grains per dry standard cubic foot corrected to 3% oxygen.~~

Permit Conditions 5.7, 5.8, 5.10, 5.12

The PCs 5.7, 5.8, 5.10, and 5.12 are old PCs 5.10, 5.11, 5.19, and 5.20.

Permit Condition 5.9

The PC 5.9 is old PC 5.12 with addition of General Provision B from the 9/20/00 PTC, as a second paragraph of PC 5.9. It reads as follows:

“An O&M manual for the boiler and LoNO<sub>x</sub> - EGR systems shall remain on site at all times.

**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.”**

Permit Condition 5.11

The PC 5.11 is old PC 5.22.11. It is not taken from PTC No. 077-00006 issued on September 20, 2000. It was added to the existing Tier I under the authority of IDAPA 58.01.01.322.06 & .07. The operating hours recorded in PC 5.11 are used to calculate hourly natural gas usage to demonstrate compliance with the hourly natural gas throughput limit in PC 5.7. The PC 5.11 reads as follows:

~~“5.22.11~~**5.11** For each boiler operating day, the permittee shall **record** and maintain the records of the number of hours ~~that of the operation of the boiler~~ **operates.**”

Permit Condition 5.12

VOC is added to PC 5.12 under the authority of IDAPA 58.01.01.322.06. It reads as follows:

“The permittee shall calculate the emissions of **VOC**, SO<sub>2</sub>, CO, and NO<sub>x</sub> from the boiler on a monthly basis using AP-42 Section 1.4 (~~73~~/98) emission factors, or a DEQ-approved alternative.”

**Permit Conditions 5.13**

Permit Condition 5.13.1

The NO<sub>x</sub> emissions limit in PC 5.13.1 is an applicable requirement taken from 40 CFR 60, Subpart Db. It was not included in the existing Tier I.

The boiler was installed in 2000, after July 9, 1997, and its annual capacity factor is greater than 10% at times according to the information provided in Simplot’s comments on the facility draft. Therefore, the boiler is subject to NO<sub>x</sub> standard under 40 CFR 60.44b (l)(1). The boiler is also subject to 40 CFR 60.44b(h) and (i).

Permit Conditions 5.13.2 and 5.13.3

The PCs 5.13.2 and 5.13.3 are old PCs 5.9 and 5.8.

The PCs 5.13.2 and 5.13.3 specify how to determine compliance with the limits in PC 5.13.1 and PC 5.4. These requirements are taken from 40 CFR 60, Subpart Db and PTC No. 077-00006 issued on September 20, 2000.

#### **MRRR – (Permit Conditions 5.14 through 5.16)**

The compliance demonstration methods for the NO<sub>x</sub> emissions limits in lb/MMBtu are taken from 40 CFR 60, Subpart Db and the existing PTC issued on September 20, 2000. They are as follows:

- 40 CFR 60 Subpart Db - § 60.46b Compliance and performance test methods and procedures for nitrogen oxides (PC 5.14)
- 40 CFR 60 Subpart Db - § 60.48b Emission monitoring for nitrogen oxides (PC 5.15)
- 40 CFR 60 Subpart Db - § 60.49b Reporting and recordkeeping requirements (PC 5.16)

#### New Permit Conditions 5.14 and 5.15

The PCs 5.14 and 5.15 are taken from 40 CFR 60.46b Compliance and performance test methods and procedures for nitrogen oxides and 40 CFR 60.48b Emission monitoring for nitrogen oxides.

According to Simplot's comments on the facility draft permit, the boiler's annual capacity factor is greater than 10% at times.

The initial compliance test required by 40 CFR 60.46b(e)(1) is fulfilled based on the correspondences provided in Simplot's comments on the facility draft permit.

Simplot's comments on the facility draft has confirmed that the boiler is subject to 40 CFR 60.46b(e)(4) because the boiler has an applicable NO<sub>x</sub> limit under 60.44b, the boiler is less than 250 MMBtu/hr heat input, and it combusts natural gas with a nitrogen content of 0.30 weight percent or less.

#### Permit Condition 5.15.1

The PC 5.15.1 is old PC 5.13. Minor changes are made to the PC as a result of the federal regulation change. It reads as follows. New text is in bold; and the deleted text is stricken out.

“... install, calibrate, **maintain**, and operate a ~~NO<sub>x</sub>~~ CEMS for measuring **NO<sub>x</sub> and O<sub>2</sub> (or CO<sub>2</sub>)** emissions discharged to the atmosphere, and **shall** record the output of the system.”

The PC 5.15.1 is in Idaho SIP. The citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 5.15.1.

#### Permit Condition 5.15.2

The PC 5.15.2 is old PC 5.14. PC 5.15.2 is in Idaho SIP. The citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 5.15.2.

#### Permit Condition 5.15.3

PC 5.15.3 is old PC 5.15. Minor changes are made to the PC as result of the federal regulation change. PC 5.15.3 is in Idaho SIP. The citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 5.15.3. It read as follows:

“The one-hour average NO<sub>x</sub> emission rates measured by the NO<sub>x</sub> CEMS shall be expressed in

lb/MMBtu heat input and shall be used to calculate the average 30-day emissions rates under Permit Conditions 5.4 and 5.13. The one-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2). ~~At least two data points must be used to calculate each one-hour average.~~

**40 CFR 60.13(h)(2):**

**40 CFR 60.13(h) (2) For continuous monitoring systems...”**

Permit Condition 5.15.4

The PC 5.15.4 is old PCs 5.16 and 5.17. Changes are made to the PC as result of the federal regulation change. PC 5.15.4 is in Idaho SIP. The citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 5.15.4. It read as follows:

**“The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. The NO<sub>x</sub> CEMS must meet all requirements set forth in 40 CFR 60.13 (provided in Appendix B).**

The span value for **the** NO<sub>x</sub> CEMS is 500 ppm.”

Permit Condition 5.15.5

PC 5.15.5 is old PC 5.18. Minor changes are made to the PC as result of the federal regulation change. PC 5.15.5 is also in Idaho SIP. The citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 5.15.5. It reads as follows:

“5.15.5 When NO<sub>x</sub> emissions data ~~is~~ **are** not obtained because of . . . , emissions data will be obtained by using . . . , or other approved reference methods to provide emissions data for a minimum of 75% of the operating hours in each steam-generating unit operating day, ~~in for~~ at least 22 out of 30 successive steam-generating unit operating days.

[PTC No. 077-00006, 9/20/00; 40 CFR 60.43(b), 48b(f); **40 CFR 52.670 (d), 8/14/06**]

Permit Condition 5.16

PC 5.16 is taken from 40 CFR 60 .49b Reporting and recordkeeping requirements.

Permit Condition 5.16.2

The requirement in PC 5.16.2 is fulfilled based on the 6/22/01 and 11/28/01 correspondences provided by Simplot in its comments on the facility draft permit.

Permit Condition 5.16.3

The PC 5.16.3 is old PC 5.21. Changes are made to the PC as result of the federal regulation change. The PC 5.16.3 is in Idaho SIP. The citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 5.16.3. It reads as follows:

**“The permittee shall record and maintain records of the amounts of the fuel combusted during each day and calculate the annual capacity factor for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.**

~~The permittee shall calculate the annual capacity factor for each calendar quarter, and determine the~~

~~annual capacity factor based on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.”~~

#### Permit Condition 5.16.4

PC 5.16.4 is old PC 5.22. Changes are made to the PC as result of the federal regulation change. It reads as follows:

~~“5.22.2~~ (2) The average hourly NO<sub>x</sub> emission rates (expressed as NO<sub>2</sub>) **(ng/J or lb/MMBtu heat input) measured or predicted**~~measured as lb/MMBtu heat input.”~~

~~“5.22.3~~ (3) The 30-day average NO<sub>x</sub> emission rate (lb/MMBtu heat input) calculated at the end of each boiler operating day from the measured **or predicted** hourly NO<sub>x</sub> emission rates for the preceding 30 boiler operating days.”

#### Permit Condition 5.16.4 (4)

PC 5.16.4 (4) was revised. It reads as follows:

~~“5.22.4~~**(4)** Identification of the boiler operating days when the calculated 30-day average NO<sub>x</sub> emissions rates are in excess of the NO<sub>x</sub> emissions standards in Permit Conditions ~~5.3 and 5.4~~ **and 5.13** with the reasons for such excess emissions as well as a description of corrective actions taken.

#### New Permit Condition 5.16.5

New PC 5.16.5 is taken from 40 CFR 60.49b(h). It reads as follows:

**“The permittee shall submit excess emission reports for any excess emissions that occurred during the reporting period.”**

#### Permit Condition 5.16.6

PC 5.16.6 is old PC 5.23. The regulatory basis for old PC 5.23 is 40 CFR 60.49b (i). Changes are made to the PC as result of the federal regulation change. It reads as follows:

~~“The permittee shall submit reports containing the information recorded under 40 CFR 60.49b(g). The permittee shall submit a quarterly report containing the information recorded under Permit Condition 5.22. All quarterly reports shall be postmarked within 30 days following the end of each calendar quarter.”~~

#### New Permit Conditions 5.16.7 and 5.16.8

New PCs 5.16.7 and 5.16.8 are taken from 40 CFR 60.49b (v) and 40 CFR 60.49b (w), respectively. They read as follows:

**“5.16.7 The permittee may submit electronic quarterly reports for NO<sub>x</sub> in lieu of submitting the written reports required under 40 CFR 60.49b (h) or (i). The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60, Subpart Db was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.**

[40 CFR 60.49b(v)]

**5.16.8 The reporting period for the reports required under 40 CFR 60, Subpart Db is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.**

[40 CFR 60.49b(w)]”

#### **EMISSIONS UNIT GROUP 4: BABCOCK AND WILCOX BOILER**

##### **Permit Conditions 6.1 through 6.6**

Emissions limits for CO, NO<sub>x</sub>, PM, PM<sub>10</sub>, SO<sub>2</sub>, and VOC are taken from PTC No. 077-00006 issued on June 16, 1995. NO<sub>x</sub> emissions limits are also in Idaho SIP, 40 CFR 52.670 (d), 8/14/06. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

##### Permit Condition 6.4

The NO<sub>x</sub> emissions limits in PC 6.4 are in Idaho SIP. The citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 6.4.

##### **MRRR – (Permit Condition 6.8 through 6.12 and PC 2.26)**

The compliance demonstration methods were taken from the existing PTC issued on June 16, 1995, or 40 CFR 60, Subpart Dc. Any additional required monitoring is under the authority of IDAPA 58.01.01.322.06 and 07. The following summarizes the methods to demonstrate compliance:

- Use natural gas only (PC 6.8)
- Limit natural gas usage (PC 6.9)
- Record natural gas usage as required in the 40 CFR 60, Subpart Dc and under the authority of IDAPA 58.01.01.322.06 and 07 (PCs 6.10 and 6.11)
- Comply with NSPS notification and recordkeeping requirements (PC 2.26)

##### Old Permit Condition 6.7 – removed

Old PC 6.7 is removed because it is covered in PC 2.13.

##### Permit Condition 6.10

40 CFR 60, Subpart Dc was amended on 6/13/07. The amended 40 CFR 60.48c(g) provides monitoring alternatives. According to Simplot’s comments on the facility draft permit, Simplot prefers to record natural gas usage in the Babcock and Wilcox boiler on a monthly basis according to 40 CFR 60.48c(g)(2) instead of a daily basis according to 40 CFR 60.48c(g)(1).

The requirement in PC 6.10 was not taken from PTC No. 077-00006, 06/16/95, the citation of “PTC No. 077-00006, 06/16/95” is removed.

The PC 6.10 is revised to reflect Simplot’s choice. It reads as follows:

“6.10 The permittee shall record and maintain records of the amounts of natural gas combusted during each ~~day~~ **calendar month**.”

[PTC No. 077-00006, 06/16/95; 40 CFR 60.48c(g)(~~1~~2); 40 CFR 60.48c(i)]

##### Permit Condition 6.12

VOC is added to PC 6.12 under the authority of IDAPA 58.01.01.322.06. Except for VOC, the requirements in PC 6.12 are in Idaho SIP. The citation of “40 CFR 52.670 (d), 8/14/06” is added to

PC 6.12. The PC 6.12 reads as follows:

“The permittee shall calculate the emissions of **VOC**, SO<sub>2</sub>, CO, and NO<sub>x</sub> from the boiler on a monthly basis using AP-42 Section 1.4 (~~73~~/98) emission factors, or a DEQ-approved alternative.”

As discussed under MRRR – (Permit Condition 4.12), according to the information in DEQ’s issues list, a letter was sent from DEQ on 3/9/06. The letter to Simplot allowed the use of the original emission factors which were used to develop the limits in the permit. When DEQ re-opens the underlying permits, DEQ will look into the emission factors that are in question.

“or a DEQ-approved alternative” in the existing Tier I, issued 11/8/2005, may be used to temporary address this issue.

#### Old Permit Condition 6.13

Old PC 6.13 is removed because it is covered in Table 2.3 under Permit Condition 2.26.

### **EMISSIONS UNIT GROUP 5: GRANULATION NO. 1 PROCESS**

#### **Permit Conditions 7.1 and 7.2**

The PM and PM<sub>10</sub> emissions limits in PCs 7.1.1 and 7.2.2 are taken from Tier II No. 077-00006 issued on December 3, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

The process weight rate limitation in PC 7.1.2 applies to the dryer, the granulator, under Permit Condition 7.31 section and the cooler, respectively. It is an applicable requirement in accordance with IDAPA 58.01.01.008.03.

According to Simplot’s June 2000 Tier I/II application, the dryer and the cooler were installed in 1961 and commenced operation prior to October 1, 1979. Therefore, IDAPA 58.01.01.702 applies to the process equipment. The process weight rate limitation is included in the Tier I operating permit. Process weight (PW) in the process weight rate equations is the material input rate rather than the output rate. The definition of process weight and process weight rate can be found in IDAPA 58.01.01.006.

The PM/PM<sub>10</sub> emissions limits in the new PC 7.2.1 are taken from the consent order signed on April 16, 2004. The limits are also in Idaho SIP, 40 CFR 52.670 (d), 8/14/06. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.f.

#### Permit Condition 7.1.2

EPA commented on process weight rate (PWR) limitation in the old permit. It is summarized in DEQ’s issues list, item 8, subitem 2e) as follows:

“PWR was not written as permit condition when there was a more stringent standard which is more conservative (such as a lb/hr limit). This may not be conservative at low process levels because the PWR limit is variable depending on the process weight. Must address this, include citation after more stringent standard (i.e. lb/hr limit) to include PWR rule.”

The PC 7.1.2 is revised to address EPA’s comments. The new text is in bold; and the deleted text is stricken out. It reads as follows:

**“No person shall emit PM to the atmosphere from any process or process equipment operating prior to October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in lb/hr, and PW is the process weight in lb/hr:**

- a. **If PW is less than 17,000 lb/hr,**  
 $E = 0.045(PW)^{0.60}$
- b. **If PW is equal to or greater than 17,000 lb/hr,**  
 $E = 1.12(PW)^{0.27}$

~~Based on the process weight rate equation the limit is 25.6 lb/hr. Because Permit Condition 7.1.1 is more stringent, compliance with Permit Condition 7.1.1 shall be deemed in compliance with Permit Condition 7.1.2.~~

According to the information in Simplot’s June 2000 Tier I/II application, the maximum hourly production rate is 54.2 tons/hr or 108,400 lb/hr for the dryer, the granulator, or the cooler.

The permitted limit of 10.9 lb/hr applies to the emissions from the dryer, the granulator, and the cooler. The permitted limit is more stringent than PWR limitation when the total production rate of the dryer, the granulator, and the cooler is greater than 9,400 lb/hr or 4.7 T/hr (i.e., When PW = 9,400 lb/hr,  $E = 0.045 (PW)^{0.60} = 0.045 (9,400)^{0.60} = 10.9$  lb/hr).

However, the permitted limit of 10.9 lb/hr could be less stringent when the total production rate of the dryer, the granulator, and the cooler is less than 9,400 lb/hr or 4.7 T/hr.

The new PC 7.12 in the facility draft permit required the permittee to develop a compliance method, within 60 days of permit issuance, to demonstrate compliance with PWR limitation when the total production rate of the dryer, the granulator, and the cooler is less than 9,400 lb/hr or 4.7 T/hr.

Simplot commented on the new PC 7.12 in the facility draft. It stated *“it is not possible to achieve a production rate less than 9130 lb/hr for a sustained period of time. The facility is not designed to operate at a rate that low. Therefore it will be difficult/impossible to develop a means to demonstrate compliance at a rate of 9130 lb/hr.”* New PC 7.12 in the facility draft permit is removed based on the above information provided by Simplot.

New Permit Condition 7.2.1

New PC 7.2.1 is taken from the consent order signed on April 16, 2004. The limits in the consent order constitute Reasonably Available Control Technology (RACT) that addresses past PM<sub>10</sub> non-attainment issues. Details can be found in the consent order. PC 7.2.1 reads as follows:

**“7.2.1 Emissions from the granulation No. 1 plant shall not exceed the emissions limits in Table 7.3. The annual PM/PM<sub>10</sub> RACT limit (tons per year) shall be set by multiplying the pound per hour RACT limit by 8,760 hours per year and dividing by 2,000 pounds per ton.**

**Table 7.3 GRANULATION NO.1 PLANT EMISSIONS LIMITS**

Source Description	PM/PM <sub>10</sub>	
	lb/hr	T/yr
Reactor/granulator stack	10.9	47.7
Dryer stack		
Baghouse stack (Granulation No. 1 baghouse, also called vent baghouse)		

**[IDAPA 58.01.01.322.07; Consent Order (RACT requirements), 4/16/04; 40 CFR 52.670 (d), 8/14/06]”**

### Permit Condition 7.2.2

PC 7.2.2 is old PC 7.2.

### **MRRR – (Permit Condition 7.10 – 7.13, 7.19, 7.20, 7.28 – 7.32)**

The methods to demonstrate compliance with PM and PM<sub>10</sub> emissions limits are established under the following authorities

- From underlying permit - Tier II No. 077-00006 issued on December 3, 1999
- Based on 40 CFR 63, Subpart BB
- In accordance with CAM
- In accordance with IDAPA 58.01.01.322.06, 07, and 08

The following summarizes the methods to demonstrate compliance:

- Conduct maintenance to the scrubbers and/or the process (PC 7.10)
- Conduct maintenance to the baghouse (PC 7.11)
- Conduct annual performance test for PM/PM<sub>10</sub> (PC 7.13)
- Comply with the monitoring requirements as required in 40 CFR 63, Subpart BB
- Comply with CAM requirements (PCs 7.28 -7.32)

### Permit Conditions 7.10 and 7.11

PCs 7.10 and 7.11 are old PCs 7.11 and 7.12. They are taken from Tier II Permit No. 077-00006 issued on December 3, 1999.

### Permit Condition 7.13

Old PC 7.18 is re-numbered as PC 7.13. It is taken from Tier II No. 077-00006 issued on December 3, 1999.

The old content in PC 7.13 was not taken from Tier II No. 077-00006 issued on December 3, 1999. It was developed under the authority of IDAPA 58.0101.322.03. Because CAM requirements are more stringent than old content in PC 7.13, the old content in PC 7.13 is obsolete and removed.

~~“7.13 The permittee shall monitor the pressure drop across the baghouse to ensure control of PM and PM<sub>10</sub>. The pressure drop shall be recorded weekly.”~~

### Permit Condition 7.13.1

The source test required to be conducted “within 12 months of, or 12 months prior to, December 24, 2002” was conducted in February 2002 according to the information provided by staff at Pocatello Regional Office through email on 4/25/2011. The source testing requirements for 2003 -2005 are fulfilled according to the information provided by staff at Pocatello Regional office through email on 12/8/2010.

DEQ received Simplot’s Tier I minor modification application on September 30, 2005. In the submittal, Simplot provided 2004 and 2005 PM<sub>10</sub> emissions rates measured using EPA Methods 5 and 202.

The following table summarizes the source test data in lb/hr from Simplot’s 2005 application and DEQ’s emissions test review letters. The source tests were conducted using EPA Methods 5 and 202.

The emissions rates from these source tests are below PM<sub>10</sub> emissions limit in the existing Tier I issued November 8, 2005.

Permit Limit (from granulation No.1 plant stacks. Limit taken from 4/16/2004 RACT CO)	From Simplot's 2005 Submittal		From DEQ's Emissions Test Review Letters				
	2004	2005	2006	2007	2008	2009	2010
10.9 lb/hr	2.49	2.59	2.89	2.9	4.07	3.54	4.81

With above information, PC 7.13.1 is revised and reads as follows:

~~“The permittee shall conduct compliance tests within 12 months of, or 12 months prior to, December 24, 2002 to demonstrate compliance with the PM and PM<sub>10</sub> hourly emissions limits in Permit Conditions 7.1 and 7.2. After the first compliance test, t~~ The permittee shall conduct a compliance test once per annum to demonstrate compliance with hourly PM and PM<sub>10</sub> emissions limits in Permit Conditions 7.1 and 7.2.

[IDAPA 58.01.01.322.06; 5/1/94; Tier II Permit No. 077-00006, 12/3/99]

~~During calendar years 2003, 2004, and 2005, compliance with the PM<sub>10</sub> emissions limit in Permit Condition 7.2.2 shall be determined by conducting a Method 5 performance test on the dryer stack, the reactor/granulator stack, and the baghouse stack. The PM<sub>10</sub> fraction of the PM emission rate determined during the test shall be determined by multiplying the PM emission rate by a 0.82 conversion factor.~~

~~During calendar years 2004 and 2005, Method 201A and 202 performance tests shall be conducted on the baghouse stack in addition to the Method 5 test. During calendar years 2004 and 2005 Method 5 and 202 performance tests shall be conducted on the dryer stack and reactor/granulator stack in addition to the Method 5 test. All performance testing shall be conducted in accordance with Permit Condition 2.10.~~

~~No later than September 30, 2005, the permittee shall submit a permit application to revise the PM<sub>10</sub> emissions limits to reflect the results of the Method 201A and 202, and Method 5 and 202 performance tests. The permit application shall contain justification for each emission limit proposed. Once DEQ issues a permit with revised PM<sub>10</sub> emissions limits, compliance with Permit Condition 7.2 shall be determined by source testing using Methods 201A and 202 on the baghouse stack and Methods 5 and 202 on the dryer stack and reactor/granulator stack.”~~

#### Permit Condition 7.19

The PC 7.19 is old PC 7.10. It is taken from 40 CFR 63.624 regarding operating requirements for scrubbers.

#### Permit Condition 7.20

The PC 7.20 is old PCs 7.14, 7.15, 7.16, and 7.17. It is taken from 40 CFR 63.625 regarding monitoring requirements for the scrubbers.

#### New Permit Conditions 7.28 to 7.32

The PCs 2.22 through 2.25 and PCs 7.28 through 7.32 are requirements developed in accordance with CAM for compliance with PM/PM<sub>10</sub> emissions limits of Granulation No. 1 dryer scrubber stack and Granulation No. 1 baghouse (also called vent baghouse) stack.

Emissions units at Granulation No.1 process with point identification number from 400.0 through

414.2 (except for 401.0 and 403.0) as listed in Table 7.1 of the permit are subject to CAM requirements for PM and PM<sub>10</sub> because they meet the applicability criteria under 40 CFR 64.2(a); specifically, the emissions units use control devices to achieve compliance with emissions limits for PM/PM<sub>10</sub>, and pre-control potential emissions for PM/PM<sub>10</sub> from these emissions units are greater than 100 T/yr, respectively. The granulator (ID 401.0) and the reactor (ID 403.0) do not meet CAM applicability criteria under 40 CFR 64.2(a).

In accordance with the information in Simplot's response to DEQ's incompleteness letter received October 19, 2007, the revised Table 6, Granulation No.1 baghouse (also called vent baghouse) and the dryer scrubber are subject to CAM requirements. Reactor/Granulator scrubber is not subject to CAM.

Even though 40 CFR 63, Subpart BB is for controlling total fluorides, DEQ staff has reviewed the regulation and determined that the requirements in the regulation for scrubbers meet CAM requirements for the dryer scrubber except for 40 CFR 63.625(f)(2). Changes of indicator(s) range(s) need to be approved by DEQ first for CAM purpose. More discussions on 40 CFR 63.625(f)(2) can be found under Permit Condition 7.31 section below.

Pressure drop range of the baghouse was provided in the response to DEQ's incompleteness letter received on October 19, 2007. However, the applicant requested not to use it as permit limit. In addition, no supporting documents were submitted for the indicator range. DEQ requests Simplot to record baghouse pressure drop in PC 7.13. DEQ is open for change regarding baghouse pressure drop monitoring in Table 7.5 of the permit and PC 7.29.3 for CAM purpose.

#### New Permit Condition 7.30

In Simplot's comments on the 2nd facility draft permit, Simplot requested to remove baghouse inspection and to change see/no see VE evaluation from daily to weekly.

The baghouse (also called vent baghouse) is used to control emissions from the material handling. The source test results from 2004 to 2011 show that the average emissions from the baghouse stack is 0.33 lb/hr and with the highest tested rate of 0.57 lb/hr. This is a small emissions point. Using both daily see/no see VE evaluation and pressure drop as CAM indicators would provide a reasonable assurance of compliance with the emissions limits. The baghouse inspection and maintenance requirement is removed from Table 7.5 for the CAM plan. However, the daily frequency for see/no see VE evaluation is kept as it is in accordance with 40 CFR 64.3(b)(4)(iii).

The rationale to select the above two indicators for the CAM plan can be found in Simplot's response to DEQ's incompleteness letter received on October 19, 2007.

#### New Permit Condition 7.31

While the dryer scrubber is subject to Maximum Achievable Control Technology (MACT), it is also subject to CAM for PM/PM<sub>10</sub> emissions limits. When MACT has an option of changing operating ranges of the dryer scrubber prior to approval in accordance with 40 CFR 63.625 (f)(2), CAM does not allow this option. In CAM, operating ranges need to be approved first. Therefore, the option in 40 CFR 63.625 (f)(2) is not available to the dryer scrubber for CAM purpose.

#### **Permit Conditions 7.3 and 7.18**

Fluoride emissions limits are taken from Tier II No. 077-00006 issued on December 3, 1999 and from 40 CFR 63, Subpart BB. They are applicable requirements for Tier I permitting purposes in accordance with IDAPA 58.01.01.008.03.

## **MRRR – (Permit Conditions 7.17 – 7.27)**

MRRRs are taken from 40 CFR 63, Subpart BB:

- 40 CFR 63.624 Operating Requirements (PC 7.19)
- 40 CFR 63.625 Monitoring Requirements (PC 7.20)
- 40 CFR 63.626 Performance tests and compliance provisions (PC 7.21)
- 40 CFR 63.627 Notification, recordkeeping, and reporting requirements (PC 7.22)
- 40 CFR 63.628 Applicability of general provisions (PC 7.23)
- 40 CFR 63.630 Compliance dates (PC 7.24)
- 40 CFR 63.632 Implementation and enforcement (PC 7.26)

### Permit Condition 7.19

The PC 7.19 is old PC 7.10. As decided in the 2/23/09 meeting with Lisa K., Mike S., Shawnee C., Rick E., and Steve Brockett, the MACT range will not be included in the permit. The inspectors will look at source test approval letter. DEQ Technical service has a spreadsheet titled “Simplot-Don Plant MACT Test Data and Approved Operating Ranges” maintaining DEQ-approved MACT ranges. As of 3/3/2011, the MACT ranges taken from the spreadsheet for Granulation No.1 scrubbers are listed as follows:

<b>Scrubber System</b>	<b>Flow Rate (gpm)</b>	<b>Pressure Drop (inches of H<sub>2</sub>O)</b>
Dryer scrubber	267-400	2.74-11.5
Reactor/granulator scrubber	253-379	13.8-20.7

### **Permit Conditions 7.4, 7.5, and 7.6**

Emissions limits for NO<sub>x</sub>, CO, and SO<sub>2</sub> are taken from the Tier II No. 077-00006 issued December 3, 1999. They are applicable requirements for Tier I permitting purposes in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Conditions 7.14 and 7.15)**

The emissions of NO<sub>x</sub>, SO<sub>2</sub>, and CO are due to combustion of natural gas in the dryer. The emissions factors for NO<sub>x</sub>, CO, and SO<sub>2</sub> in J.R. Simplot’s plant expansion permit application analysis are out of date. The emissions factors in the most recent AP-42 (7/98) are used to calculate NO<sub>x</sub>, CO, and SO<sub>2</sub> emissions in this Tier I operating permit. This change is under the authorization of IDAPA 58.01.01.322.01, 06, and 07.

According to the information in DEQ’s issues list, a letter was sent from DEQ on 3/9/06. The letter to Simplot allowed the use of the original emission factors which were used to develop the limits in the permit. When DEQ re-opens the underlying permits, DEQ will look into the emission factors that are in question.

“or a DEQ-approved alternative” in the existing Tier I, issued 11/8/2005, may be used to temporary address this issue.

### **Permit Conditions 7.7, 7.8, and 7.9**

Emissions limits for PM fugitives, PM<sub>10</sub> fugitives, and fluoride fugitives are taken from the Tier II No. 077-00006 issued on December 3, 1999. They are applicable requirements for Tier I permitting purposes in accordance with IDAPA 58.01.01.008.03.

## **MRRR – (Permit Condition 7.16)**

### Permit Condition 7.16

PC 7.16 is old PC 7.22 with changes.

Because the SIP inventory document for Granulation No.1 process is 30 pages long, it is not practical to include it as part of the permit, in addition, the facility is in compliance with the fugitive emissions limit as long as the granulation No.1 process is kept the same. After discussed with DEQ's management, Permit Condition 7.16 is revised and reads as follows:

“The permittee shall **maintain the documentation that lists the methods to control fugitive emissions** to demonstrate compliance with the PM, PM<sub>10</sub>, and fluoride fugitive emissions limits in Permit Conditions 8.7, 8.8, and 8.9 ~~using the emission factors specified in Appendix D of J.R. Simplot's June 29, 2000 Tier I/II application, or a DEQ approved alternative method.~~”

Keeping the documentation of Appendix D of J.R. Simplot's June 29, 2000 Tier I/II application on site will satisfy the permit condition as long as no changes are made to the granulation No. 1 process.

## **EMISSIONS UNIT GROUP 6: GRANULATION NO. 2 PROCESS**

### **Permit Conditions 8.1 and 8.2**

The PM and PM<sub>10</sub> emissions limits in PCs 8.1.1 and 8.2.2 are taken from the Tier II Permit No. 077-00006, issued on December 3, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

The process weight rate limitation in PC 8.1.2 applies to the dryer, the granulator, and the cooler, respectively. It is an applicable requirement in accordance with IDAPA 58.01.01.008.03.

According to Simplot's June 2000 Tier I/II application, the dryer and the cooler were installed in 1964. They commenced operation prior to October 1, 1979. Therefore, IDAPA 58.01.01.702 applies to this process equipment. The process weight rate limitation is included in the Tier I operating permit. Process weight (PW) in the process weight rate equations is the material input rate rather than the output rate. The definition of process weight and process weight rate can be found in IDAPA 58.01.01.006.

The PM/PM<sub>10</sub> emissions limits in new PC 8.2.1 are taken from the consent order signed on April 16, 2004. The limits are in Idaho SIP, 40 CFR 52.670 (d), 8/14/06. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.f.

According to the information in Simplot's June 2000 Tier I/II application, the maximum hourly production rate is 52.1 tons/hr or 104,200 lb/hr for the dryer, the granulator, or the cooler.

The permitted limit of 10.7 lb/hr applies to the emissions from the dryer, the granulator, and the cooler. The permitted limit is more stringent than PWR limitation when the total production rate of the dryer, the granulator, and the cooler is greater than 9,130 lb/hr or 4.56 T/hr (i.e., When PW = 9,130 lb/hr,  $E = 0.045 (PW)^{0.60} = 0.045 (9,120)^{0.60} = 10.7 \text{ lb/hr}$ ).

However, the permitted limit of 10.7 lb/hr is less stringent when the total production rate of the dryer, the granulator, and the cooler is less than 9,120 lb/hr or 4.56 T/hr.

New PC 8.12 in the facility draft permit required the permittee to develop a compliance method to demonstrate compliance with PWR limitation when the total production rate of the dryer, the granulator, and the cooler is less than 9,120 lb/hr or 4.56 T/hr.

In Simplot's comments on the 2nd facility draft permit, Simplot state that Simplot should have commented on PC 8.12 the same way as Simplot commented on PC 7.12 on the 1<sup>st</sup> facility draft permit. The comment on PC 7.12 was: *"it is not possible to achieve a production rate less than 9,130 lb/hr for a sustained period of time. The facility is not designed to operate at a rate that low. Therefore it will be difficult/impossible to develop a means to demonstrate compliance at a rate of 9,130 lb/hr."* New PC 8.12 requirement in the 2nd facility draft permit is removed based on the above information provided by Simplot. New PC8.12 is marked as "reserved."

#### New Permit Condition 8.2.1

New PC 8.2.1 is taken from the consent order signed on April 16, 2004. The limits in the consent order constitute RACT to address past PM<sub>10</sub> non-attainment issues in Portneuf Valley. Details can be found in the consent order.

#### Permit Condition 8.2.2

PC 8.2.2 is old PC 8.2.

#### **MRRR – (Permit Condition 8.10 – 8.13, 8.19, 8.20, 8.28 – 8.33)**

The methods to demonstrate compliance with PM and PM<sub>10</sub> emissions limits are established:

- In Tier II Operating Permit No. 077-00006 issued on December 3, 1999
- Based on 40 CFR 63, Subpart BB
- In accordance with CAM
- In accordance with IDAPA 58.01.01.322.06, 07, and 08

The following summarizes the methods to demonstrate compliance:

- Conduct maintenance to the scrubbers and/or the process (PC 8.10)
- Conduct maintenance to the baghouse (PC 8.11)
- Conduct annual performance test for PM/PM<sub>10</sub> (PC 8.13)
- Comply with the monitoring requirements as required in 40 CFR 63, Subpart BB (PC 8.17 to 8.27)
- Comply with CAM requirements (PC 8.29 to 8.31)
- For process weight rate limitation, require the permittee to develop a compliance method, within 60 days of permit issuance, to demonstrate compliance with PWR limitation when the total production rate of the dryer, the granulator, and the cooler is less than 9,120 lb/hr or 4.57 T/hr. (PC 8.12)

#### Permit Conditions 8.10 and 8.11

The PCs 8.10 and 8.11 are old PCs 8.11 and 8.12. They are taken from Tier II Permit No. 077-00006 issued on December 3, 1999.

#### Permit Condition 8.13

The old content of PC 8.13 is obsolete and removed because the old content of PC 8.13 was not taken from any underlying permits and therefore, is not an applicable requirement for Tier I and is less stringent than the CAM requirements for the baghouse.

~~"8.13 The permittee shall monitor the pressure drop across the baghouse to ensure control of PM and~~

~~PM<sub>10</sub>. The pressure drop shall be recorded weekly.”~~

The new content of PC 8.13 is from old PC 8.18. It is taken from Tier II Permit No. 077-00006 issued on December 3, 1999.

Permit Condition 8.13.1

The source test required to be conducted “within 12 months of, or 12 months prior to, December 24, 2002” was conducted on March 14 and 15, 2002 according to the information provided by staff at Pocatello Regional Office through email on 4/25/2011. The source testing requirements for 2003 -2005 are fulfilled according to the information provided by staff at Pocatello Regional office through email on 12/8/2010.

DEQ received Simplot’s Tier I minor modification application on September 30, 2005. In the submittal, Simplot provided 2004 and 2005 PM<sub>10</sub> emissions rates measured using EPA Methods 5 and 202.

The following table summarizes the source test data in lb/hr from Simplot’s 2005 application and DEQ’s emissions test review letters unless otherwise noted. The source tests were conducted using EPA Methods 5 and 202. The emissions rates from these source tests are below PM<sub>10</sub> emissions limits in the permit.

Permit Limit (from granulation No.2 plant stacks)	From Simplot’s 2005 Submittal		From DEQ’s Emission Test Review Letters				
	2004	2005	2006	2007	2008	2009	2010
Limit taken from 4/16/2004 RACT CO							
lb/hr							
10.7	7.8	5.78	3.75 (baghouse) + 3.95 (scrubber) = 7.7  (from source test log)	0.47(bagho use) + 1..85 (scrubber) = 2.32  (from source test log)	1.07 (baghouse) + 1.64 (scrubber) = 2.71	2.60	4.43

With above information, PC 8.13.1 is revised and reads as follows:

~~“The permittee shall conduct compliance tests within 12 months of, or 12 months prior to, December 24, 2002 to demonstrate compliance with the PM and PM<sub>10</sub> hourly emissions limits in Permit Conditions 8.1 and 8.2. After the first compliance test, The permittee shall conduct a compliance test once per annum to demonstrate compliance with hourly PM and PM<sub>10</sub> emissions limits in Permit Conditions 8.1 and 8.2.~~

[Tier II Permit No. 077-00006, 12/3/99]

~~During calendar years 2003, 2004, and 2005, compliance with the PM<sub>10</sub> emissions limit in Permit Condition 8.2.2 shall be determined by conducting a Method 5 performance test on the tailgas scrubber stack and the baghouse stack. The PM<sub>10</sub> fraction of the PM emission rate determined during the test shall be determined by multiplying the PM emission rate by a 0.82 conversion factor.~~

~~During calendar years 2004 and 2005, Method 201A and 202 performance tests shall be conducted on~~

~~the baghouse stack in addition to the Method 5 test. During calendar years 2004 and 2005 Method 5 and 202 performance tests shall be conducted on the tailgas scrubber stack in addition to the Method 5 test. All performance testing shall be conducted in accordance with Permit Condition 2.10.~~

~~No later than September 30, 2005, the permittee shall submit a permit application to revise the PM10 emissions limits to reflect the results of the Method 201A and 202, and Method 5 and 202 performance tests. The permit application shall contain justification for each emission limit proposed. Once DEQ issues a permit with revised PM10 emissions limits, compliance with Permit Condition 8.2 shall be determined by source testing using Methods 201A and 202 on the baghouse stack and Methods 5 and 202 on the tailgas scrubber stack.”~~

#### Permit Condition 8.15

Simplot’s comments on PC 8.15 of the facility draft permit stated that *“Existing emission limits for NOx, SO<sub>2</sub>, and CO were not derived with AP-42 Section 1.4 (7/98) emission factors. Either the emission limits have to be adjusted to reflect the use of proposed emission factors or the emission factors used to determine existing emission limits have to be used. Correspondence submitted to DEQ in 2004 to address this issue.”*

According to the information in DEQ’s issues list, a letter was sent from DEQ on 3/9/06. The letter to Simplot allowed the use of the original emission factors which were used to develop the limits in the permit. When DEQ re-opens the underlying permits, DEQ will look into the emission factors that are in question.

“or a DEQ-approved alternative” in the existing Tier I, issued 11/8/2005, may be used to temporary address this.

#### Permit Condition 8.19

The PC 8.19 is old PC 8.10. It is taken from 40 CFR 63.624 regarding operating requirements for the scrubbers.

#### Permit Condition 8.20

The PC 8.20 is old PCs 8.14, 8.15, 8.16, and 8.17. It is taken from 40 CFR 63.625 regarding monitoring requirements for the scrubbers.

#### New Permit Conditions 8.28 - 8.31

The PCs 2.22 through 2.25 and PCs 8.28 through 8.31 are requirements developed in accordance with CAM for compliance with PM/PM<sub>10</sub> emissions limits of Granulation No. 2 Tailgas scrubber stack and No.2 baghouse and Cooler baghouse stack.

Emissions units at Granulation No.2 process with point identification number from 450.0 through 470.3 as listed in Table 8.1 of the permit are subject to CAM requirements for PM and PM<sub>10</sub> because they meet the applicability criteria under 40 CFR 64.2(a); specifically, the emissions units use control devices to achieve compliance with emissions limits for PM/PM<sub>10</sub>, and pre-control potential emissions for PM/PM<sub>10</sub> from these emissions units are greater than 100 T/yr, respectively.

Even though 40 CFR 63, Subpart BB is for controlling total fluorides, DEQ staff has reviewed the regulation, and determined that the requirements in the regulation for the scrubbers meet CAM requirements for the scrubbers for compliance with PM/PM<sub>10</sub> permit limits except for 40 CFR 63.625(f)(2). When 40 CFR 63, Subpart BB has an option of changing operating ranges of the scrubbers prior to approval in accordance with 40 CFR 63.625 (f)(2), CAM does not allow this option.

In CAM, operating ranges need to be approved first. Therefore, the option in 40 CFR 63.625 (f)(2) cannot be used for CAM purpose.

Pressure drop range of the baghouse was provided in the response to DEQ's incompleteness letter received on October 19, 2007. However, the applicant requested not to use it as a permit limit. In addition, no supporting documents were submitted for the indicator range. Therefore, in the permit, DEQ requires that Simplot conduct source test to develop the indicator range for DEQ approval.

Simplot's comments on the facility draft permit provide the following explanation on why the Dryer Venturi scrubber is process equipment and not subject to CAM requirements:

*The primary purpose of the Dryer Venturi scrubber at Granulation 2 is to capture product and raw materials (e.g. ammonia) that would otherwise be lost in the exhaust stream from the dryer. It serves a purpose similar to the low mole and high mole scrubbers at Granulation 2. The Tailgas scrubber is the final scrubber serving as the air pollution control device for the process. Relative to the EPA evaluation criteria for distinguishing process equipment from air pollution control equipment, the Dryer Venturi scrubber's primary purpose is not as air pollution control equipment, but rather as a means to recover valuable product and raw material and return it to the process (to the Reactor in this case). Because this device is considered to be process equipment, and not air pollution control equipment, CAM requirements do not apply.*

The above discussions also apply to the Dryer cyclone.

#### New Permit Condition 8.30

In Simplot's comments on the 2<sup>nd</sup> facility draft permit, Simplot requested DEQ to remove baghouse inspection and to change see/no see VE evaluation from daily to weekly.

The Granulation No.2 baghouse (also called dust baghouse) is used to control emissions from the material handling. The cooler baghouse is used to control emissions from the cooler. The two baghouses share one baghouse stack. The source test results from 2004 to 2011 show that the average emissions from the baghouse stack is 1.77 lb/hr and with the highest tested rate of 3.75 lb/hr.

Using both daily see/no see VE evaluation and pressure drop as CAM indicators would provide a reasonable assurance of compliance with the emissions limits. The baghouse inspection and maintenance requirement is removed from Table 8.5 for the CAM plan. However, the daily frequency for see/no see VE evaluation is kept as it is in accordance with 40 CFR 64.3(b)(4)(iii).

The rationale to select the above two indicators for the CAM plan can be found in Simplot's response to DEQ's incompleteness letter received on October 19, 2007.

#### **Permit Conditions 8.3 and 8.18**

Fluoride emissions limits are taken from Tier II Permit No. 077-00006 issued on December 3, 1999 and from 40 CFR 63, Subpart BB. They are applicable requirements for Tier I permitting purposes in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Conditions 8.17 – 8.27)**

MRRRs are taken from 40 CFR 63, Subpart BB:

- 40 CFR 63.624 Operating Requirements (PC 8.19)
- 40 CFR 63.625 Monitoring Requirements (PC 8.20)

- 40 CFR 63.626 Performance tests and compliance provisions (PC 8.21)
- 40 CFR 63.627 Notification, recordkeeping, and reporting requirements (PC 8.22)
- 40 CFR 63.628 Applicability of general provisions (PC 8.23)
- 40 CFR 63.630 Compliance dates (PC 8.24)

Permit Condition 8.19

PC 8.19 is old PC 8.10. As decided in the 2/23/09 meeting with Lisa K., Mike S., Shawnee C., Rick E., and Steve Brockett, the MACT range will not be included in the permit. The inspectors will look at source test approval letter. Technical service has a spreadsheet maintaining DEQ-approved MACT ranges. As of 3/3/2011, the MACT ranges taken from the spreadsheet for Granulation No.2 scrubber are listed in the following:

Scrubber System	Flow Rate (gpm)	Pressure Drop (inches of H <sub>2</sub> O)
Tailgas scrubber	507-760	0.3-1.51

**Permit Conditions 8.4, 8.5, and 8.6**

Emissions limits for NO<sub>x</sub>, CO, and SO<sub>2</sub> are taken from the Tier II Permit No. 077-00006 issued on December 3, 1999. They are applicable requirements for Tier I permitting purposes in accordance with IDAPA 58.01.01.008.03.

**MRRR – (Permit Conditions 8.14 and 8.15)**

The emissions of NO<sub>x</sub>, SO<sub>2</sub>, and CO are due to natural gas combustion in the dryer. The emissions factors for NO<sub>x</sub>, CO, and SO<sub>2</sub> in J.R. Simplot’s plant expansion permit application analysis are out of date. The emissions factors in the most recent AP-42 (7/98) are used to calculate NO<sub>x</sub>, CO, and SO<sub>2</sub> emissions in this Tier I operating permit. This change is under the authorization of IDAPA 58.01.01.322.01, 06, and 07.

According to the information in DEQ’s issues list, a letter was sent from DEQ on 3/9/06. The letter to Simplot allowed the use of the original emission factors which were used to develop the limits in the permit. When DEQ re-opens the underlying permits, DEQ will look into the emission factors that are in question.

“or a DEQ-approved alternative” in the existing Tier I, issued 11/8/2005, may be used to temporary address this issue.

**Permit Conditions 8.7, 8.8, and 8.9**

Emissions limits for PM fugitives, PM<sub>10</sub> fugitives, and fluoride fugitives are taken from the Tier II Permit No. 077-00006 issued on December 3, 1999. They are applicable requirements for Tier I permitting purposes in accordance with IDAPA 58.01.01.008.03.

**MRRR – (Permit Condition 8.16)**

Permit Condition 8.16

PC 8.16 is old PC 8.22 with changes.

Because the SIP inventory document for Granulation No.2 process is many pages long, it is not practical to include it as part of the permit, in addition, the facility is in compliance with the fugitive emissions limit as long as the granulation No.2 process is kept the same. After discussed it with DEQ’s management, Permit Condition 8.16 is revised and reads as follows:

“The permittee shall **maintain the documentation that lists the methods to control fugitive emissions** to demonstrate compliance with the PM, PM<sub>10</sub>, and fluoride fugitive emissions limits in Permit Conditions 8.7, 8.8, and 8.9 ~~using the emission factors specified in Appendix D of J.R. Simplot’s June 29, 2000 Tier I/II application, or a DEQ approved alternative method.”~~

Keeping the documentation of Appendix D of J.R. Simplot’s June 29, 2000 Tier I/II application on site will satisfy the permit condition as long as no changes are made to the granulation No. 2 process.

## **EMISSIONS UNIT GROUP 7: GRANULATION NO. 3 PROCESS, EAST BULKING STATION, AND DEFLUORINATION PROCESS**

### **Permit Conditions 9.1 and 9.2**

The emissions from Entoleter scrubber of Granulation No.3 process, material handling baghouse of Granulation No.3 process, and defluorination scrubber of defluorination process exhaust through Granulation No.3 stack. The PM and PM<sub>10</sub> emissions limits of Granulation No.3 stack in PC 9.1.1 and 9.2.1 are taken from PTC issued on December 12, 2001. PC 9.2.1 is also included in Idaho SIP 40 CFR 52.670 (d), 8/14/06. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

The PM<sub>10</sub> emissions limits of diatomaceous earth silo baghouse stack of the defluorination process in PC 9.2.2 is taken from PTC issued on November 12, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

The process weight rate limitations in PC 9.1.2 apply to emissions from Granulation No. 3 stack, diatomaceous earth silo baghouse stack, limestone bins baghouse stack, and east dry-bulking station, respectively. The limits are applicable requirements in accordance with IDAPA 58.01.01.008.03. The above processes commenced operation after October 1, 1979; therefore, IDAPA 58.01.01.701 applies to the processes.

### **MRRR – (Permit Condition 9.11, 9.12, 9.14, 9.15, 9.17, 9.22, and 9.26)**

The methods to demonstrate compliance with PM and PM<sub>10</sub> emissions limits are established:

- In PTC No. 077-00006 issued September 13, 1995
- In PTC No. 077-00006 issued November 12, 1999
- In PTC No. 077-00006 issued December 12, 2001
- In accordance with IDAPA 58.01.01.322.01, 06, 07, and/or 08
- In accordance with 40 CFR 64 (CAM)

The following summarizes the methods to demonstrate compliance with PM and PM<sub>10</sub> limits of Granulation No.3 stack:

- Limit hourly throughput to Granulation No.3 process/plant, monthly and annual throughput to defluorination process, and daily and annual throughput to east dry bulking station. (PC 9.11)
- Develop and update O&M manuals and maintain operational parameters of the scrubbers and the baghouses within O&M manuals’ specifications. (PC 9.12)
- Limit the dryer’s rated heat input capacity. (PC 9.14)
- Conduct maintenance to the scrubbers, process equipment, and/or material handling baghouse. (PC 9.15)
- Conduct performance test. (PCs 9.17 and 9.26)
- Monitor above throughput and operating limits. (PC 9.22)

- Comply with CAM requirements. (PC 9.26)

To demonstrate compliance with process weight rate limitations of the emissions from Granulation No. 3 stack, diatomaceous earth silo baghouse stack, limestone bins baghouse stack, and east dry-bulking station, in addition to above compliance methods, east dry-bulking station is required to comply with and record daily and annual throughput limits (PCs 9.11.3, 9.22.5), and emissions from limestone bins are required to be controlled by limestone baghouse (PC 9.13).

According to the information in the technical memorandum for east dry-bulking station project; the emissions from east dry-bulking station are process fugitive emissions, and the estimated fugitive emissions rates are 1.53 lb/hr or 6.71 T/yr. The east dry-bulking station complies with process weight rate limitation when operating as designed and complying with throughput limits.

#### Permit Condition 9.12

For clarification purpose, minor changes are made in PC 9.12. It reads as follows:

9.12 The permittee shall develop the following O&M manual(s):

...

The permittee shall have submitted an updated O&M Manual for the Granulation No.3 Entoleter scrubber, which includes the provisions that the fresh water flow to the scrubber does not drop below 10 gpm while producing **Monocalcium Phosphate** (21 P) and **Dicalcium Phosphate** (18.5P), that the fresh water flow to the scrubber does not drop below 32 gpm while producing triple superphosphate (0-45-0), that the total scrubber flow does not drop below 600 gpm, and that the scrubber duct spray water flow does not drop below 250 gpm, all determined based upon daily averaging of data collected during operations on approximately four hour intervals.”

#### **Permit Conditions 9.3**

Total fluoride emissions limits are taken from PTC issued on December 12, 2001. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Conditions 9.11.1, 9.11.2, 9.12, 9.15, 9.17, 9.22.1 to 9.22.3, 9.22.6, and 9.26)**

The methods to demonstrate compliance with total fluoride emissions limits are established:

- In PTC No. 077-00006, issued November 12, 1999
- In PTC No. 077-00006, issued December 12, 2001
- In accordance with IDAPA 58.01.01.322.01, 06, 07, and/or 08
- In accordance with 40 CFR 64 (CAM)

The following summarizes the methods to demonstrate compliance with total fluoride emissions limits of Granulation No.3 stack:

- Limit hourly throughput to Granulation No.3 process/plant and monthly and annual throughput limits to defluorination process. (PCs 9.11.1 and 9.11.2)
- Develop and update O&M manuals and maintain operational parameters of the scrubbers and the baghouses within O&M manuals’ specifications (PC 9.12)
- Conduct maintenance to the scrubbers, process equipment, and/or material handling baghouse (PC 9.15)
- Conduct performance test (PCs 9.17 and 9.26)
- Monitor above throughput and operating limits (PC 9.22)
- Comply with CAM requirements (PC 9.26)

### **Permit Conditions 9.4, 9.5, 9.6, and 9.7**

Emissions limits for NO<sub>x</sub>, CO, SO<sub>2</sub> and VOC are taken from PTC issued on December 12, 2001. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Conditions 9.14, 9.18, and 9.22.4)**

The methods to demonstrate compliance with emissions limits of NO<sub>x</sub>, CO, SO<sub>2</sub> and VOC are established

- In PTC No. 077-00006, issued December 12, 2001
- In accordance with IDAPA 58.01.01.322.01.06, 07, and/or 08

The following summarizes the methods to demonstrate compliance with the NO<sub>x</sub>, CO, SO<sub>2</sub> and VOC emissions limits of Granulation No.3 stack:

- Limit fuel type to natural gas only and limit rated heat input rate. (PC 9.14)
- Monitor natural gas usage and calculate emissions. (PC 9.18)
- Record dryer daily heat input rate. (PC 9.22.4)

The emissions of NO<sub>x</sub>, SO<sub>2</sub>, CO, and VOC are due to combustion of natural gas in the dryer. The emissions factors in the most recent AP-42 (7/98) are used to calculate NO<sub>x</sub>, CO, SO<sub>2</sub> and VOC emissions.

### **Permit Conditions 9.8, 9.9, and 9.10**

Emissions limits for PM fugitives, PM<sub>10</sub> fugitives, and fluoride fugitives are taken from the PTC No. 077-00006 issued on December 12, 2001. They are applicable requirements for Tier I permitting purposes in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Condition 9.19 and 9.21)**

The methods to demonstrate compliance with the fugitive emissions limits are established in PTC No. 077-00006 issued on December 12, 2001

The following summarizes the methods to demonstrate compliance with the emissions limits:

- Calculate the emissions. (PC 9.19)
- Conduct weekly plant-wide fugitive emissions inspection. (PC 9.21)

### Permit Conditions 9.1 to 9.7

Emissions estimation methods in PC 9.1 to PC 9.7 that were not included in the initial Tier I are added to the permit because they are taken from the underlying PTCs and are applicable requirements for Tier I permitting purposes in accordance with IDAPA 58.01.01.008.03.

In PTC issued on 12/12/2001, the permit allows Simplot to use EPA method 5 to demonstrate compliance with PM<sub>10</sub>. It conflicts with the testing methods specified in PC 2.10, SIP, and the consent order. It is obsolete and is not added to the Tier I.

The PC 9.2.1 is in Idaho SIP, and the citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 9.2.1.

### Permit Conditions 9.11 to 9.22

Because there are three baghouses and two scrubbers in this section, specific names for scrubbers and baghouses are added to the permit conditions that contain the words “baghouse” or “scrubber.” This

helps to clarify which scrubber or baghouse is subject to the requirements.

#### Permit Condition 9.12

The PC 9.12 includes old PCs 9.12, 9.13, and 9.21.

The requirement of updating the O&M manual is taken from the consent order signed on April 13, 2007 to address fluoride exceedance. Simplot submitted the updated O&M manual on May 11, 2007. The operating ranges of the Entoleter scrubber parameters are specified in the consent order. It is decided to add this requirement with specified operating parameters into the permit using the authority of IDAPA 58.01.01.322.01.

Maintaining the pressure drop across and the liquid flow rate to Defluorination scrubber and the pressure drop across Diatomaceous earth baghouse for defluorination process within O&M manual specifications are added to PC 9.12 because they are taken from PTC No. 077-00006 issued November 12, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03, and were missed in the initial Tier I.

21 P in PC 9.12 represents Monocalcium Phosphate ( $\text{Ca}(\text{H}_2\text{PO}_4)_2 \cdot \text{H}_2\text{O}$ ), feed grade (minimum 21.0% Phosphorous). 18.5 P in PC 9.12 represents Dicalcium Phosphate, feed grade (minimum 18.5% Phosphorous).

In PC 9.12, 0-45-0 is a Monocalcium/ Dicalcium Phosphate granulated product typically referred to as Triple Superphosphate. 45 mean 45% of  $\text{P}_2\text{O}_5$  in Triple Superphosphate.

#### New Permit Condition 9.13

The PC 9.13 requires emissions from limestone bins to be controlled by a baghouse to meet process weight limitation. It is developed under the authority of IDAPA 58.01.01.322.01.

#### Permit Condition 9.17

The consent order signed on April 13, 2007 requires Simplot to conduct fluoride performance test on the Granulation No.3 plant by or before December 31, 2007 and annually thereafter. Simplot conducted the source test on September 11, 2007 and has been conducting performance testing annually thereafter.

The requirement of the annual fluoride performance testing from the consent order signed on April 13, 2007 has been added to the permit under the authority of IDAPA 58.01.01.322.06. It reads as follows:

**“The permittee shall conduct fluoride performance testing on the Granulation No.3 plant annually.”**

Applicant has indicated that VE reading should be conducted only during PM/PM<sub>10</sub> performance test. In accordance with PTC No. 077-00006 issued November 12, 1999 (Page 3 of the PTC,) VE reading is also required in fluoride compliance test.

The source test required to be conducted “within 12 months of, or 12 months prior to, December 24, 2002” was conducted on 7/28/2002 according to the information provided by staff at Pocatello Regional Office through email on 4/25/2011. The source testing requirements for 2003 -2005 are fulfilled according to the information provided by staff at Pocatello Regional office through email on 12/8/2010.

DEQ received Simplot’s Tier I minor modification application on September 30, 2005. In the submittal, Simplot provided 2004 and 2005 PM<sub>10</sub> emissions rates measured using EPA Methods 5 and 202.

The following table summarizes the source test data in lb/hr from Simplot's 2005 application and DEQ's emissions test review letters. The source tests were conducted using EPA Methods 5 and 202.

Permit Limit (From granulation No.3 stack. Limit taken from PTC issued 12/12/2001)	From 2005 Submittal		From DEQ's test review letters					
	2004	2005	2006	2007	2008	2009	2010	2011
lb/hr								
5.7	6.11	2.65	3.2	2.17	2.12	1.88	2.9	4.47

With above information, the second, third and fourth paragraphs of PC 9.17 are removed.

~~“The permittee shall conduct compliance tests within 12 months of, or 12 months prior to, December 24, 2002 to demonstrate compliance with the PM hourly emissions limit in Permit Condition 9.1.1, the PM<sub>10</sub> hourly emissions limit in Permit Condition 9.2.1, and the fluoride hourly emissions limit in Permit Condition 9.3.~~

~~During calendar years 2003, 2004, and 2005, compliance with the PM<sub>10</sub> emissions limit in Permit Condition 9.2.1 shall be determined by conducting a Method 5 performance test on the granulation No. 3 stack. The PM<sub>10</sub> fraction of the PM emission rate determined during the test shall be determined by multiplying the PM emission rate by a 0.82 conversion factor.~~

~~During calendar years 2004 and 2005, Method 5 and 202 performance tests shall be conducted on the granulation No. 3 stack in addition to the Method 5 test. No later than September 30, 2005, The permittee shall submit a permit application to revise the PM<sub>10</sub> emissions limits to reflect the results of the Method 5 and 202 performance tests. The permit application shall contain justification for each emission limit proposed. Once DEQ issues a permit with revised PM<sub>10</sub> emissions limits, compliance with Permit Condition 9.2.1 shall be determined by source testing using Methods 5 and 202 on the granulation No. 3 scrubber stack.”~~

PC 9.17 paragraph 3 is in Idaho SIP, the citation of “40 CFR 52.670 (d), 8/14/06” is added to PC 9.17. Simplot, in the comments on the facility draft, requested DEQ to remove the last sentence of the 3<sup>rd</sup> paragraph in the facility draft permit. The last sentence is deleted because Simplot tested PM/PM<sub>10</sub> emissions annually from 2004 to 2010, and the calendar year 2006 had already past.

“PC 9.17...

The compliance tests shall be performed in accordance with Permit Condition 2.10, and the following requirements ~~except that Permit Condition 9.17.6 shall not apply to testing of emissions of PM and PM<sub>10</sub> until calendar year 2006.~~  
...”

### Permit Condition 9.17.3

The PC 9.17.3 is revised to add CAM indicators in accordance with CAM requirements.

The testing condition taken from PTC No. 077-00006 issued on November 12, 1999 is added to PC 9.17.3. It was missed in the initial Tier I. The throughput in pounds per hour to the defluorination process is measured by a flow meter measuring gallons and located after Tank 7 and prior to the batch tanks, according to Simplot's comments on the 2nd facility draft permit.

PC 9.17.3 reads as follows:

9.17.3 The following shall be monitored and recorded during each compliance test:

- **For each fluoride performance test, all process areas which emit fluoride emissions out the Granulation No.3 stack shall be in operation. Production throughput for each process area shall also be monitored and recorded for each performance test run in addition to the throughput in pounds per hour to the defluorination process.**

[PTC No. 077-00006, 11/12/99]

- The pressure drop across the Entoleter wet scrubber
- ~~The and~~ liquid flow rate through the Entoleter wet scrubber
- The fresh water flow to the Entoleter wet scrubber
- The duct spray water flow of the Entoleter wet scrubber
- The pressure drop across the defluorination scrubber
- The liquid flow rate through the defluorination scrubber

[PTC No. 077-00006, 12/12/01; PTC No.077-00006, 11/12/99; 40 CFR 64.4 (d), 64.4(e), 64.6(b), and 64.6(e)(2)]

#### Permit Condition 9.17.6

The PC 9.17.6 clarifies that the testing frequency applies to PM and PM<sub>10</sub> emissions only. It reads as follows:

“9.17.6 **For emissions limits of PM and PM<sub>10</sub>**, if the measurement during the performance test required in Permit Condition 9.26.1...”

#### Permit Condition 9.18

“AP-42 Section 1.4 (3/98)” in PC 9.18 should be “AP-42 Section 1.4 (7/98.)” It is a typo correction.

#### Old Permit Condition 9.20

Old PC 9.20 is moved to PC 9.12.

#### New Permit Condition 9.21

The requirement of inspecting fugitive emissions of Granulation No.3 plant is taken from PTC No. 077-00006 issued on December 12, 2001. It is an applicable requirement in accordance with IDAPA 58.01.01.008.03 and was missed in the initial Tier I.

#### Permit Condition 9.22.3

The requirements in PC 9.22.3 are also covered under CAM (i.e., PC 9.26.)

#### New Permit Condition 9.22.6

The requirement in PC 9.22.6 is taken from PTC No. 077-00006 issued on November 12, 1999. It is an applicable requirement in accordance with IDAPA 58.01.01.008.03 and was missed in the initial Tier I.

#### Permit Condition 9.23

The requirement in PC 9.23 in the facility draft permit is taken from the consent order signed on April 13, 2007. It is an applicable requirement in accordance with IDAPA 58.01.01.008.03. Simplot stated in its comments on the facility draft permit that the correspondence was delivered to DEQ on May 11, 2007. Because the requirements are fulfilled, PC 9.23 of the facility draft permit is changed to “reserved” as follows:

**9.23 Reserved** ~~By May 13, 2007, the permittee shall correct and resubmit the 2005 Semiannual Monitoring Report (SAMR) received by DEQ on July 25, 2005 and the 2005 Annual Compliance Certification (ACC) received by DEQ on January 23, 2006 to include the March 10, 2005 performance test failure of the Granulation No.3 plant. The requirement was fulfilled on May 11, 2007.~~

{Consent Order 4/13/07}

#### Permit Condition 9.24

The requirement in PC 9.24 is replaced with "Reserved." According to the application, the Granulation No.3 process is not capable of making diammonium and/or monoammonium phosphate by introducing ammonia into the process.

**9.24 Reserved** ~~40 CFR 63, Subpart BB, is not applicable to the Granulation No. 3 plant. The permittee shall notify DEQ prior to introducing ammonia into the Granulation No. 3 plant to generate diammonium and/or monoammonium phosphate.~~

#### New Permit Condition 9.26

The PC 9.26 includes requirements developed in accordance with 40 CFR 64 (CAM), the application, and the response to DEQ's incompleteness letter received on October 19, 2007.

The applicant is required to develop or verify the parameters operating ranges for Granulation No. 3 Entoleter scrubber, defluorination scrubber of defluorination process, and Granulation No. 3 material handling baghouse because the applicant either does not have the data or is not ready to commit the existing operating ranges.

The testing and approval timeframe is developed to meet the timeframe in CAM that is by 180 days of the Tier I permit issuance, the CAM indicator ranges (i.e., ranges of the control device operating parameters) need to be approved by DEQ.

#### New Permit Condition 9.26.2

Simplot commented on new PC 9.26.2 of the facility draft permit and stated: "*Performance test should not be product specific. Due to market conditions, 0-45-0 is seldom manufactured. The defluorination process operates while 21P & 18.5P are produced because defluorinated acid is required for those products. However, defluorinated acid is not used in the manufacture of 0-45-0, therefore, the defluorination process typically is not operating during the manufacture of 0-45-0. This has been discussed with the Pocatello Regional Office.*" Based on Simplot's comments, PC 9.26.2 of the facility draft permit is modified and reads as follows:

"9.26.2 As discussed in 40 CFR 64.4(c)(1), performance test(s) generally shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions. ~~(e.g., when Granulation No.3 process is making triple superphosphate, defluorination process is operating, and the material handling is operating.)~~ Such data may be supplemented, if desired, by engineering assessments and manufacturer's recommendations to justify the indicator ranges (or, if applicable, the procedures for establishing such indicator ranges). Emission testing is not required to be conducted over the entire indicator range or range of potential emissions.

[40 CFR 64.4(c)(1)]"

#### New Permit Condition 9.26.4

Simplot did not provide information regarding detector's location and minimum acceptable accuracy for each flow meter and pressure gauge listed in Tables 9.3 and 9.5. The PC 9.26.4 is revised to

require Simplot to provide the information to DEQ as part of CAM approval.

New Permit Conditions 9.26.7 or Table 9.3

The range of the pressure drop (i.e., 5.0 to 25.0 inches of water) across Granulation No.3 Entoleter scrubber and the higher end of the liquid flow rate range (i.e., 800 gpm) for the liquid flow rate through Granulation No.3 Entoleter scrubber were provided in the response to DEQ's incompleteness letter received on October 19, 2007. Though the pressure drop range and the higher end of the liquid flow rate range are included in the permit, PC 9.26 allows Simplot to change them as described in PCs 9.26.1 through 9.26.5, or in accordance with PC 9.26.6.

The other indicators and their ranges in Table 9.3 of the permit for Granulation No.3 Entoleter scrubber and the lower end of the liquid flow rate range (i.e., 600 gpm) for the liquid flow rate through Granulation No.3 Entoleter scrubber are taken from the consent order signed on April 13, 2007. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

In Simplot's comments on the 2<sup>nd</sup> facility draft permit, Simplot requested DEQ to remove CAM indicator No.3 and indicator No.4 from the CAM plan. DEQ is not able to remove these indicators as discussed in the following:

The CAM plan is for compliance with emissions limits of Granulation No. 3 stack for PM/PM<sub>10</sub> and total fluoride. Four parameters are used as CAM indicators to provide a reasonable assurance of compliance with emissions limits. They are:

- Indicator No.1 - pressure drop across the wet scrubber
- Indicator No.2 - liquid flow rate through the wet scrubber
- Indicator No.3 - fresh water flow to the scrubber
- Indicator No.4 - scrubber duct spray water flow

Indicators No.1 and No.2 are the parameters required to be monitored in the PTC issued on 11/12/2001. However, they are not adequate to ensure compliance with the fluoride emissions limits. Simplot exceeded the fluoride emissions limits in 2004 and signed a consent order with DEQ in 2007. The 4/13/2007 consent order added the other two parameters to ensure compliance with the fluoride emissions limits. These two parameters are indicators No.3 and No.4 of the CAM plan. Therefore, indicators No.1 through No.4 are necessary to provide a reasonable assurance of compliance with the fluoride emissions limits and cannot be removed from the CAM plan.

New Table 9.4 (PC 9.26.8)

In Simplot's comments on the 2<sup>nd</sup> facility draft permit, Simplot requested to remove baghouse inspection and to change see/no see VE evaluation from daily to weekly.

The baghouse is used to control emissions from the material handling. Using both daily see/no see VE evaluation and pressure drop as CAM indicators would provide a reasonable assurance of compliance with the emissions limits. The baghouse inspection and maintenance requirement is removed from Table 9.4 for the CAM plan. However, the daily frequency for see/no see VE evaluation is kept as it is in accordance with 40 CFR 64.3(b)(4)(iii).

The rationale to select the above two indicators for the CAM plan can be found in Simplot's response to DEQ's incompleteness letter received on October 19, 2007.

### New Tables 9.3 and 9.5

In Simplot's comments on the facility draft permit, Simplot requested to change "differential pressure" to "pressure drop" for indicator No.1 for Entoleter scrubber and the defluorination scrubber in Tables 9.3 and 9.5, respectively. The changes are made to both tables.

### **EMISSIONS UNIT GROUP 8: GYPSUM STACK (PILE)**

#### **Permit Conditions 10.1 and 10.2**

Emissions limits for total fluorides and PM<sub>10</sub> from the gypsum stack (pile) were taken from the Tier II Permit No. 077-00006 issued on December 3, 1999. They are applicable requirements per IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Condition 10.9)**

##### Permit Condition 10.9

Under the authority of IDAPA 58.01.01.322.06, 07, & 08, PC 10.9 is revised and reads as follows:

"The permittee shall **maintain the documentation that lists the methods to control emissions** to demonstrate compliance with the total fluoride emissions limits in Permit Condition 10.1 and PM<sub>10</sub> emissions limits in Permit Condition 10.2. ~~using method specified in Simplot's June 21, 2007 Tier I application, Appendix C, Air Emissions Inventory.~~"

Keeping the documentation of Simplot's June 21, 2007 Tier I application, Appendix C, Air Emissions Inventory on site will satisfy the permit condition as long as no changes are made to the gypsum stack.

#### **Permit Conditions 10.3 to 10.8 and 10.10 to 10.12**

As defined in 40 CFR 61.200, the gypsum stacks are subject to the requirements under 40 CFR 61, Subpart R. These are applicable requirements per IDAPA 58.01.01.008.03 for this Tier I operating permit.

The regulatory review in the application stating "not apply" is incorrect. Refer to the following applicability determination:

*"§ 61.200 Designation of facilities.*

*The provisions of this subpart apply to each owner or operator of a phosphogypsum stack, and to each person who owns, sells, distributes, or otherwise uses any quantity of phosphogypsum which is produced as a result of wet acid phosphorus production or is removed from any existing phosphogypsum stack."*

#### **MRRR – (Permit Conditions 10.3 to 10.8 and 10.11 to 10.12)**

MRRR is established in 40 CFR 61, Subpart R.

Currently, the gypsum stacks are active. Therefore, they are only subject to the phosphogypsum placement and removal requirements. However, if the gypsum stacks become classified as inactive, the permittee is then immediately subject to the Radon-222 emissions limits and its related requirements in 40 CFR 61, Subpart R.

Permit Condition 10.12 (a)

The PC 10.12 (a) does not apply because gypsum stack (pile) is not subject to flux standard in 40 CFR 61.202. The PC 10.12 (a) is changed to “Does not apply.”

**EMISSIONS UNIT GROUP 9: 10-ACRE DECANT POND**

**Permit Condition 11.1**

The limit of decant pond size is taken from the PTC No. P-2009.0053 issued on November 5, 2009. It is applicable requirements in accordance with IDAPA 58.01.01.008.03.

**MRRR – (Permit Condition 11.2)**

MRRR is established in the PTC No. P-2009.0053 issued on November 5, 2009. Simplot is required to maintain documentation of the surface area of the 10-acre decant pond to demonstrate compliance with Permit Condition 11.1.

According to information in the underlying PTC, the PCs 11.1 and 11.2 are required for PSD-avoidance which restricts fluoride emissions to below the PSD significant level.

**EMISSIONS UNIT GROUP 10: PHOSPHORIC ACID MANUFACTURING PLANTS - PHOSPHORIC ACID PLANT NO. 400 / WET PROCESS PHOSPHORIC ACID PROCESS LINE**

**Permit Conditions 12.1 and 12.10**

The Phosphoric Acid Plant is subject to fluoride emissions limits set in the Tier II Permit No. 077-00006 issued on December 3, 1999. The aforementioned requirements are applicable requirements for Tier I operating permit in accordance with IDAPA 58.01.01.008.03.

Simplot’s Phosphoric Acid Plant is subject to 40 CFR 63, Subpart AA, National Emission Standards for Hazardous Air Pollutants from Phosphoric Acid Manufacturing Plants. According to Simplot’s June 2000 Tier I/II application, the Phosphoric Acid Plant was installed in 1985 and last modified in 1992. The phosphoric acid plant qualifies as an existing facility according to 40 CFR 63.2. As such, it is subject to the total fluorides standard for existing sources under 40 CFR 63.602(a). It is an applicable requirement for the Tier I operating permit in accordance with IDAPA 58.01.01.008.03.

**MRRR – (Permit Conditions 12.6, 12.12 -12.22, and 12.25)**

Compliance demonstration of total fluorides emissions limits is specified in the Tier II Permit No. 077-00006 issued on December 3, 1999 and is provided in 40 CFR 63, Subpart AA. The following summarizes the methods to demonstrate compliance:

- Perform regular maintenance on each scrubber (PC 12.6)
- Comply with operating and monitoring requirements of the wet scrubber (PCs 12.12, 12.15, and 12.16, )
- Monitor and record P<sub>2</sub>O<sub>5</sub> feed rate (PCs 12.13 and 12.14)
- Conduct an annual source test and determine compliance (PCs 12.17, 12.18, and 12.19)
- Comply with 40 CFR 63.607 for notification, recordkeeping, and reporting requirements (PCs 12.20, 12.21, and 12.22)
- Comply with the requirements of the general provisions in 40 CFR 63, Subpart A (PC 12.25)

### **Permit Conditions 12.2 and 12.3**

The emissions limits for PM and PM<sub>10</sub> are taken from the Tier II Permit No. 077-00006 issued on December 3, 1999. The PM<sub>10</sub> emissions limits in PC 12.3 are also in Idaho SIP 40 CFR 52.670 (d), 8/14/06. The plant is subject to process weight rate limitation under IDAPA 58.01.01.701 because the plant commenced operation after 1979. These limits are applicable requirements in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Conditions 12.6, 12.7, 12.12)**

Demonstrating compliance with PM and PM<sub>10</sub> emissions limits is specified in the Tier II Permit No. 077-00006 issued on December 3, 1999, in 40 CFR 63, Subpart AA, or is established in accordance with IDAPA 58.01.01.322.06. The following summarizes the methods to demonstrate compliance:

- Conduct annual performance source tests as required in the Tier II Permit No. 077-00006 issued on December 3, 1999, under the authority of IDAPA 58.01.01.322.06, and required in the SIP, 40 CFR 52.670 (d), 8/14/06. (PC 12.7)
- Comply with MACT requirements (PCs 12.12)
- Conduct scrubber maintenance (PC 12.6)

### **Permit Condition 12.4**

The total reduced sulfur emissions limits are taken from the Tier II Permit No. 077-00006 issued on December 3, 1999. They are BACT/LEAR for TRS and fluorides required by a consent order founded in the files of 1990 General Correspondence. They are included in the Tier I operating permit as they are applicable requirements in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Conditions 12.8, 12.12)**

Demonstrating compliance with total reduced sulfur emissions limits is specified in the Tier II Permit No. 077-00006 issued on December 3, 1999, in 40 CFR 63, Subpart AA, or is established in accordance with IDAPA 58.01.01.322.06. The following summarizes the methods to demonstrate compliance:

- One-time performance source test was completed in July 2004 during the permit term for the initial Tier I OP issued in 2002. The tested emissions rate was 3.52 lb/hr TRS, 41% of the limit.

A one-time performance source test is required in this permit term to demonstrate compliance with the emissions limit (PC 12.8)

- Comply with operating requirements for each scrubber (PC 12.12)

### **Permit Condition 12.5**

The PM<sub>10</sub> fugitive emissions limits are taken from the Tier II Permit No. 077-00006 issued on December 3, 1999. They are included in the Tier I operating permit because they are applicable requirements in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Condition 12.5)**

According to the December 3, 1999 Tier II Permit No. 077-00006, the PM<sub>10</sub> emissions estimation was specified in *Air Quality Improvement Plan for Power and Bannock Counties dated May 1993*. The related information in the document is included in Appendix E of this SOB.

The fugitive emissions rates in the EI of the Tier I renewal application using different emissions estimation method are higher than the fugitive emissions rates using PM<sub>10</sub> emissions estimation

method specified in *Air Quality Improvement Plan for Power and Bannock Counties dated May 1993*. We may need to look into this when renew the Tier II, issued December 3, 1999.

#### **Permit Condition 12.10**

In accordance with 40 CFR 63.600(b)(1), the requirements of 40 CFR 63, Subpart AA apply to the following emission points which are components of a wet-process phosphoric acid process line: reactors, filters, evaporators, and hot wells.

The emissions limit of total fluorides is taken from 40 CFR 63.602(a); it is applicable requirement in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Conditions 12.12 to 12.25)**

MRRR is specified in 40 CFR 63, Subpart AA. They are:

§63.604 Operating requirements (PC 12.12)

§63.605 Monitoring requirements (PCs 12.13 through 12.16)

§63.606 Performance tests and compliance provisions (PCs 12.17 through 12.19)

§63.607 Notification, recordkeeping, and reporting requirements (PCs 12.20 through 12.22)

§63.608 Applicability of general provisions (PC 12.25)

#### **Permit Condition 12.11**

In accordance with 40 CFR 63, Subpart AA - § 63.602 Standards for existing sources, no owner or operator shall introduce into any evaporative cooling tower any liquid effluent from any wet scrubbing device installed to control emissions from process equipment. This is an applicable requirement in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Conditions 12.11)**

MRRR is specified in 40 CFR 63, Subpart AA - § 63.602 Standards for existing sources. It reads as follows:

Each owner or operator of an affected source subject to 40 CFR 63.602(e) must certify to the Administrator annually that he/she has complied with the requirements contained in this section.

#### Permit Condition 12.1

PC 12.1 is old PC 12.1.2

#### Permit Condition 12.3

The emissions limits in PC 12.3 are included in the SIP under 40 CFR 52.670 (d) that is added to the citation of the permit condition. It reads as follows:

“12.3 ...

[Tier II Permit No. 077-00006, 12/3/99; **40 CFR 52.670 (d), 8/14/06**]

#### Permit Condition 12.5

According to the information in the Tier II issued December 3, 1999, the emissions are determined as in *Air Quality Improvement Plan for Power and Bannock Counties dated May 1993*. PC 12.5 is revised:

“...In addition, they shall not exceed 0.01 lb/hr and 0.03 T/yr, as determined in *Air Quality Improvement Plan for Power and Bannock Counties dated May 1993* in Simplot’s June 29, 2000 Tier I/II application Appendix D, Air Emissions Inventory.”

Permit Conditions 12.6 and 12.8

Old PCs 12.7 and 12.14 are re-numbered as PCs 12.6 and 12.8.

Permit Condition 12.7

The PC 12.7 is old PC 12.13. Requirements in PC 12.7 are in the SIP 40 CFR 52.670 (d), 8/14/06. The citation of PC 12.7 is revised to add 40 CFR 52.670 (d), 8/14/06.

Permit Condition 12.7.1

The PC 12.7.1 is old PC 12.13.1. The source test required to be conducted “within 12 months of, or 12 months prior to, December 24, 2002” was conducted on December 3 and 4, 2001 according to the information provided by staff at Pocatello Regional Office through email on 4/25/2011. The source test requirements for 2003 to 2005 are fulfilled according to the information provided by staff at Pocatello Regional office through email on 12/8/2010.

DEQ received Simplot’s Tier I minor modification application on September 30, 2005. In the submittal, Simplot provided 2004 and 2005 PM<sub>10</sub> emissions rates measured using EPA Methods 5 and 202.

The following table summarizes the source test data from Simplot’s 2005 application and DEQ’s emissions test review letters. The source tests were conducted using EPA Methods 5 and 202.

Permit Limit (From phosphoric acid plant No. 400 stack. Limit is from Tier II issued 12/3/1999)	From 2005 Submittal		From DEQ’s emissions test review letters					
	2004	2005	2006	2007	2008	2009	2010	2011
2.77 lb/hr	2.99	3.07	3.45	2.79	3.18	2.88	4.04	1.13

Second, third, and fourth paragraphs of PC 12.7.1 are removed, and first paragraph of PC 12.7.1 is revised. PC 12.7.1 reads as follows:

~~“The permittee shall conduct compliance tests within 12 months of, or 12 months prior to, December 24, 2002 to demonstrate compliance with the PM and PM<sub>10</sub> hourly emissions limits required in Permit Conditions 12.2 and 12.3. After the first compliance test, t~~ The permittee shall conduct a compliance test once per annum to demonstrate compliance with hourly PM and PM<sub>10</sub> emissions limits in Permit Conditions 12.2 and 12.3.

**[IDAPA 58.01.01.322.06, 5/1/94; Tier II Permit No. 077-00006, 12/3/99; 40 CFR 52.670 (d), 8/14/06]**

~~During calendar years 2003, 2004, and 2005, compliance with the PM<sub>10</sub> emissions limit in Permit Condition 12.3 shall be determined by conducting a Method 5 performance test on the belt filter scrubber stack. The PM<sub>10</sub> fraction of the PM emission rate determined during the test shall be determined by multiplying the PM emission rate by a 0.82 conversion factor.~~

~~During calendar years 2004 and 2005, Method 5 and 202 performance tests shall be conducted on the belt filter scrubber stack in addition to the Method 5 test. All performance testing shall be conducted in accordance with Permit Condition 2.10.~~

~~No later than September 30, 2005, the permittee shall submit a permit application to revise the PM<sub>10</sub> emissions limits to reflect the results of the Method 5 and 202 performance tests. The permit application shall contain justification for each emission limit proposed. Once DEQ issues a permit with revised PM<sub>10</sub> emissions limits, compliance with PM<sub>10</sub> emissions limit in Permit Condition 12.3 shall be determined by source testing using Methods 5 and 202 on the belt filter scrubber stack.”~~

#### New Permit Condition 12.9

The PC 12.9 is taken from 40 CFR 63.600. It emphasizes that the affected sources for this regulation are components of a wet-process phosphoric acid process line: reactors, filters, evaporators, and hot wells.

#### Permit Condition 12.10

PC 12.10 is old PC 12.1.2.

#### New Permit Condition 12.11

This is taken from 40 CFR 63.602. It is an applicable requirement and is added to the permit.

#### Permit Conditions 12.12 through 12.25

Old PCs 12.6, 12.8, 12.9, 12.10, 12.11, 12.12, 12.12.1, 12.12.2, 12.15, 12.16, 12.17, 12.18, 12.19, and 12.20 are re-numbered as PCs 12.12 through 2.25, respectively.

## **EMISSIONS UNIT GROUP 11: PLANT ROADS**

### **Permit Condition 13.1**

Pound per hour and ton per year emissions limits for fugitive PM and PM<sub>10</sub> are taken from Appendix B of Tier II Permit No. 077-00006 issued on December 3, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Condition 13.2)**

The Tier II Permit No. 077-00006, issued on December 3, 1999, specified the methods to determine compliance with PM and PM<sub>10</sub> fugitive emissions limits. They are in *Air Quality Improvement Plan for Power and Bannock Counties* dated May 1993.

The fugitive emissions rates in the EI of the Tier I renewal application, using different emissions estimation method, are higher than the fugitive emissions rates using PM<sub>10</sub> emissions estimation method specified in *Air Quality Improvement Plan for Power and Bannock Counties dated May 1993*. We may need to look into this when renew the Tier II, issued December 3, 1999.

## **EMISSIONS UNIT GROUP 12: RECLAIM COOLING TOWER CELLS PLANT (DIRECT CONTACT) /EVAPORATIVE COOLING TOWERS**

### **Permit Conditions 14.1 and 14.2**

Particulate matter and PM<sub>10</sub> emissions limits are taken from the Tier II issued on December 3, 1999.

PC 14.2 is in Idaho SIP. The citation of 40 CFR 52.670 (d), 8/14/06 is added to the permit. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

The PWR limitation applies to these cooling towers. It is an applicable requirement in accordance with IDAPA 58.01.01.008.03. According to Simplot's June 2000 Tier I/II application, the cooling towers were last modified after October 1, 1979. Therefore, IDAPA 58.01.01.701 applies to the process equipment. The PRW limitation is included in the Tier I operating permit.

#### Permit Condition 14.1.2

EPA commented that PWR was not written as a separate permit condition when a more stringent standard existed, but this might not be the case at low process levels because the PWR limit varies with the process weight. PC 14.1.2 is revised to address EPA's comments. It reads as follows:

**“14.1.2 No person shall emit PM to the atmosphere from any process or process equipment commencing operating on or after October 1, 1979, particulate matter in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in lb/hr, and PW is the process weight in lb/hr:**

**a. If PW is less than 9,250 lb/hr,**

$$E = 0.045(PW)^{0.60}$$

**b. If PW is equal to or greater than 9,250 lb/hr,**

$$E = 1.10(PW)^{0.25}$$

~~Based on the process weight rate equation the limit is 40.7 lb/hr per cell using a flowrate of 3,750 gpm per cell (30,000 gpm to the cooling tower). Because Condition 14.1.1 is more stringent, compliance with Condition 14.1.1 shall be deemed compliance with Condition 14.1.2.~~

#### **MRRR – (Permit Conditions 14.5 and 14.6)**

Demonstrating compliance with PM and PM<sub>10</sub> emissions limits was specified in the Tier II issued on December 3, 1999 and the settlement agreement dated 6/10/04, or established in accordance with IDAPA 58.01.01.322.01, 06, and 07. The following summarizes the methods to demonstrate compliance:

- Operate the mist eliminator as described in the Tier II Permit No. 077-00006 issued on December 3, 1999 and required under the authority of IDAPA 58.01.01.322.01, 06, and 0.7. (PC 14.5)
- Conduct source testing as specified in Tier II OP issued on December 3, 1999 and the settlement agreement dated 6/10/04. (PC 14.6)

Simplot commented on the 2<sup>nd</sup> facility draft permit regarding PWR: “*The cooling towers maintain full water flow regardless of the operational status of the Phosphoric Acid Plant. Operation at lower levels cannot be sustained.*” DEQ staff does not foresee the exceedance of the PWR limitation either; therefore, no additional monitoring requirements are required for the PWR limitation.

#### Permit Condition 14.5

The primary purpose of the mist eliminators is to retain water in the system (which would otherwise need to be replaced with make-up water, increasing the overall cost of the process) and to prevent excess deposition of salts in the area of the plant near the cooling towers. By reducing the water droplets leaving the system, mist eliminator reduces emissions of PM and total fluorides.

Under the authority of IDAPA 58.01.01.322.01, 06, and 07, Simplot is required to operate the mist-eliminator control device at all times during operation of the reclaim cooling towers and in accordance

with the Operations and Maintenance (O&M) manual. Simplot is required to develop an O&M manual for the mist-eliminator. The language of O&M manual is taken from DEQ’s internal guidance, *Guidance on Establishing Permit Conditions*.

The revised PC 14.5 reads as follows:

“14.5 The permittee shall operate the mist-eliminator at all times during operation of the reclaim cooling towers **and in accordance with the O&M) manual.**

**Within 60 days of permit issuance, the permittee shall have developed and submitted to DEQ an O&M manual for the mist-eliminator which describes the procedures that will be followed to comply with the manufacturer specifications for the mist-eliminator and the following:**

**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 of the mist-eliminator.**

**At a minimum, the manual shall include:**

- **Inspection and maintenance schedule**
- **The items to be inspected**

**The manual shall be a permittee developed document independent of the manufacturer supplied operating manual.”**

Simplot commented on the O&M manual that requires Simplot to include *summaries of procedures included in the manufacturer supplied operating manual*. Simplot stated that “*Simplot is not aware of a manufacturer supplied operating manual...*” That specific requirement in the facility draft permit is removed.

Permit Condition 14.6

DEQ received Simplot’s Tier I minor modification application on September 30, 2005. In the submittal, Simplot provided 2004 and 2005 PM<sub>10</sub> emissions rates measured using EPA Methods 5 and 202. According to Simplot’s comments on the 2<sup>nd</sup> facility draft permit, the testing method used was modified EPA Methods 5 and 202.

The following table summarizes the source test data in lb/hr from Simplot’s 2005 application and DEQ’s emissions test review letters. The source tests were conducted using modified EPA Methods 5 and 202 according to Simplot’s comments on the 2<sup>nd</sup> facility draft permit.

Permit Limit	From 2005 Submittal		From DEQ’s Emission Test Review Letters					
	2004	2005	2006	2007	2008	2009	2010	2011
3.53 lb/hr for each cell	17.81		26.3	28.1		18.07	16.4	
Cell 1								
Cell 2		24.93	22.2		26.56	13.9		10.1
Cell 3		29.09		23.9	17.92		18.4	
Cell 4	13.4		27.9	17.5		33.85	7.9	
Cell 5		21.93	22.5		30.44	10.4		7.55
Cell 6		12.85		20.8	14.25		7.92	
Cell 7	5.8	14.19	20.8	15.9	9.99	19.49	10.1	8.85
Cell 8		12.27	13	9.9	10.0	6.3	4.8	

Old Permit Condition 14.6.1

The old PC 14.6.1 is in Idaho SIP, 40 CFR 52.670 (d), 8/14/06.

Test requirement in the first paragraphs of old PC 14.6.1 was developed under the authority of IDAPA

58.01.01.322.06. The source testing required to be conducted “within 12 months of, or 12 months prior to, December 24, 2002” was conducted on May 12 through 17, 2003 according to the information provided by staff at Pocatello Regional Office through email on 4/25/2011.

The rest of the testing requirements in old PC 14.6.1 are taken from the settlement agreement signed on June 10, 2004. The source testing requirements for 2003 to 2005 are fulfilled according to the information provided by staff at Pocatello Regional office through email on 12/8/2010.

Old PC 14.6.1 contents are removed and read as “Reserved.”

~~“The permittee shall conduct a compliance test within 12 months of, or 12 months prior to, December 24, 2002 to demonstrate compliance with the PM and PM<sub>10</sub> hourly emissions limits in Permit Conditions 14.1 and 14.2.~~

[IDAPA 58.01.01.322.06, 5/1/94]

~~During calendar years 2003 and 2004, compliance with the PM<sub>10</sub> emissions limit in Permit Condition 14.2 shall be determined by conducting a Method 5 compliance test on one of the cooling tower cells in each of the three reclaim cooling towers. During calendar year 2005, six cooling tower cells will be tested. The PM<sub>10</sub> fraction of the PM emission rate determined during the test shall be determined by multiplying the PM emission rate by a 0.20 conversion factor.~~

~~During calendar years 2004, Method 5 and 202 tests shall be conducted on one of the cooling tower cells in each of the three reclaim cooling towers in addition to the Method 5 test. During calendar year 2005, six cooling cells will be tested. All compliance testing shall be conducted in accordance with Permit Condition 2.10.~~

~~No later than September 30, 2005, The permittee shall submit a permit application to revise the PM<sub>10</sub> emissions limits to reflect the results of the Method 5 and 202 tests. The permit application shall contain justification for each emission limit proposed. Once DEQ issues a permit with revised PM<sub>10</sub> emissions limits, compliance with Permit Condition 14.2 shall be determined by annual source testing using Methods 5 and 202 on two of the cooling tower cells in each of the three reclaim cooling towers. The annual source test shall be conducted as specified in Permit Condition 14.6.2.”~~

#### Permit Condition 14.6.2

The PC 14.6.2 is old PC 14.8. It is taken from the settlement agreement signed 6/10/04. The citation of PC 14.6.2 “Settlement Agreement, 6/10/04” is replaced with “IDAPA 58.01.01.322.06 and .09, 5/1/94.”

For clarification purpose to address Simplot’s comments, “for PM and PM<sub>10</sub> compliance tests” is added to PC 14.6.2. It reads as follows:

“14.6.2 In and after 2005, **for PM and PM<sub>10</sub> compliance tests**, the permittee shall test two cooling tower cells in each of the three reclaim cooling towers...”

#### Permit Condition 14.6.3

The PC 14.6.3 is taken from Tier II OP No. 077-00006 issued December 3, 1999. The permit specifies that the permittee evaluates visible emissions during each PM<sub>10</sub> compliance test.

#### **Permit Condition 14.3**

Total fluoride emissions limits in Permit Condition 14.3 are taken from the Tier II operating permit issued on December 3, 1999. They are applicable requirements in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Conditions 14.4, 14.5, and 14.7)**

Demonstration of compliance with total fluoride emissions limits was specified in the existing Tier II

issued on December 3, 1999, 40 CFR 63, Subpart AA, and the 6/10/04 settlement agreement, or established in accordance with IDAPA 58.01.01.322.01, 06, and 07. The following summarizes the methods to demonstrate compliance:

- No scrubber water is introduced to cooling tower in accordance with 40 CFR 63.602(e). (PC 14.4)
- Operate the mist eliminator as described in Tier II Permit No. 077-00006 issued on December 3, 1999 and required under the authority of IDAPA 58.01.01.322.01, 06, and 07. (PC 14.5)
- Conduct source testing as required in the consent order signed on 4/13/07. (PC 14.7)

#### Permit Condition 14.7

Old PC 14.7.1 is removed because the testing requirement is fulfilled. According to Simplot's response to DEQ's incompleteness letter received on October 19, 2007, Simplot conducted the performance test during the period from August 8 to 22, 2002.

Old PC 14.7.2 is removed because it was included by mistake.

Old PC 14.7.3, originally taken from Tier II issued 12/3/99, is replaced with the more stringent testing requirements, taken from the consent order signed on 4/13/07. 7B of the consent order reads "*In order to fully resolve Violation Nos. 1 & 2, Simplot shall modify sections 14.7 and 14.8 of its Tier I Operating Permit, through the Tier I Operating Permit Renewal Process, to incorporate the performance testing requirements appearing in Section 7.B.1 below...*" The testing requirements in the 4/13/2007 consent order are included in the renewal Tier I as PC 14.7 as follows:

#### **"14.7 Total Fluorides Compliance Tests**

**To demonstrate compliance with the hourly total fluorides emissions limit in Permit Condition 14.3, the permittee shall conduct performance testing on three reclaim cooling tower cells during the first six months of the calendar year, and three different reclaim cooling tower cells during the last six months of the calendar year. Testing shall be conducted in such a manner that: 1) at least 60 days separate each set (three cells) of reclaim cooling tower cell tests; 2) testing of the cells is conducted on a rotational basis, such that the permittee shall test different cells until all of the reclaim cooling tower cells have been tested. A total of six reclaim cooling tower cells will be tested in each calendar year. During the next calendar year the two cells not tested previously will be included in the next years testing; and 3) once all of the reclaim cooling tower cells have been tested, the selection process shall start again.**

**[IDAPA 58.01.01.322.06, 07, 5/1/94]"**

It is decided that Permit Condition 14.7 would use IDAPA 58.01.01.322.06, and .07 as an authority in the citation rather than the 4/13/2007 consent order as an authority in the citation.

#### **Permit Condition 14.4**

Simplot shall not introduce any liquid effluent from any wet scrubbing device that controls emissions from process equipment into the reclaim cooling towers according to 40 CFR 63.602(e). This is an applicable requirement for the Tier I operating permit in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Condition 14.4)**

Demonstration of compliance with this requirement was specified in 40 CFR 63, Subpart AA and established in accordance with IDAPA 58.01.01.322.06, 07, and 08. The following summarizes the method to demonstrate compliance:

- Provide compliance certification to the EPA administrator. (PC 14.4)

#### Old Permit Condition 14.10

The requirement in the old PC 14.10 was fulfilled prior to 12/24/2002 according to the information provided in Simplot's comments on the facility draft received on October 3, 2011. Old PC 14.10 is removed.

~~"The permittee shall identify the entire flow path of all scrubber output and submit it to DEQ on or before the issuance of this permit."~~

#### New Permit Condition 14.8

The facility would be subject to 40 CFR 63, Subpart Q if the facility uses chromium-based water treatment chemicals. New PC 14.8 is added to the Tier I renewal as follows:

**"14.8 No owner or operator of an industrial process cooling tower shall use chromium-based water treatment chemicals in any affected industrial process cooling tower.**

[40 CFR 63.402]"

### **EMISSIONS UNIT GROUP 13: SUPERPHOSPHORIC ACID PLANT / SUPERPHOSPHORIC ACID PROCESS LINE**

#### **Permit Condition 15.1**

Fugitive emissions limits are taken from Tier II Permit No. 077-00006 issued on December 3, 1999. They are applicable requirements for Tier I operating permit in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Condition 15.1)**

According to the application, the fugitive emissions are reduced due to changes at the plant since the original limit was set. The process is now enclosed, and the emissions used to be fugitive are now collected and sent to the scrubber. Fumes from the second and third stage aging tanks are now vented to the primary control scrubber prior to discharging to the atmosphere. The uncaptured emissions are estimated to be about 2% of the emissions limits.

Simplot is required to maintain the documentation that lists the methods to control fugitive to demonstrate compliance with the limits.

To change the emissions limits in PC 15.1, Simplot can request the change to the underlying permit (i.e., Tier II Permit No. 077-00006 issued on December 3, 1999.)

#### Permit Condition 15.1

PC 15.1 is old PC 15.1.2 with changes. It reads as follows:

~~"Fugitive emissions of total fluorides from this process shall be reasonably controlled and shall not exceed 0.37 lb/hr and 1.62 T/yr. **The permittee shall maintain the documentation that lists the methods to control fugitive to demonstrate compliance with the limits.** using the method specified in SIP inventory, which can be found in Simplot's June 29, 2000 Tier I/II application, Appendix D."~~

The new language is based on a program decision made for demonstrating compliance with the limits

for fugitive emissions in Tier I. More discussions can be found in Issues List, Section 8, Path Forward 2b) and 2c).

### **Permit Condition 15.2**

The NOx emissions limits are taken from Tier II Permit No. 077-00006 issued on December 3, 1999, originally from PTC No.1260-00006 issued on April 17, 1990. They are applicable requirements for Tier I operating permit in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Conditions 15.4, 15.5)**

Demonstrating compliance with the emissions limits is specified in the Tier II Permit No. 077-00006 issued on December 3, 1999 and PTC No.1260-00006 issued on April 17, 1990, or is developed under the authority of IDAPA 58.01.01.322.01. The following summarizes the methods to demonstrate compliance:

- Operate the extended absorber system in accordance with Simplot’s Standard Operating Procedures for the system (PC 15.4)
- Perform maintenance on the extended absorber system when visible emissions from the system exceed 10% opacity (PC 15.5)

### Permit Conditions 15.4 and 15.5

The PCs 15.4 and 15.5 are old PCs 15.5 and 15.6. “PTC No. 1260-00006, 4/17/90” is an underlying permit, and is added to the citation for PC 15.5. It was missed in the citation for the existing Tier I issued November 8, 2005.

“Extended absorber scrubber” and “extended absorber system” are used interchangeably. To avoid confusion between the extended absorber system and the primary scrubber, PC 15.4 is revised and reads as follows:

“The extended absorber ~~scrubber~~**system** shall be operated according to Simplot’s Standard Operating Procedures (SOPs) for the **extended absorber system**~~scrubber~~.”

The PC 15.5 is revised and reads as follows:

“Maintenance on the extended absorber ~~scrubber~~**system** shall be performed when visible emissions from the system exceed 10% opacity for no more than three minutes aggregate in any 60-minute period, as determined using the procedures in IDAPA 58.01.01.625.04.”

### **Permit Condition 15.3**

The CO emissions limits are taken from Tier II Permit No. 077-00006 issued on December 3, 1999, originally from PTC No.1260-00006 issued on April 17, 1990. They are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Condition 15.6)**

Compliance demonstration of the emissions limits is specified in the Tier II Permit No. 077-00006 issued on December 3, 1999 and is developed under the authority of IDAPA 58.01.01.322.06.

The applicant performed source testing on December 9, 2004. The source test result was approved by DEQ on April 11, 2005. The CO emissions (post extended absorption system) are 1.8 lb/hr at 43 T/hr of

P<sub>2</sub>O<sub>5</sub> equivalent production rate. The emissions factor is developed based on the source test result. It is (1.8 lb CO /hr) / (43 T/hr) = 0.042 lb CO/ton of equivalent P<sub>2</sub>O<sub>5</sub> feed.

DEQ is not able to remove this permit condition as requested by Simplot because for each emissions limit in the permit, the permittee is required to demonstrate continuous compliance. This permit condition cannot be removed; however, it is revised as in the following.

#### Permit Condition 15.6

PC 15.6 is old PC 15.15 with changes. It reads as follows:

~~“On or before December 31, 2004~~The permittee shall either conduct a compliance test to measure CO emissions from the SPA extended absorption scrubber stack utilizing a pollutant specific method promulgated by the EPA, a DEQ approved alternative, or use DEQ’s emission estimation methods used in the analysis of the “Extended Absorption Scrubber,” PTC No. 077-00006, dated April 17, 1990, ... **calculate emissions using emissions factor of 0.042 lb CO/ton of equivalent P<sub>2</sub>O<sub>5</sub> feed obtained during December 9, 2004 source testing** to demonstrate compliance with the CO limits in Permit Condition 15.3. **The lb/hr shall be determined by multiplying the emissions factor by the actual or allowable equivalent P<sub>2</sub>O<sub>5</sub> feed rate of the superphosphoric acid plant. The ton-per-year rate shall be determined by multiplying the actual or allowable (if actual is not available) pound-per-hour emission rate by the actual hours per year the process(es) venting to the stack operate(s).”**

#### **Permit Condition 15.7**

In accordance with 40 CFR 63.600(b)(5), the requirements of 40 CFR 63, Subpart AA apply to the following emission points which are components of a superphosphoric acid plant process line: evaporators, hot wells, acid sumps, and cooling tanks.

The emissions limit of total fluorides is taken from 40 CFR 63.602(b)(1); it is an applicable requirement in accordance with IDAPA 58.01.01.008.03.

#### **MRRR – (Permit Conditions 15.9 - 15.18)**

Demonstrating compliance of total fluorides emissions limits is specified in the Tier II Permit No. 077-00006 issued on December 3, 1999 and is provided in the 40 CFR 63, Subpart AA. The following summarizes the methods to demonstrate compliance:

- §63.604 Operating requirements (PC 15.9)
- §63.605 Monitoring requirements (PCs 15.10 through 15.13)
- §63.606 Performance tests and compliance provisions (PC 15.14)
- §63.607 Notification, recordkeeping, and reporting requirements (PC 15.15)
- §63.608 Applicability of general provisions (PC 15.18)

#### Permit Conditions 15.7 and 15.9 – 15.18

PCs 15.7 and 15.9 – 15.18 are old PCs 15.4, 15.7 -15.10, 15.12.1, 15.13, 15.17, 15.18, 15.19, 15.20, 15.21, and 15.22. Though permit numbers are different, the contents are the same.

#### Permit Condition 15.14.1

The content of new PC 15.14.1 is the same as that in old PC 15.12.

In the application, Simplot requested to reduce the testing frequency of the superphosphoric acid plant.

DEQ is not able to change it because it is required in 40 CFR 63, Subpart AA, and it is an applicable requirement for Tier I.

#### Old Permit Condition 15.11

Old PC 15.11 was developed under the authority of IDAPA 58.01.01.322.06 & .07. It duplicates facility-wide PC 2.8. It is removed.

~~“15.11—The permittee shall conduct a weekly visible emissions inspection of the scrubber stack in accordance with Permit Condition 2.8.”~~

#### Old Permit Condition 15.14

Old PC 15.14 is removed. “15.14——Reserved.”

#### Old Permit Condition 15.16

Old PC 15.16 was removed as a result of removing old PC 15.11. Old PC 15.16 was developed under the authority of IDAPA 58.01.01.625. It duplicates PCs 2.7 and 2.8. The citation of “Tier II Permit No. 077-00006, 12/3/99” in old PC 15.16 was a mistake. The requirement in old PC 15.16 was not found in the underlying Tier II issued on December 3, 1999.

### **Permit Condition 15.8**

In accordance with 40 CFR 63, Subpart AA - § 63.602 Standards for existing sources, no owner or operator shall introduce into any evaporative cooling tower any liquid effluent from any wet scrubbing device installed to control emissions from process equipment. This is an applicable requirement in accordance with IDAPA 58.01.01.008.03.

### **MRRR – (Permit Conditions 15.8)**

MRRR is specified in 40 CFR 63, Subpart AA - § 63.602 Standards for existing sources. It reads as follows:

Each owner or operator of an affected source subject to 40 CFR 63.602(e) must certify to the Administrator annually that he/she has complied with the requirements contained in this section.

#### Table 15.1 of the permit

In Simplot’s response to DEQ’s incompleteness letter received on October 19, 2007, Simplot provided an updated process description for the superphosphoric acid plant. The revised process description is included in the renewal Tier I OP. Table 15.1 is revised to reflect that the emissions from the second and third stage aging tanks are now controlled by the primary control scrubber.

#### Summary Description

Process description of superphosphoric plant is revised and is based on the information in the application, Simplot’s response to DEQ’s incompleteness letter dated October 19, 2007, and Tier II issued on December 3, 1999.

## Emissions Unit Group 14: SULFURIC ACID PLANT NO. 300

### Permit Condition 16.1

Sulfur dioxide emissions limits in lb/hr and T/yr in PC 16.1.1 are taken from PTC No. 077-00006 issued on June 15, 2001; it is also included as EPA-Approved Idaho Source-Specific Requirements in Idaho SIP, 40 CFR 52.670(d) on July 13, 2006 with effective date of August 14, 2006. The SO<sub>2</sub> emissions limit of 4 lbs/T of 100% sulfuric acid produced is taken from 40 CFR 60, Subpart H that is included in the PTC issued on June 15, 2001. The SO<sub>2</sub> emissions limit of 28 lbs/T of 100% sulfuric acid produced is taken from IDAPA 58.01.01.846.

The above emissions limits are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

#### Permit Condition 16.1.1

Citation has been updated. It is [PTC No. 077-00006, 6/15/01, **40 CFR 52.670 (d), 8/14/06**].

#### Permit Condition 16.1.2

For clarification, PC 16.1.2 is revised and reads as follows:

“Emissions of SO<sub>2</sub> shall not exceed 4 lb/T of 100% sulfuric acid produced **in accordance with 40 CFR 60.82.**”

#### New Permit Condition 16.1.3

This applicable requirement was missed in the initial Tier I and is added to the renewal Tier I. It reads as follows:

“**Emissions of SO<sub>2</sub> shall not exceed 28 lb/T of 100% sulfuric acid produced in accordance with IDAPA 58.01.01.846.**”

### **MRRR – (Permit Conditions 16.8 – 16.11 and 16.13 – 16.18)**

Demonstrating compliance with SO<sub>2</sub> emissions limits is specified in the PTC issued on June 15, 2001, 40 CFR 60, Subpart H, and 40 CFR 64 (CAM). The following summarizes the compliance methods:

- Comply with the daily throughput limit. (PC 16.8)
- Comply with scrubber operational requirements. (PC 16.9)
- Use a CEMS to measure SO<sub>2</sub> emissions. (PC 16.10).
- Perform annual compliance test. (PC 16.11)
- Monitor and record throughput and scrubber operations. (PC 16.13)
- Submit performance test reports. (PC 16.14)
- Submit excess emissions reports. (PC 16.16)
- Comply with NSPS notification requirements. (PC 16.17)
- Comply with CAM requirements. In accordance with 40 CFR 64.3(d)(2)(ii), the permittee is deemed to satisfy the monitoring requirements in 40 CFR 64.3(a) and (b) when the permittee complies with the CEM requirement in Permit Condition 16.10. (PC 16.18.1)

#### Permit Condition 16.9

40 CFR 60.11(d) is readily available at [http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl). It is no longer included in the permit as

Appendix B. The PC 16.9 is revised to reflect this change. The PC 16.9 now reads as follows:

“At all times, including periods of startup, shutdown, and malfunction, owners and operators shall... in accordance with 40 CFR 60.11(d), ~~as contained in Appendix B.~~”

#### Permit Condition 16.10

The underlying permit condition 4.1 in the PTC issued on June 15, 2001 was missed in the initial Tier I. It is added to the renewal Tier I as first paragraph of PC 16.10.

Idaho SIP, 40 CFR 52.670(d) (71 FR 39574, 7/13/06, effective 8/14/06) includes the rest of the PC 16.10. PC 16.10 is revised and reads as follows:

**“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 Permit Condition 16.11.**

[PTC No. 077-00006, 6/15/01]

#### **In accordance with 40 CFR 60.84**

(a) A continuous monitoring system for ...

[40 CFR 60.84, 40 CFR 52.670 (d), 8/14/06]”

#### Permit Condition 16.11

For clarification, a title is added to PC 16.11: “**Initial Performance Test and Annual Compliance Test**”

In the application, Simplot requested to change annual source test frequency. DEQ is not able to change it because it is a requirement from the underlying PTC issued on June 15, 2001 and is in Idaho SIP, 40 CFR 52.670 (d) (71 FR 39574, 7/13/06, effective 8/14/06.)

#### Permit Condition 16.11.1

For clarification purpose, the following minor changes are also made to PC 16.11.1:

“16.11.1 Sulfur Dioxide, Sulfuric Acid Mist, **and Visible Emissions**

...

**In accordance with 40 CFR 60.85(b)**, the owner or operator shall determine compliance with the SO<sub>2</sub>, acid mist, and visible emission standards in Permit Conditions 16.1, 16.2, and 16.6...”

#### Permit Condition 16.11.5

In the application, Simplot requested to change “each performance test run” to “each PM/PM<sub>10</sub> performance test run.” DEQ is not able to change it because it is a requirement from the underlying PTC issued on June 15, 2001 and is included in SIP, 40 CFR 52.670 (d) (71 FR 39574, 7/13/06, effective 8/14/06.)

In addition, Sulfuric Acid Plant No.300 is subject to 40 CFR 60, Subpart H. The standard for acid mist (40 CFR 60.83) includes a numeric standard and an opacity standard. 40 CFR 60.85 requires the facility

to demonstrate compliance with both SO<sub>2</sub> acid mist and visible emission standards. Visible observation during source testing shall not be limited to during each PM/PM<sub>10</sub> performance test run.

#### New Permit Condition 16.16

The PC 16.16 is taken from PC 5.2 of the underlying PTC issued on June 15, 2001. It was missed in the initial Tier I.

#### **“16.16 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).**

[PTC No. 077-00006, 6/15/01]”

#### New Permit Condition 16.17

The PC 16.17 is taken from PC 5.3 of the underlying PTC issued on June 15, 2001. It was missed in the initial Tier I. Simplot may provide supporting document to demonstrate completion of the requirements. “Requirement is fulfilled” can then be added to PC 16.17 to avoid future questions.

#### **“16.17 NSPS Notifications**

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

- **Notification of the date reconstruction commenced, postmarked no later than thirty (30) days after such date.**
- **Notification of the actual date of initial startup of the modified facility, postmarked no later than fifteen (15) days after such date.**
- **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.**
- **Notification of the date upon which demonstration of the continuous monitoring system performance commences.**
- **Notification of the anticipated date for conducting the opacity observations.**
- **Notification of any performance tests at least thirty (30) days prior to the test.**

[PTC No. 077-00006, 6/15/01]”

In Simplot’s comments on the 2<sup>nd</sup> facility draft permit, Simplot stated that the No.300 Sulfuric Acid Plant did not trigger NSPS requirements. The applicability determination of 40 CFR 60, Subpart H was made in 2001 for the plant’s 2001 restoration project, and the 2001 restoration project triggered 40 CFR 60 Subpart H. Detailed discussions can be found in the technical memorandum for the 6/15/2001 PTC.

#### **Permit Condition 16.2**

Emissions limits for sulfuric acid mist in lb/hr and T/yr in PC 16.2.1 are taken from PTC No. 077-00006 issued on June 15, 2001. The acid mist limit of 0.15 lbs/ton of 100% sulfuric acid in PC 16.2.2 is taken

from 40 CFR 60, Subpart H. The above emissions limits are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

**MRRR – (Permit Conditions 16.6, 16.8, 16.11, 16.14, 16.16, 16.17, and 16.18)**

Demonstrating compliance with emissions limits for acid mist was established in the PTC No. 077-00006 issued on June 15, 2001, 40 CFR 60, Subpart H, and 40 CFR 64. Compliance test requirement is also included in Idaho SIP 40 CFR 52.670(d). Detailed discussion can be found in the technical memorandum of the 6/15/01 PTC and its application. The following summarizes the compliance methods:

- Comply with visible emissions limits. (PC 16.6)
- Complying with daily throughput limits. (PC 16.8)
- Perform annual compliance test. (PC 16.11)
- Submit performance test reports. (PC 16.14)
- Submit excess emissions reports. (PC 16.16)
- Comply with NSPS notification requirements. (PC 16.17)
- Comply with CAM requirements. (PC 16.18)

Permit Condition 16.6

To clarify the authority of the requirement, PC 16.6 is revised and reads as follows:

**“In accordance with 40 CFR 60.83(a)(2), eEmissions from the No. 300 sulfuric acid plant stack shall not exceed 10% opacity as determined by following EPA Reference Method 9. In accordance with 40 CFR 60.11(c), tThe opacity standards set forth here shall apply at all times except during periods of startup, shutdown, and malfunction. In accordance with 40 CFR 60.11(b), fFor purposes of initial compliance, the minimum total time of observations shall be three hours (a total of 30 six-minute averages) using EPA Reference Method 9.”**

[40 CFR 60.83(a)(2); 40 CFR 60.11(b)&(c); PTC No. 077-00006, 6/15/01]

New Permit Condition 16.18.2

Simplot provided the following information in the response to DEQ’s incompleteness letter received on October 19, 2007:

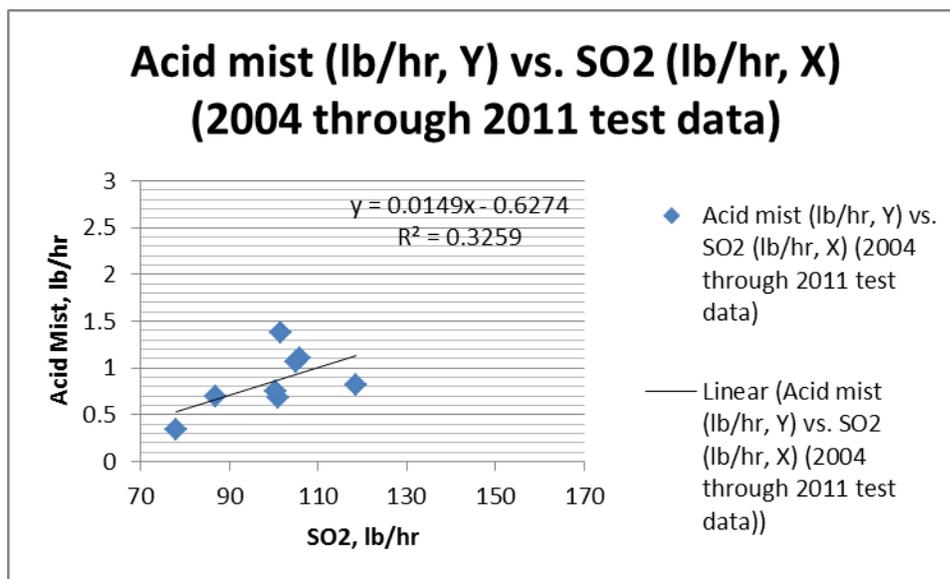
*“Simplot has reviewed the scrubbing system operation with the manufacturer and has concluded that the pH of the scrubbing liquor does not appreciably affect sulfuric acid mist emissions from the AmmSOx scrubber. Sulfuric acid mist emissions are primarily determined by the presence of the mist eliminators.*

*The mist eliminators required little maintenance and no continuous compliance indicators could be determined; therefore, only periodic inspections of the mist eliminators are being proposed.”*

Simplot provided the mist eliminators inspection details in the response to DEQ’s incompleteness letter received on October 19, 2007. The inspection details on the mist eliminators of the Ammsox packed-bed ammonia scrubber is used to develop CAM requirements for compliance with H<sub>2</sub>SO<sub>4</sub> acid mist emissions limits that is the new Permit Condition 16.18.2.

In the response to DEQ’s incompleteness letter received on October 19, 2007 and the comments on the 1<sup>st</sup> and 2<sup>nd</sup> facility draft permits received on October 3, 2011 and January 27, 2012, Simplot proposed to use SO<sub>2</sub> hourly emissions as an indicator and SO<sub>2</sub> permit limit of 170 lb/hr as a trigger value for acid mist CAM plan.

DEQ is not able to use this approach for acid mist CAM plan at this time because Simplot did not provide analysis to support the proposed CAM plan, and the source test data as shown in the following chart do not support the conclusion that as long as the SO<sub>2</sub> emissions are less than 170 lb/hr, the acid mist emissions will be less than 3 lb/hr. In addition, the source test data do not support a correlation between acid mist and SO<sub>2</sub> emissions using Pearson Product Coefficient. Of course, the linear relationship does not exist. The R<sup>2</sup> (coefficient of determination) is only 0.3259; that means approximately 32.6 % of the variation in Y (acid mist) can be explained by variable X (SO<sub>2</sub>).



### Permit Condition 16.3

The PM<sub>10</sub> emissions limits in lb/hr and T/yr are established and specified according to the consent order signed on April 16, 2004. The PWR limitation for PM emissions is taken from IDAPA 58.01.01.701. These emissions limits are applicable requirements for Tier I in accordance with IDAPA Ammsox packed-bed ammonia scrubber 58.01.01.008.03.

Emissions limits in PC 16.3.1 were developed according to the consent order (also in Idaho SIP, 40 CFR 52.670 (d), 8/14/06) as described in the following:

Emissions of PM<sub>10</sub> from the No. 300 sulfuric acid plant stack shall not exceed

- hourly emissions limit determined by the following method
- annual emissions limit determined by the following method

The hourly PM<sub>10</sub> reasonably available control technology (RACT) emissions limit (pounds per hour) for the No. 300 sulfuric acid plant shall be set by conducting five performance tests on the sulfuric acid plant stack. The limit will be determined based on the 95% confidence interval: limit = average of five tests plus 1.96 times the standard deviation of the five tests. The annual PM<sub>10</sub> RACT limit (tons per year) shall be set by multiplying the pound per hour RACT limit by 8,760 hours per year and dividing by 2,000 pounds per ton. The first performance test shall be conducted prior to December 30, 2004, and tests shall be conducted annually thereafter. The sum of the emissions measured from Methods 5 and 202 shall be considered PM<sub>10</sub>. The hourly PM<sub>10</sub> emissions limit is based on 24-hour average according

to the 4/16/2004 consent order.

Using source test data, hourly and annual limits are developed. Hourly limit = average of (6.52, 9.8, 9.78, 6.5, 8.11) lb/hr + 1.96 x 1.64 (standard deviation) lb/hr = 11.36 lb/hr, and annual limit = 11.36 lb/hr x 8,760 hr/yr / 2,000 lb/T = 49.8 T/yr.

DEQ has determined that the consent order, signed on 4/16/04, constitutes RACT for PM<sub>10</sub> emissions and secondary aerosol (PM<sub>10</sub>) emissions of NO<sub>x</sub> and SO<sub>2</sub> in light of the attainment needs of the Portneuf Valley PM<sub>10</sub> non-attainment area.

For PC 16.3.2 PWR:

As long as the plant complies with the permitted PM<sub>10</sub> limit of 11.4 lb/hr, the plant will comply with PWR limitation. The following calculation supports the above statement.

Estimate PM emissions using the following information:

- According to 2009 source test data, the ratio of PM/PM<sub>10</sub> is 0.68 (i.e., 4.98 lb/hr / 7.35 lb/hr = 0.68.) PM emissions were measured using EPA method 5. PM<sub>10</sub> emissions are the sum of emissions measured using EPA method 5 and EPA method 202.
- Based on source test data, the average tested production rate was 72 tons 100% H<sub>2</sub>SO<sub>4</sub>/hr. The permitted production rate is 1,750 tons 100% H<sub>2</sub>SO<sub>4</sub>/day or 73 tons 100% H<sub>2</sub>SO<sub>4</sub>/hr, 24-hr average.
- The permitted PM<sub>10</sub> emissions rate is 11.4 lb/hr.
- One ton of sulfur can make 3.06 tons of 100% H<sub>2</sub>SO<sub>4</sub> stoichiometric (i.e., 98 (lb 100% H<sub>2</sub>SO<sub>4</sub> / lb-mol) / 32 (lb S/lb-mol) = 3.06 lb 100% H<sub>2</sub>SO<sub>4</sub>/1 lb S.)
- Assume EF is the same for different levels of production. This may not be a best assumption, but we do not have emissions information at lower production level.

The estimated PM EF = (0.68 PM/PM<sub>10</sub>) x (11.4 lb PM<sub>10</sub> /hr) / (72 tons 100% H<sub>2</sub>SO<sub>4</sub>/hr) x (3.06 tons 100% H<sub>2</sub>SO<sub>4</sub> / 1 ton S) x 1 ton S/2,000 lb S = 1.65 x 10<sup>-4</sup> lb PM/lb S.

The PM emissions rate can be estimated using:

Production level in T 100% H<sub>2</sub>SO<sub>4</sub>/ hr x converting factor (i.e., 1 T 100% H<sub>2</sub>SO<sub>4</sub>/hr x (1 T S/3.06 T 100% H<sub>2</sub>SO<sub>4</sub>) x (2,000 lb S / 1 T S) x EF for PM (i.e., 1.65 x 10<sup>-4</sup> lb PM/lb S.)

The following calculation results indicate that as long as the plant complies with the permitted PM<sub>10</sub> limit of 11.4 lb/hr, the plant will comply with process weight rate limitation.

Production (T/hr 100% H <sub>2</sub> SO <sub>4</sub> )	PW (lb S /hr)	Emissions using EF	Emissions (using process weight rate eq.)	Estimated emissions rate < process weight rate limitation
0.0001	0.1	1.08E-05	8.75E-03	yes
5	3265.3	5.38E-01	5.78E+00	yes
40	26122.4	4.30E+00	1.40E+01	yes

Production (T/hr 100% H <sub>2</sub> SO <sub>4</sub> )	PW (lb S /hr)	Emissions using EF	Emissions (using process weight rate eq.)	Estimated emissions rate < process weight rate limitation
100	65306.1	1.08E+01	1.76E+01	yes
150	97959.2	1.61E+01	1.95E+01	yes
160	104489.8	1.72E+01	1.98E+01	yes

Permit Condition 16.3.1

PC 16.3.1 is revised with the new content. The old requirement is obsolete as a result of the consent order signed on April 16, 2004.

~~“16.3.1 A source test will be required to determine the emission rate for PM<sub>10</sub>. This test was conducted and documented in a report dated 12/9/02.~~

[PTC No. 077-00006, 6/15/04]

**Emissions of PM<sub>10</sub> from the No. 300 sulfuric acid plant stack shall not exceed:**

- **11.4 lb/hr**
- **49.8 T per any consecutive 12-month period**

[Consent Order 4/16/04]”

**MRRR – (Permit Conditions 16.8, 16.9, 16.11, 16.13, 16.14, 16.16, and 16.18)**

Compliance demonstration of PM<sub>10</sub> emissions limits was established in the PTC No. 077-00006 issued on June 15, 2001 and 40 CFR 64 (CAM). Detailed discussion can be found in the technical memorandum of the PTC and its application. The test requirement is also in Idaho SIP, 40 CFR 52.670(d), effective 8/14/06. The following summarizes the compliance methods:

- Comply with the daily throughput limit. (PC 16.8)
- Comply with scrubber operational requirements. (PC 16.9)
- Perform annual compliance test. (PC 16.11)
- Monitor and record throughput and scrubber operations. (PC 16.13)
- Submit performance test reports. (PC 16.14)
- Submit excess emissions reports. (PC 16.16)
- Comply with CAM requirements. (PC 16.18)

New Permit Condition 16.18.3

New PC 16.18.3 includes CAM requirements for compliance with PM/PM<sub>10</sub> emissions limits. Simplot is required to develop CAM requirements (e.g., identify indicators and develop indicators’ ranges) and submit them to DEQ for review and approval. Within 180 days of the permit issuance, DEQ will either approve or disapprove the CAM plan. The permittee is in violation of 40 CFR 64.4(e) if DEQ disapproves CAM plan by then.

According to EPA’s “Technical Guidance Document: Compliance Assurance Monitoring” and 40 CFR 64.3(a)(1), monitoring must be designed to obtain data for one or more indicators of performance of the control device, any associated capture system, and processes necessary to assure compliance. Such indicators can include the following:

- “a measured or predicted emissions level, such as total hydrocarbon concentration, nitrogen oxides (NO<sub>x</sub>) concentration, opacity, or visible emissions

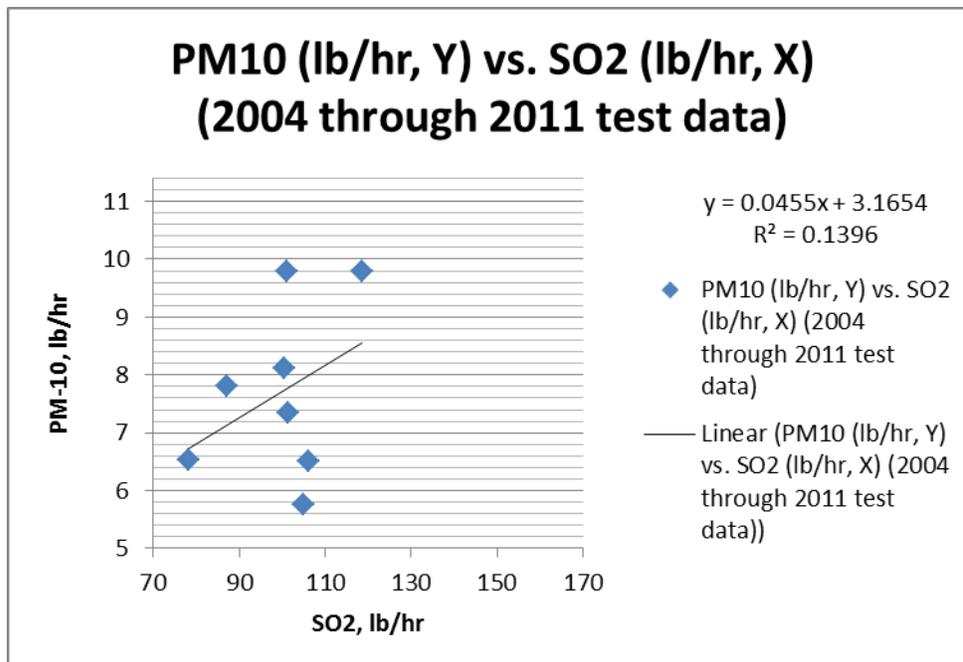
- a pollution control device operating parameter, such as temperature or pressure drop
- a process operating parameter, such as temperature or flow
- a recordkeeping item, such as pounds of volatile organic compound per gallon of coating
- a work practice activity, such as records of solvent usage for cleaning activities
- recorded findings of inspection and maintenance activities, such as an internal fabric filter baghouse inspection, or
- a combination of these types of indicators”

In the response to DEQ’s incompleteness letter received on October 19, 2007, Simplot states that DynaWave scrubber is part of the process, and CAM does not apply to it. According to Permit Condition 16.9 and the description of the scrubber system in the permit, both scrubbers are control devices that are used to control SO<sub>2</sub>, PM/PM<sub>10</sub>, and acid mist. Therefore, the CAM plan needs to discuss both scrubbers in accordance with 40 CFR 64.3(a)(1)&(2).

Simplot may refer to the federal register - FR Vol 62, No. 204 October 22, 1997, page 54913 regarding process equipment vs. control device to review the determination.

In the response to DEQ’s incompleteness letter received on October 19, 2007 and the comments on the 1<sup>st</sup> and 2<sup>nd</sup> facility draft permits received on October 3, 2011 and January 27, 2012, Simplot proposed to use SO<sub>2</sub> hourly emissions as an indicator and SO<sub>2</sub> permit limit of 170 lb/hr as a trigger value for PM/PM<sub>10</sub> CAM plan.

DEQ is not able to use this approach for PM/PM<sub>10</sub> CAM plan at this time because Simplot did not provide analysis to support the proposed CAM plan, and the source test data as shown in the following chart do not support the conclusion that as long as the SO<sub>2</sub> emissions are less than 170 lb/hr, the PM/PM<sub>10</sub> emissions will be less than 11.4 lb/hr. In addition, the source test data do not support a correlation between PM/PM<sub>10</sub> and SO<sub>2</sub> emissions using Pearson Product Coefficient. Of course, the linear relationship does not exist. The R<sup>2</sup> (coefficient of determination) is only 0.1396; that means approximately 14 % of the variation in Y (PM<sub>10</sub> emissions) can be explained by variable X (SO<sub>2</sub> emissions.)



## **Permit Conditions 16.4 and 16.5**

The annual NO<sub>x</sub> and ammonia emissions limits are taken from PTC No. 077-00006 issued on June 15, 2001. The hourly NO<sub>x</sub> emissions limit based on 24-hour average is taken from the consent order signed on April 16, 2004. It is also included in Idaho SIP 40 CFR 52.670(d), 8/14/06. These emissions limits are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

### Permit Condition 16.4

The emissions limit taken from the consent order signed on April 16, 2004 and also in 40 CFR 52.670 (d), 8/14/06, Idaho SIP is added to PC 16.4. It reads as follows:

“ ...

- **16.0 lb/hr, based on 24-hour average**

[Consent Order 4/16/04; 40 CFR 52.670(d), 8/14/06]”

## **MRRR – (Permit Conditions 16.8, 16.9, 16.11, 16.13, 16.14, and 16.16)**

Compliance demonstration of NO<sub>x</sub> and ammonia emissions limits was established in the PTC No. 077-00006 issued on June 15, 2001. Detailed discussion can be found in the technical memorandum of the PTC and its application. The following summarizes the compliance methods:

- Comply with the daily throughput limit. (PC 16.8)
- Comply with scrubber operational requirements. (PC 16.9)
- Perform annual compliance test. (PC 16.11)
- Monitor and record throughput and scrubber operations. (PC 16.13)
- Submit performance test reports. (PC 16.14)
- Submit excess emissions reports. (PC 16.16)

## **Permit Condition 16.6**

The 10% visible emissions limit was originally taken from 40 CFR 60, Subpart H. It was included in the PTC No. 077-00006 issued on June 15, 2001. The opacity standard set forth here shall apply at all times except for during periods of startup, shutdown, and malfunction according to 40 CFR 60.11(c). These emissions limits are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

## **MRRR – (Permit Conditions 16.11 and 16.12)**

Demonstrating compliance with the opacity limit was established in the PTC No. 077-00006 issued on June 15, 2001. It includes performance source testing and monthly monitoring.

### Table 16.2 of the permit

“more than six-minute average” in Table 16.2 is not specified in the regulation; therefore, it is removed.

## **Permit Condition 16.7**

Requirements for fugitive visible emissions are taken from the existing PTC No. 077-00006 issued on June 15, 2001. These emissions limits are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

## **MRRR – (Permit Condition 16.7)**

Compliance demonstration of fugitive visible emissions is specified in PC 16.7.

### Permit Condition 16.7

Old content of PC 16.7.1 is removed because it duplicates PC 2.7. Old PC 16.7.2 is renumbered as PC 16.7.

### Old Permit Condition 16.15

Old PC 16.15 regarding SO<sub>2</sub> ambient monitoring is removed. The content of old PC 16.15 is replaced with “reserved” to avoid renumbering of the permit. The following justification for removing old PC 16.15 is provided by DEQ’s attorney general office.

The requirement to operate the ambient SO<sub>2</sub> monitors under 40 CFR 52.675(b)(7) is obsolete. Consequently, DEQ has removed this requirement from this Tier I operating permit and requests that EPA remove said requirements from Idaho’s SIP at 40 CFR 52.675(b)(7) through the State Implementation Plan streamline process discussed on pages 13 through 15 of EPA’s White Paper for Streamlined Development of Part 70 Permit Applications dated July 10, 1995.

The requirement to operate the monitors derives from a conflict that occurred over three decades ago between EPA and Simplot over the pound per hour of SO<sub>2</sub> that could be emitted from the #300 sulfuric acid plant without exceeding the SO<sub>2</sub> national ambient air quality standard. See 41 Fed. Reg. 23200, 23201 (June 9, 1976). EPA asserted the plant’s emissions must be restricted to 1,700 pounds per hour SO<sub>2</sub> while Simplot asserted its modeling efforts demonstrated that a rate of 2190 pounds per hour (9,592 T/yr) would not cause or contribute to a violation of the SO<sub>2</sub> NAAQS. EPA determined

“It would be futile to attempt to do further analysis on the proper emission rate at this time in view of (1) the lack of adequate technical background data, and (2) the changes that have been made recently in the plant’s configuration. The Administration has determined that the more appropriate action is to base the emissions rate on an analysis of actual measured ambient air quality, meteorological and emissions data.

Therefore, the Administrator is today promulgating an emissions limitation of 2,190 pounds of SO<sub>2</sub> per hour for the 300 sulfuric acid plant. Also in order to determine whether a more restrictive emission limit is required, the Administrator is requiring that Simplot install and operate an expanded ambient monitoring network until such time as the Administrator declares that an adequate data base has been generated which shall be no earlier than at least one year. Within 90 days of the Administrator’s declaration of an adequate data base, Simplot will submit for EPA’s review a technical analysis indicating the degree of permanent emission control required on the #300 acid plant to ensure attainment and maintenance of the NAAQS.”

By letter dated December 11, 1981 EPA determined that “the original purpose of the data gathering has been satisfied.” Since that time Simplot has attempted numerous times to obtain approval to discontinue operating the monitors. The following delineates the numerous facts establishing that operation of the monitors is an obsolete requirement that should be removed from the Idaho SIP.

In 1982, pursuant to Section 107(a) of the Clean Air Act EPA stated:

“In Pocatello, there have been no violations of the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide (SO<sub>2</sub>) during the past eight calendar quarters. Therefore, this area meets EPA’s criteria for a redesignation to attainment.”

Fed. Reg. 32530, 32531 ( July 28, 1982). Thus, at that time EPA determined that no source was causing or contributing to a violation of the SO<sub>2</sub> NAAQS. EPA determined Simplot could operate at the 2190 pound per hour emission level and not cause or contribute to a violation of the NAAQS. At that time, the need to run the monitors had then become obsolete.

In 1989 a PSD permit was issued to Simplot. As part of the application for that permit EPA requested that Simplot perform a demonstration that the ambient SO<sub>2</sub> standard would be attained and maintained. Simplot submitted the necessary information, the analysis was confirmed and a PSD permit issued. The SO<sub>2</sub> emissions limit in the PSD permit was 750 pounds per each running three-hour period for #300 sulfuric acid plant and 999 pounds per each three-hour period for #400 sulfuric acid plant.

Ten years later, in response to Simplot's request to delete the requirements under 40 CFR 52.675, in a letter dated November 22, 1999, EPA responded that it "would consider repealing all or part of the Federal Implementation Plan (FIP) under the following circumstances:

1. EPA could repeal the entire FIP if the State submitted and EPA approved a SIP containing SO<sub>2</sub> emission limits and a demonstration that these emission limits would not interfere with the attainment or maintenance of the NAAQS, violate any applicable PSD increment, or result in visibility impairment.
2. EPA could replace the portion of the FIP that requires Simplot to collect SO<sub>2</sub> monitoring data and meteorological data upon the submission of demonstration showing that the emission limits contained in the FIP are protective of the SO<sub>2</sub> NAAQS. Since the FIP does not include a SO<sub>2</sub> emission limit for the #400 sulfuric acid plant, the demonstration should use the permit-to-construct limits for this plant.

Recall the purpose for the monitors was due to a dispute whether 2190 versus 1700 pounds per hour of SO<sub>2</sub> could be emitted from the #300 sulfuric acid plant without causing or contributing to a violation of the SO<sub>2</sub> NAAQS. In 1999 Simplot held the following SIP issued permits: SO<sub>2</sub> permitted emissions is 750 lb/hr per each running three-hour period. Thus, permitted emissions were at that time far below the 1700 pounds per hour EPA had asserted met the SO<sub>2</sub> standard. The highest 24 hour average (140 ppb standard) over the last 3 years was 57 ppb on 7-Jan-09 at Simplot's #1 monitor. The highest 3 hour average (500 ppb standard) during this period was 262 ppb on 6-Jan-09, also at the #1 monitor.

Nevertheless DEQ and Simplot agreed to work together to complete the demonstration. Simplot hired MFG (environmental consulting firm) to conduct the modeling and DEQ to complete the SIP narrative. The work was completed in 2002.

The demonstration was not submitted to EPA in 2002 as at that time the priority project for the Pocatello area was redesignation to attainment for PM<sub>10</sub>. See 71 Fed. Reg. 39574 (July 13, 2006) and 40 CFR 81.313. It should be noted that as part of the PM<sub>10</sub> redesignation project, Simplot entered into a Compliance Agreement and Voluntary Order that included SO<sub>2</sub> limits EPA agreed constituted RACT. As discussed in the Reasonably Available Control Technology Analysis, DEQ imposed RACT limitations on all sources with a 10 ton per year potential to emit of PM<sub>10</sub>, and SO<sub>2</sub>, NO<sub>x</sub> and NH<sub>3</sub>, which are PM<sub>10</sub> precursors in the airshed. The #300 and #400 sulfuric acid plants were the only sources with the potential to emit over 10 tons per year of SO<sub>2</sub>. They are permitted to emit 750 and 1458 tons per year respectively.

As part of that process Simplot submitted a document entitled RACT ANALYSIS, J. R. Simplot Company, Don Plant, Pocatello, Idaho, Final February 2004. In regard to SO<sub>2</sub> emissions, Simplot notes that it has "decreased permitted sulfur dioxide emissions from over 10,000 tons

per year in 1982 to less than 2,300 tons per year. See page 6. Also noted is the fact that Astaris (formerly FMC) shut down eliminating another approximately 3,700 tons per year of SO<sub>2</sub> from the airshed. See page 6-7.

Simplot has permitted SO<sub>2</sub> emissions less than the 1700 pounds per hour EPA desired to permit them at in 1976. The area was designated attainment for SO<sub>2</sub> over thirty years ago. Facility wide SO<sub>2</sub> emissions were modeled in the late 1980s as part of a PSD permit and again in 2002 as part of a SIP attainment project. The condition to monitor the SO<sub>2</sub> ambient concentrations is obsolete and has been for many years.

## **EMISSIONS UNIT GROUP 15: SULFURIC ACID PLANT NO. 400**

### **Permit Condition 17.1**

#### Permit Condition 17.1.1

The PC 17.1.1 is old PC 17.1. Sulfur dioxide emissions limits in PC 17.1.1 are taken from Tier II Permit No. 077-00006 issued on December 3, 1999. The limit of 4 lbs/T of 100% sulfuric acid produced is taken from 40 CFR 60, Subpart H and is also in Tier II Permit No. 077-00006 issued on December 3, 1999. The requirements in PC 17.1.1 are also in the SIP, 40 CFR 52.670 (d), 8/14/06.

#### New Permit Condition 17.1.2

The PC 17.1.2 is a new permit condition. Sulfur dioxide emissions limit in PC 17.1.2 is taken from the consent order signed on May 29, 2012. It is an applicable requirement in accordance with IDAPA 58.01.01.008.03. The new PC 17.1.2 reads as follows:

**“17.1.2 The SO<sub>2</sub> emissions from the No. 400 sulfuric plant stack shall not exceed 2.0 lb/T of 100% sulfuric acid produced on a 12-month rolling average basis.”**

### **MRRR – (Permit Conditions 17.1, 17.6, 17.7, 17.8, 17.10, 17.11, 17.12, 17.13, 17.14, 17.15, and 17.16)**

Compliance demonstration of SO<sub>2</sub> emissions limits was established in 40 CFR 60, Subpart H, in Tier II Permit No. 077-00006 issued on December 3, 1999, CO signed on May 29, 2012, and/or under the authority of IDAPA 58.01.01.332.01. The following summarizes the compliance methods:

- Calculate the annual emissions. (PC 17.1)
- Comply with the production rate limit (PC 17.6) and monitor and record the production rate. (PC 17.10)
- Keep good air pollution control practice. (PC 17.7)
- Use CEMS to monitor SO<sub>2</sub> emissions (PC 17.8.1) and calculate SO<sub>2</sub> emissions. (PC 17.8.2)
- Conduct annual performance test. (PC 17.11)
- Comply with the reporting requirements. (PCs 17.12, 17.13, 17.14, and 17.15)
- Comply with the standard operating procedures (SOPs) for sulfuric acid plant No. 400. (PC 17.16)

#### Permit Condition 17.6

The PC 17.6 is old PC 17.5. Changes are made to the permit numbers in new PC 17.6. It reads as follows:

**“17.56 The production... Permit Condition 17.110. ... Permit Conditions 17.65.1 through 17.65.5 are met.”**

### Permit Condition 17.6.5

The PC 17.6.5 is old PC 17.5.5. PM<sub>10</sub> and NO<sub>x</sub> are added to PC 17.6.5 because the higher production rate shall not be granted if the plant cannot meet the PM<sub>10</sub> and/or NO<sub>x</sub> limits at the higher production rate. This change is under the authority of IDAPA 58.01.01.332.01. New PC 17.6.5 reads:

“17.56.5 The **PM<sub>10</sub>, NO<sub>x</sub>, SO<sub>2</sub>**, and acid mist emission limits will not be violated at the requested increased emission rates.

[Tier II Permit No. 077-00006, 12/3/99; **IDAPA 58.01.01.332.01, 3/19/99**]

### New Permit Condition 17.6.6

The requirement in the new PC 17.6.6 is taken from the 5/29/2012 CO. It reads as follows:

**“17.6.6 The maximum production rate of Sulfuric Acid Plant No.400 shall not exceed 789,579 tons of 100% sulfuric acid in any consecutive 12-calendar months.**

[Consent Order 5/29/2012]”

### Permit Condition 17.7

The PC 17.7 is old PC 17.6.

### Permit Condition 17.8.1

The PC 17.8.1 is old PC 17.7. It is also in SIP, 40 CFR 52.670 (d), 8/14/06. The SIP citation is added to PC 17.8. It reads as follows:

“17.8 ...

[40 CFR 60.84(a), (b), (c), and (d); Tier II Permit No. 077-00006, 12/3/99; **40 CFR 52.670 (d), 8/14/06**]

### New Permit Condition 17.8.2

The requirements in the new PC 17.8.2 are taken from the CO signed on May 29, 2012. It reads as follows:

#### **“17.8.2 Monitoring and Recordkeeping**

**The permittee shall use CEMS data collected in accordance with 40 CFR Part 60, Subpart H (i.e., Permit Condition 17.8.1) to demonstrate compliance with the SO<sub>2</sub> emissions limit in Permit Condition 17.1.2.**

**The permittee shall monitor and record SO<sub>2</sub> emissions from the No.400 sulfuric acid plant stack:**

- **in pounds per ton of 100% sulfuric acid produced on a three-hour average basis**
- **in pounds per ton of 100% sulfuric acid produced on a 12-month rolling average basis.”**

### New Permit Condition 17.10

The requirements in the new PC 17.10 are taken from the consent order signed on April 16, 2004 and the consent order signed on May 29, 2012. It reads as follows:

**“17.10 The permittee shall monitor and record the production rate of the No. 400 sulfuric acid plant in tons per hour, tons per rolling 24-hour period, and tons per any consecutive 12-month**

**period.**

**[Consent Order 4/16/04, Consent Order 5/29/2012]”**

Permit Condition 17.11

The PC 17.11 is old PC 17.10. Titles are added to PC 17.11 and 17.11.1 for clarification purpose. They read as follows:

~~“17.1011~~      **Performance Test**

**17.11.1**      **For SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> mist**

Annual SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub>...

[Tier II Permit No. 077-00006, 12/3/99; **40 CFR 52.670 (d), 8/14/06]**

(a) In conducting the performance tests...

**[40 CFR 60.8 and 60.85; IDAPA 58.01.01.322.06, 5/1/94; Tier II Permit No. 077-00006, 12/3/99; 40 CFR 52.670 (d), 8/14/06]”**

Simplot requested to change the annual source test frequency. It cannot be done at the Tier I renewal because the annual test requirement is taken from the underlying Tier II operating permit issued on December 3, 1999 and it is also in the SIP, 40 CFR 52.670 (d), 8/14/06.

New Permit Condition 17.11.3

This source test requirement is taken from the 5/29/2012 CO.

On June 26, 2012, Simplot notified DEQ that the project as described in the CO was substantially complete on June 18, 2012 and began operation on June 19, 2012. The 5/29/2012 CO requires Simplot to conduct source testing within 120 days of completion of the project. The date of 10/4/2012 is 6/19/2012 plus 120 days and is added to the permit. The new PC 17.11.3 reads as follows:

**“17.11.3      SO<sub>2</sub> Testing Required by Consent Order**

**By October 4, 2012, the permittee shall conduct performance tests in accordance with IDAPA 58.01.01.157 to demonstrate that the No.400 Sulfuric Acid Plant is capable of achieving the established emissions limit in the consent order as specified in Permit Condition 17.1.2.**

**[Consent Order 5/29/2012]”**

Permit Condition 17.16

Under IDAPA 58.01.01.322.01, Permit Condition 17.16 requires the permittee to keep the standard operating procedures on site and to make it available to the Department on request; the permittee will operate the plant in accordance with the SOPs. The language about August 9, 2001 consent order is removed because the consent order was terminated on March 1, 2002.

Revised PC 17.16 reads as follows:

~~“17.16~~ ~~As specified in the Consent Order issued by DEQ on August 9, 2001,~~ The standard operating procedures (SOPs) for the sulfuric acid plant No. 400 shall be kept on site and shall be made available to DEQ representatives upon request. **The permittee shall operate the sulfuric acid plant No. 400 in accordance with the SOPs.**

~~[Consent Order, 8/9/01; IDAPA 58.01.01.322.01, 3/19/99]”~~

### **Permit Condition 17.2**

Sulfuric acid mist emissions limits are taken from the Tier II Permit No. 077-00006 issued on December 3, 1999. The 0.15 lb/ton of 100% sulfuric acid limit is taken from 40 CFR 60, Subpart H and is also in the Tier II Permit No. 077-00006 issued on December 3, 1999.

### **MRRR – (Permit Conditions 17.2, 17.6, 17.7, 17.10, 17.11, 17.12, 17.13, and 17.16)**

Compliance demonstration of sulfuric acid mist emissions limits was established in 40 CFR 60, Subpart H, in Tier II Permit No. 077-00006 issued on December 3, 1999, and/or under the authority of IDAPA 58.01.01.332.01. The following summarizes the compliance methods:

- Calculate the annual emissions. (PC 17.2)
- Comply with the production rate limit (PC 17.6) and monitor and record the production rate. (PC 17.10)
- Keep good air pollution control practice. (PC 17.7)
- Conduct annual performance test.(PC 17.11)
- Comply with the reporting requirements. (PC 17.13)
- Comply with the standard operating procedures (SOPs) for sulfuric acid plant No. 400. (PC 17.16)

### **Permit Condition 17.3**

The 10% visible emissions limit is taken from 40 CFR 60, Subpart H and is also in the Tier II permit No. 077-00006 issued on December 3, 1999.

### **MRRR – (Permit Conditions 17.3, 17.6, 17.7, 17.9, 17.13 and 17.16)**

Demonstration of compliance with the opacity limit was established in Tier II Permit No. 077-00006 issued on December 3, 1999, 40 CFR 60, Subpart H, and/or under the authority of IDAPA 58.01.01.332.01. The following summarizes the compliance methods:

- Determine opacity using method 9 and in accordance with 40 CFR 60.11. (PCs 17.3 and 17.9)
- Comply with the production rate limit (PC 17.6) and monitor and record the production rate. (PC 17.10)
- Keep good air pollution control practice. (PC 17.7)
- Determine opacity and record VE reading monthly. (PC 17.9)
- Comply with the reporting requirements. (PC 17.13)
- Comply with the standard operating procedures (SOPs) for sulfuric acid plant No. 400. (PC 17.16)

### Table 17.2 of the permit

“more than six-minute average” in Table 17.2 is not specified in the regulation; therefore, it is removed.

### **Permit Condition 17.4**

This emissions unit is subject to IDAPA 58.01.01.701 process weight rate because it commenced operation after October 1, 1979. The process weight rate is an applicable requirement in accordance with IDAPA 58.01.01.008.03.

**MRRR – (Permit Conditions 17.6, 17.7, 17.10, 17.11.2, 17.13, and 17.16)**

As long as the plant complies with the permitted PM<sub>10</sub> limit of 13.6 lb/hr, the plant will comply with process weight rate limitation. The following calculation supports the above statement.

Estimate PM emissions using the following information:

- According to source test data from 2005 to 2008, the ratio of PM/PM<sub>10</sub> is 0.79 (i.e., 6.4 lb/hr / 8.1 lb/hr = 0.79.) PM emissions are measured using EPA method 5. PM<sub>10</sub> emissions are the sum of emissions measured using EPA method 5 and EPA method 202.
- Based on source test data from 2005 to 2008, the average tested production rate is 95.4 tons 100% H<sub>2</sub>SO<sub>4</sub>/hr.
- The permitted PM<sub>10</sub> emissions rate is 13.6 lb/hr.
- One ton of sulfur can make 3.06 tons of 100% H<sub>2</sub>SO<sub>4</sub> stoichiometricly (i.e., 98 (lb 100% H<sub>2</sub>SO<sub>4</sub> /lb-mol) / 32 (lb S/lb-mol) = 3.06 lb 100% H<sub>2</sub>SO<sub>4</sub>/1 lb S.)
- Assume EF is the same for different level of production. This may not be a best assumption, but we don't have emissions information at lower production level.

The estimated PM EF = (0.79 PM/PM<sub>10</sub>) x (13.6 lb PM<sub>10</sub> /hr) / (95.4 tons 100% H<sub>2</sub>SO<sub>4</sub>/hr) x (3.06 tons 100% H<sub>2</sub>SO<sub>4</sub> / 1 ton S) x 1 ton S/2,000 lb S = 1.73 x 10<sup>-4</sup> lb PM/lb S.

The PM emissions rate can be estimated as follows:

Production level in T 100% H<sub>2</sub>SO<sub>4</sub>/ hr x converting factor (i.e., 1 T 100% H<sub>2</sub>SO<sub>4</sub>/hr x (1 T S/3.06 T 100% H<sub>2</sub>SO<sub>4</sub>) x (2,000 lb S / 1 T S) x EF for PM (i.e., 1.73 x 10<sup>-4</sup> lb PM/lb S.)

The following calculation results indicate that as long as the plant complies with the permitted PM<sub>10</sub> limit of 13.6 lb/hr, the plant will comply with PRW limitation.

Production (T/hr 100% H <sub>2</sub> SO <sub>4</sub> )	Process weight (PW, lb S /hr)	Estimated emissions using EF	PWR limits according to IDAPA 58.01.01.701	Estimated emissions rate is less than PWR limits
0.0001	0.1	1.13E-05	8.75E-03	yes
5	3,265	5.65E-01	5.78E+00	yes
40	26,122	4.52E+00	1.40E+01	yes
100 (105% x avg. max production rate)	65,306	1.13E+01	1.76E+01	yes
150	97,959	1.69E+01	1.95E+01	yes
160	104,490	1.81E+01	1.98E+01	yes

**New Permit Condition 17.5.1**

The PM<sub>10</sub> emissions limits in lb/hr and T/yr are established and specified according to the consent order signed on April 16, 2004. These emissions limits are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

Emissions limits in PC 17.5.1 were developed according to the consent order (also in Idaho SIP, 40 CFR 52.670 (d), 8/14/06) as described in the following:

Emissions of PM<sub>10</sub> from the No. 400 sulfuric acid plant stack shall not exceed

- hourly emissions limit determined by the following method
- annual emissions limit determined by the following method

The hourly PM<sub>10</sub> RACT emissions limit (pounds per hour) for the No. 400 sulfuric acid plant shall be set by conducting five performance tests on the sulfuric acid plant stack. The lb/hr limit is based on 24-hour average according to the consent order. The limit will be determined based on the 95% confidence interval: limit = average of five tests plus 1.96 times the standard deviation of the five tests. The annual PM<sub>10</sub> RACT limit (tons per year) shall be set by multiplying the pound per hour RACT limit by 8,760 hours per year and dividing by 2,000 pounds per ton. The first performance test shall be conducted prior to December 30, 2004, and tests shall be conducted annually thereafter. The sum of the emissions measured from EPA Methods 5 and 202 shall be considered PM<sub>10</sub>.

Using source test data, hourly limit and annual limit are developed. Hourly limit = average of (12.6, 8.9, 5.8, 6.95, 8.5) lb/hr + 1.96 x 2.58 lb/hr (standard deviation) = 13.61 lb/hr, and annual limit = 13.61 lb/hr x 8,760 hr/yr / 2,000 lb/T = 59.6 T/yr.

DEQ has determined that the consent order signed on 4/16/04 constitutes RACT for PM<sub>10</sub> emissions and secondary aerosol (PM<sub>10</sub>) emissions of NO<sub>x</sub> and SO<sub>2</sub> in light of the attainment needs of the Portneuf Valley PM<sub>10</sub> non-attainment area.

New PCs 17.5 and 17.5.1 read as follows:

**“17.5 Requirements of reasonably available control technology (RACT) for PM<sub>10</sub> and NO<sub>x</sub>**

**17.5.1 Emissions of PM<sub>10</sub> from the No. 400 sulfuric acid plant stack shall not exceed:**

- **13.6 lb/hr, based on 24-hour average**
- **59.6 tons per any consecutive 12-month period**  
[Consent Order 4/16/04; 40 CFR 52.670 (d), 8/14/06]”

**MRRR – (Permit Conditions 17.6, 17.7, 17.10, 17.11.2, 17.13, and 17.16)**

Compliance demonstration of PM<sub>10</sub> emissions limits was established under the authority of IDAPA 58.01.01.322.01 and 06, 40 CFR 60.11(d), and the consent order signed on April 16, 2004. The following summarizes the compliance methods:

- Comply with the production rate limit (PC 17.6) and monitor and record the production rate. (PC 17.10)
- Keep good air pollution control practice. (PC 17.7, 40 CFR 60.11(d))
- Perform compliance test. (PC 17.11.2)
- Comply with the reporting requirements. (PC 17.13)
- Comply with the standard operating procedures (SOPs) for sulfuric acid plant No. 400. (PC 17.16)
- 

New Permit Condition 17.11.2

New PC 17.11.2 is proposed in the application. It is developed using DEQ’s internal guidance for monitoring and under the authority of IDAPA 58.01.01.332.06. In addition to the other PCs, this requirement assures compliance with the PM<sub>10</sub> and NO<sub>x</sub> limits in PC 17.5. The new PC 17.11.2 reads as follows:

**“17.11.2 For PM<sub>10</sub> and NO<sub>x</sub>**

**At least once every five years, the permittee shall conduct a performance test to demonstrate compliance with the emissions limits specified in Permit Condition 17.5 in accordance with Permit Condition 2.10. After the initial performance test conducted within six-month of the permit issuance date, future testing shall be performed according to the following schedule. If the emissions rate measured in the most recent test is less than or equal to 75% of the emission standard in the permit, the next test shall be conducted within five years of the test date. If the emission rate measured during the most recent performance test is greater than 75%, but less than or equal to 90%, of the emission standard in the permit, the next test shall be conducted within two years of the test date. If the emission rate measured during the most recent performance test is greater than 90% of the emission standard in the permit, the next test shall be conducted within one year of the test date.**

**[IDAPA 58.01.01.322.06, 5/1/94]”**

**New Permit Condition 17.5.2**

The NO<sub>x</sub> emissions limits in lb/hr and T/yr are established and specified according to the consent order signed on April 16, 2004. These emissions limits are applicable requirements for Tier I in accordance with IDAPA 58.01.01.008.03.

The consent order states:

Emissions of NO<sub>x</sub> from the No. 400 sulfuric acid plant stack shall not exceed

- hourly emissions limit determined by the following method
- annual emissions limit determined by the following method

The hourly NO<sub>x</sub> RACT emissions limit (pounds per hour) for the No. 400 sulfuric acid plant shall be set by conducting five performance tests on the sulfuric acid plant stack. The lb/hr limit is based on 24-hour average according to the consent order. The limit will be determined based on the 95% confidence interval: limit = average of five tests plus 1.96 times the standard deviation of the five tests. The annual NO<sub>x</sub> RACT limit (tons per year) shall be set by multiplying the pound per hour RACT limit by 8,760 hours per year and dividing by 2,000 pounds per ton. The first performance test shall be conducted prior to December 30, 2004, and tests shall be conducted annually thereafter.

The above method to determine emissions limits are also included in Idaho SIP, 40 CFR 52.670 (d), 8/14/06.

Using source test data, hourly limit and annual limit are developed. Hourly limit = average of (7.53, 8.1, 8.3, 9.3, 8.5) lb/hr + 1.96 x 0.64465 lb/hr (standard deviation) = 9.61 lb/hr, and annual limit = 9.61 lb/hr x 8,760 hr/yr / 2,000 lb/T = 42.1 T/yr.

New PC 17.5.2 reads as follows:

**“17.5.2 Emissions of NO<sub>x</sub> from the No. 400 sulfuric acid plant stack shall not exceed:**

- **9.6 lb/hr, based on 24-hour average**
- **42.1 tons per any consecutive 12-month period**

**[Consent Order 4/16/04; 40 CFR 52.670 (d), 8/14/06]”**

**MRRR – (Permit Conditions 17.6, 17.7, 17.10, 17.11.2, 17.13, and 17.16)**

Compliance demonstration of NO<sub>x</sub> emissions limits was established under the authority of IDAPA

58.01.01.322.01 and 06, 40 CFR 60.11(d), and the consent order signed on April 16, 2004. The following summarizes the compliance methods:

- Comply with the production rate limit (PC 17.6) and monitor and record the production rate. (PC 17.10)
- Keep good air pollution control practice. (PC 17.7, 40 CFR 60.11(d))
- Perform compliance test. (PC 17.11.2)
- Comply with the reporting requirements. (PC 17.13)
- Comply with the standard operating procedures (SOPs) for sulfuric acid plant No. 400. (PC 17.16)

#### Old Permit Conditions 17.8 and 17.16

Old PCs 17.8 and 17.16 regarding SO<sub>2</sub> ambient monitoring are removed. Same discussions for Sulfuric Acid Plant #300 apply to Sulfuric Acid Plant #400. 40 CFR 58 mentioned in the old PC 17.8 was for Ambient Air Quality Surveillance. Refer to discussions under Old Permit Condition 16.15 section for details.

### **5.3 General Provisions**

Unless expressly stated, there are no MRRR for the general provisions. The General Provisions in the permit are taken from the December 2011 template.

#### **General Provision 1 – General Compliance, Duty to Comply**

The permittee must comply with the terms and conditions of the permit.

[IDAPA 58.01.01.322.15.a, 5/1/94; 40 CFR 70.6(a)(6)(i)]

#### **General Provision 2 – General Compliance, Need to Halt or Reduce Activity Not a Defense**

The permittee cannot use the fact that it would have been necessary to halt or reduce an activity as a defense in an enforcement action.

[IDAPA 58.01.01.322.15.b, 5/1/94; 40 CFR 70.6(a)(6)(ii)]

#### **General Provision 3 – General Compliance, Duty to Supplement or Correct Application**

The permittee must promptly submit such supplementary facts or corrected information upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application. The permittee must also provide information as necessary to address any new requirements that become applicable after the date a complete application has been filed but prior to the release of a draft permit.

[IDAPA 58.01.01.315.01, 5/1/94; 40 CFR 70.5(b)]

#### **General Provision 4 – Reopening, Additional Requirements, Material Mistakes, Etc.**

This term lists the instances when the permit must be reopened and revised, including times when additional requirements become applicable, when the permit contains mistakes, or when revision or revocation is necessary to assure compliance with applicable requirements.

[IDAPA 58.01.01.322.15.c, 5/1/94; IDAPA 58.01.01.386, 3/19/99;  
40 CFR 70.7(f)(1), (2); 40 CFR 70.6(a)(6)(iii)]

### **General Provision 5 – Reopening, Permitting Actions**

This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If Simplot files a request to modify, revoke, reissue, or terminate the permit, the request does not stay any permit condition, nor does notification of planned changes or anticipated noncompliance.

[IDAPA 58.01.01.322.15.d, 5/1/94; 40 CFR 70.6(a)(6)(iii)]

### **General Provision 6 – Property Rights**

This permit does not convey any property rights of any sort, or any exclusive privilege.

[IDAPA 58.01.01.322.15.e, 5/1/94; 40 CFR 70.6(a)(6)(iv)]

### **General Provision 7 – Information Requests**

The permittee must furnish, within a reasonable time to DEQ, any information, including records required by the permit, that is requested in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.

[Idaho Code 40 CFR 39-108; IDAPA 58.01.01.122, 4/5/00; IDAPA 58.01.01.322.15.f, 4/5/00; 40 CFR 70.6(a)(6)(v)]

### **General Provision 8 – Information Requests, Confidential Business Information**

Upon request, the permittee must furnish to DEQ copies of records required to be kept by this permit. For information claimed to be confidential, the permittee may furnish such records along with a claim of confidentiality in accordance with Idaho Code 40 CFR 9-342A and applicable implementing regulations including IDAPA 58.01.01.129.

[IDAPA 58.01.01.322.15.g, 5/1/94; IDAPA 58.01.01.128, 4/5/00; 40 CFR 70.6(a)(6)(v)]

### **General Provision 9 - Severability**

If any provision of the permit is held to be invalid, all unaffected provisions of the permit will remain in effect and enforceable.

[IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]

### **General Provision 10 – Changes Requiring Permit Revision or Notice**

The permittee may not commence construction or modification of any stationary source, facility, major facility, or major modification without first obtaining all necessary permits to construct or an approval under IDAPA 58.01.01.213, or complying with IDAPA 58.01.01.220 through 223. The permittee must comply with IDAPA 58.01.01.380 through 386 as applicable.

[IDAPA 58.01.01.200-223, 4/2/08; IDAPA 58.01.01.322.15.i, 3/19/99; IDAPA 58.01.01.380-386, 7/1/02; 40 CFR 70.4(b)(12), (14), (15), and 70.7(d), (e)]

### **General Provision 11 – Changes Requiring Permit Revision or Notice.**

Changes that are not addressed or prohibited by the Tier I operating permit require a Tier I operating permit revision if such changes are subject to any requirement under Title IV of the CAA, 42 U.S.C. Section 7651 through 7651c, or are modifications under Title I of the CAA, 42 U.S.C. Section 7401 through 7515. Administrative amendments (IDAPA 58.01.01.381), minor permit modifications (IDAPA 58.01.01.383), and significant permit modifications (IDAPA 58.01.01.382) require a revision to the Tier I operating permit. IDAPA 58.01.01.502(b)(10) changes are authorized in accordance with IDAPA 58.01.01.384. Off-permit changes and required notice are authorized in accordance with IDAPA 58.01.01.385.

[IDAPA 58.01.01.381-385, 7/1/02; IDAPA 58.01.01.209.05, 4/11/06; 40 CFR 70.4(b)(14) and (15)]

## **General Provisions 12 and 13 – Federal and State Enforceability**

All permit conditions are federally enforceable unless specified in the permit as a state or local only requirement. State and local only requirements are not required under the CAA and are not enforceable by EPA or by citizens.

[IDAPA 58.01.01.322.15.j, 5/1/94; IDAPA 58.01.01.322.15.k, 3/23/98; Idaho Code 40 CFR 39-108; 40 CFR 70.6(b)(1) and (2)]

## **General Provision 14 – Inspection and Entry**

Upon presentation of credentials, Simplot shall allow DEQ or an authorized representative of DEQ to do the following:

- a. Enter upon the permittee's premises where a Tier I source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- d. As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code 40 CFR 39-108; IDAPA 58.01.01.322.15.l, 5/1/94; 40 CFR 70.6(c)(2)]

## **General Provision 15 – New Applicable Requirements**

The permittee must continue to comply with all applicable requirements and must comply with new requirements on a timely basis.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.10.a.ii, 5/1/94; 40 CFR 70.6(c)(3) citing 70.5(c)(8)]

## **General Provision 16 - Fees**

The owner or operator of a Tier I source shall pay annual registration fees to DEQ in accordance with IDAPA 58.01.01.387 through IDAPA 58.01.01.397.

[IDAPA 58.01.01.387, 4/2/03; 40 CFR 70.6(a)(7)]

## **General Provision 17 – Certification**

All documents submitted to DEQ shall be certified in accordance with IDAPA 58.01.01.123 and comply with IDAPA 58.01.01.124.

[IDAPA 58.01.01.322.15.o, 5/1/94; 40 CFR 70.6(a)(3)(iii)(A); 40 CFR 70.5(d)]

## **General Provision 18 – Renewal**

a. Simplot shall submit an application to DEQ for a renewal of this permit at least six months before, but no earlier than 18 months before, the expiration date of this operating permit. To ensure that the term of the operating permit does not expire before the permit is renewed, the owner or operator is encouraged to submit a renewal application nine months prior to the date of expiration.

[IDAPA 58.01.01.313.03, 4/5/00; 40 CFR 70.5(a)(1)(iii)]

b. If a timely and complete application for a Tier I operating permit renewal is submitted, but DEQ fails to issue or deny the renewal permit before the end of the term of this permit, then all the terms and conditions of this permit including any permit shield that may have been granted pursuant to IDAPA

58.01.01.325 shall remain in effect until the renewal permit has been issued or denied.  
[IDAPA 58.01.01.322.15.p, 5/1/94; 40 CFR 70.7(b)]

### **General Provision 19 – Permit Shield**

Compliance with the terms and conditions of the Tier I operating permit, including those applicable to all alternative operating scenarios and trading scenarios, shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

- a. Such applicable requirements are included and are specifically identified in the Tier I operating permit; or
  - i. DEQ has determined that other requirements specifically identified are not applicable and all of the criteria set forth in IDAPA 58.01.01.325.01(b) have been met.
- b. The permit shield shall apply to permit revisions made in accordance with IDAPA 58.01.01.381.04 (administrative amendments incorporating the terms of a permit to construct), IDAPA 58.01.01.382.04 (significant modifications), and IDAPA 58.01.01.384.03 (trading under an emissions cap).
- c. Nothing in this permit shall alter or affect the following:
  - i. Any administrative authority or judicial remedy available to prevent or terminate emergencies or imminent and substantial dangers;
  - ii. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - iii. The applicable requirements of the acid rain program, consistent with 42 U.S.C. Section 7651(g)(a); and
  - iv. The ability of EPA to obtain information from a source pursuant to Section 114 of the CAA; or the ability of DEQ to obtain information from a source pursuant to Idaho Code 40 CFR 39-108 and IDAPA 58.01.01.122.

[Idaho Code 40 CFR 39-108 and 112; IDAPA 58.01.01.122, 4/5/00;  
IDAPA 58.01.01.322.15.m, 325.01, 5/1/94; IDAPA 58.01.01.325.02, 3/19/99;  
IDAPA 58.01.01.381.04, 382.04, 383.05, 384.03, 385.03, 3/19/99; 40 CFR 70.6(f)]

### **General Provision 20 – Compliance Schedule and Progress Reports.**

- a. For each applicable requirement for which the source is not in compliance, the permittee shall comply with the compliance schedule incorporated in this permit.
- b. For each applicable requirement that will become effective during the term of this permit and that provides a detailed compliance schedule, the permittee shall comply with such requirements in accordance with the detailed schedule.
- c. For each applicable requirement that will become effective during the term of this permit that does not contain a more detailed schedule, the permittee shall meet such requirements on a timely basis.
- d. For each applicable requirement with which the permittee is in compliance, the permittee shall continue to comply with such requirements.

[IDAPA 58.01.01.322.10, 4/5/00; IDAPA 58.01.01.314.9, 5/1/94; IDAPA 58.01.01.314.10, 4/5/00;  
40 CFR 70.6(c)(3) and (4)]

### **General Provision 21 – Periodic Compliance Certification**

Simplot shall submit compliance certifications during the term of the permit for each emissions unit to DEQ and the EPA as follows:

- a. The compliance certifications for all emissions units shall be submitted annually from December 24 to December 23 or more frequently if specified by the underlying applicable requirement or elsewhere in this permit.
- b. The initial compliance certification for each emissions unit shall address all of the terms and conditions contained in the Tier I operating permit that are applicable to such emissions unit including emissions limitations, standards, and work practices;
- c. The compliance certification shall be in an itemized form providing the following information (provided that the identification of applicable information may cross-reference the permit or previous reports as applicable):
  - i. The identification of each term or condition of the Tier I operating permit that is the basis of the certification;
  - ii. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under Subsections 322.06, 322.07, and 322.08;
  - iii. The status of compliance with the terms and conditions of the Tier I operating permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in Subsection 322.11.c.ii. above. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and
  - iv. Such information as the Department may require to determine the compliance status of the emissions unit.
- d. All original compliance certifications shall be submitted to DEQ and a copy of all compliance certifications shall be submitted to the EPA.

[IDAPA 58.01.01.322.11, 4/6/05; 40 CFR 70.6(c)(5)(iii) as amended,  
62 Fed. Reg. 54900, 54946 (10/22/97); 40 CFR 70.6(c)(5)(iv)]

**General Provision 22 – False Statements**

Simplot may not make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

**General Provision 23 – No Tampering**

Simplot may not render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

**General Provision 24 – Semiannual Monitoring Reports.**

In addition to all applicable reporting requirements identified in this permit, Simplot shall submit reports of any required monitoring at least every six months. Simplot's semiannual reporting periods shall be from December 24 to June 23 and June 24 to December 23. All instances of deviations from this operating permit's requirements must be clearly identified in the report. The semiannual reports shall be submitted to DEQ within 30 days of the end of the specified reporting period.

[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.322.09.c,  
4/5/00; 40 CFR 70.6(a)(3)(iii)]

## **General Provision 25 – Reporting Deviations and Excess Emissions**

Each and every applicable requirement, including MRRR, is subject to prompt deviation reporting. Deviations due to excess emissions must be reported in accordance Sections 130-136. All instances of deviation from Tier I operating permit requirements must be included in the deviation reports. The reports must describe the probable cause of the deviation and any corrective action or preventative measures taken. Deviation reports must be submitted at least every six months unless the permit specifies a different time period as required by IDAPA 58.01.01.322.09.c. Examples of deviations include, but are not limited to, the following:

- Any situation in which an emissions unit fails to meet a permit term or condition
- Emission control device does not meet a required operating condition
- Observations or collected data that demonstrate noncompliance with an emissions standard
- Failure to comply with a permit term that requires a report  
[IDAPA 58.01.01.322.15.q, 3/23/98; IDAPA 58.01.01.135, 4/11/06; 40 CFR 70.6(a)(3)(iii)]

## **General Provision 26 – Permit Revision Not Required, Emissions Trading**

No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit.

[IDAPA 58.01.01.322.05.b, 4/5/00; 40 CFR 70.6(a)(8)]

## **General Provision 27 - Emergency**

In accordance with IDAPA 58.01.01.332, an “emergency” as defined in IDAPA 58.01.01.008, constitutes an affirmative defense to an action brought for noncompliance with such technology-based emissions limitation if the conditions of IDAPA 58.01.01.332.02 are met.

[IDAPA 58.01.01.332.01, 4/5/00; 40 CFR 70.6(g)]

## **6. REGULATORY REVIEW**

### **6.1 Attainment Designation (40 CFR 81.313)**

The facility is located in Power County which is designated as attainment or unclassifiable for PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>2</sub>, SO<sub>x</sub>, and Ozone. Reference 40 CFR 81.313.

### **6.2 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)**

The facility is classified as a major facility, in accordance with IDAPA 58.01.01.008, for Tier I permitting purpose, because the facility emits or has the potential to emit PM<sub>10</sub>, CO, NO<sub>x</sub>, and SO<sub>2</sub> greater than 100 T/yr, respectively. With regard to HAPs, the facility is classified as major for fluorides. For a phosphoric acid plant, according to 61 FR 68430, the preamble for the proposed MACT rules, EPA relies on using emission estimates of total fluorides instead of HF and other specific HAPs to determine if a phosphoric acid plant is “major” for HAPs. Refer to the following webpage for more information:

[http://frwebgate.access.gpo.gov/cgi-bin/getpage.cgi?position=all&page=68435&dbname=1996\\_register](http://frwebgate.access.gpo.gov/cgi-bin/getpage.cgi?position=all&page=68435&dbname=1996_register)

**POTENTIAL TO EMIT (T/yr)**

<b>Pollutants (T/yr)</b>	<b>PM<sub>10</sub></b>	<b>NO<sub>x</sub></b>	<b>SO<sub>2</sub></b>	<b>CO</b>	<b>VOC</b>	<b>Lead</b>	<b>Fluorides</b>	<b>HAPs</b>
<b>Facility-wide total emissions</b>	464	214	2,277	150	8	Negligible	336	338

**6.3 PSD Classification (40 CFR 52.21)**

The facility is a designated facility as defined by IDAPA 58.01.01.006. Because the facility emits or has the potential to emit PM<sub>10</sub>, CO, NO<sub>x</sub>, and SO<sub>2</sub> greater than 100 T/yr, respectively, the facility is an existing PSD major facility for these pollutants and subject to PSD permitting requirements.

**6.4 NSPS Applicability (40 CFR 60)**

EMISSIONS UNIT GROUP 2: AMMONIUM SULFATE PLANT

In the comments on the facility draft permit, Simplot stated that the facility replaced the dryer at the plant in 1998 at a fixed capital cost of approximately \$350,000. Simplot installed the new dryer after February 4, 1980; the dryer is subject to 40 CFR 60 Subpart PP.

The following are the applicability definitions used to make the applicability determination. They are taken from 40 CFR 60, Subpart PP and Subpart A and CAA 111(a)(2).

**§ 60.420 Applicability and designation of affected facility.**

(a) *The affected facility to which the provisions of this subpart apply is each ammonium sulfate dryer within an ammonium sulfate manufacturing plant in the caprolactam by-product, synthetic, and coke oven by-product sectors of the ammonium sulfate industry.*

(b) *Any facility under paragraph (a) of this section that commences construction or modification after February 4, 1980, is subject to the requirements of this subpart.*

**§ 60.421 Definitions.**

...

*Synthetic ammonium sulfate manufacturing plant* means any plant which produces ammonium sulfate by direct combination of ammonia and sulfuric acid.

**§ 60.2 Definitions.**

...

*Commenced* means, with respect to the definition of new source in section 111(a)(2) of the Act, that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

*Construction* means fabrication, erection, or installation of an affected facility.

**CAA §111(a)(2)**

The term “new source” means any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source.

### EMISSIONS UNIT GROUP 3: HPB&W BOILER

The boiler is subject to 40 CFR 60, Subpart Db because it was installed in 2000 after the regulatory applicable date of June 19, 1984 and has a heat input capacity of 175 MMBtu/hr that is greater than the regulatory threshold of 100 MMBtu/hr.

On June 13, 2007, EPA amended 40 CFR 60, Subparts D, Da, Db, and Dc to clarify the intent for applying and implementing specific rule requirements, to provide additional compliance alternatives, and to correct unintentional technical omissions and editorial errors. In addition, EPA republished 40 CFR 60, Subparts D, Da, Db, and Dc in their entirety for the purpose of revising the wording and writing style to be more consistent across all the NSPS subparts applicable to steam generating units. The amendments to 40 CFR 60.13 provides a standard methodology for validating partial operating hours.

On January 28, 2009, EPA amended Subparts D, Da, Db. and Dc of 40 CFR part 60 to add compliance alternatives for owners/ operators of certain affected sources, to eliminate the opacity standard for certain facilities voluntarily using PM CEMS, and to correct technical and editorial errors.

Changes are made in the permit conditions as a result of regulation amendments on June 13, 2007 and January 28, 2009.

The amendment to 40 CFR 60, Subpart Dc published at 76 FR 3523, January 20, 2011 does not affect the requirements applying to this boiler.

40 CFR 60, Subpart Db has been delegated to DEQ; therefore, DEQ is the administrator for this subpart.

### EMISSIONS UNIT GROUP 4: BABCOCK AND WILCOX BOILER

Babcock & Wilcox boiler is subject to 40 CFR 60, Subpart Dc because it was constructed after June 9, 1989 and has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.

On June 13, 2007, EPA amended 40 CFR 60, Subparts D, Da, Db, and Dc to clarify the intent for applying and implementing specific rule requirements, to provide additional compliance alternatives, and to correct unintentional technical omissions and editorial errors. In addition, EPA republished 40 CFR 60, Subparts D, Da, Db, and Dc in their entirety for the purpose of revising the wording and writing style to be more consistent across all the NSPS subparts applicable to steam generating units. The amendments to 40 CFR 60.13 provides a standard methodology for validating partial operating hours. On January 28, 2009, EPA amended Subparts D, Da, Db. and Dc of 40 CFR part 60 to add compliance alternatives for owners/operators of certain affected sources, to eliminate the opacity standard for certain facilities voluntarily using PM CEMS, and to correct technical and editorial errors.

Changes are made in the permit conditions as a result of regulation amendments on June 13, 2007. EPA January 28, 2009 amendments do not affect this emissions unit.

The amendment to 40 CFR 60, Subpart Dc published at 76 FR 3523, January 20, 2011 does not affect the requirements applying to this boiler.

40 CFR 60, Subpart Dc has been delegated to DEQ; therefore, DEQ is the administrator for this subpart.

#### EMISSIONS UNIT GROUP 14: SULFURIC ACID PLANT NO. 300

Sulfuric acid plant No.300 is subject to 40 CFR 60, Subpart H - Standards of Performance for Sulfuric Acid Plants and 40 CFR 60, Subpart A - General Provisions because the sulfuric acid plant commenced construction after August 17, 1971. According to the information in the technical memorandum for PTC No. P-000318 issued on June 15, 2001, EPA made the applicability determination when Simplot proposed the No.300 plant restoration in 2001; the restoration project of sulfuric acid plant No.300 was a modification of the plant because it was a physical change that might increase the emissions of acid mist from 6.4 T/yr to 13.1 T/yr. Simplot also indicated in the PTC application that 40 CFR 60, Subpart H applied to sulfuric acid plant No.300.

At this time (2011), the regulation has not been changed since 2000. 40 CFR 60, Subpart H has been delegated to DEQ; therefore, DEQ is the administrator for this subpart.

#### EMISSIONS UNIT GROUP 15: SULFURIC ACID PLANT NO. 400

Sulfuric acid plant No.400 is subject to 40 CFR 60, Subpart H - Standards of Performance for Sulfuric Acid Plants and 40 CFR 60, Subpart A - General Provisions because the sulfuric acid plant commenced construction after August 17, 1971. A PTC was issued to the plant on January 25, 1985. The start-up of the plant was around November 1985 to April 1986.

At this time (2011), the regulation has not been changed since 2000. 40 CFR 60, Subpart H has been delegated to DEQ; therefore, DEQ is the administrator for this subpart.

#### **Non-applicable**

#### EMISSIONS UNIT GROUP 7: GRANULATION NO. 3 PROCESS, EAST BULKING STATION, AND DEFLUORINATION PROCESS

##### *40 CFR 60 Subpart W Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants*

40 CFR 60.231 (a) defines a triple superphosphate plant as "any facility manufacturing triple superphosphate by reacting phosphate rock with phosphoric acid."

As discussed in the technical memorandum for the PTC issued on October 16, 2001, the process of Granulation No.3 is different from what is defined in the regulation because in Granulation No.3 process, limestone (calcium carbonate  $\text{CaCO}_3$ ) reacts with phosphoric acid to produce triple superphosphate. Therefore, Granulation No.3 is not subject to 40 CFR 60, Subpart W.

##### *40 CFR Part 60, Subpart X Standards of Performance for the Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities*

As discussed in the technical memorandum for the PTC issued on October 16, 2001, 40 CFR 60.240 of this regulation states that the affected facility to which the provisions of this subpart apply is each granular triple superphosphate storage facility. The definitions found in section 40 CFR 60.241 do not define granular triple superphosphate. However, this section states that "as used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part." While granular triple superphosphate is not specifically defined, Subpart W defines a triple superphosphate plant as "any facility manufacturing triple superphosphate by reacting phosphate rock with phosphoric acid." Since Simplot does not manufacture any of the products in the Granulation No.3 plant by reacting phosphate rock with phosphoric acid, the storage of the material from the manufacturing process is not subject to the standards for triple superphosphate storage facilities.

EMISSIONS UNIT GROUP 10: PHOSPHORIC ACID MANUFACTURING PLANTS -  
PHOSPHORIC ACID PLANT NO. 400 / WET PROCESS PHOSPHORIC ACID PROCESS LINE

NSPS Subpart T, Subpart U, or Subpart NN

Phosphoric acid manufacturing plants - phosphoric acid plant no. 400 / wet process phosphoric acid process line is subject to 40 CFR 63, Subpart AA (i.e., 40 CFR 63.600 – 63.611.) In accordance with 40 CFR 63.610, any affected source subject to the provisions of 40 CFR 63, Subpart AA is exempted from any otherwise applicable new source performance standard contained in 40 CFR 60, Subpart T, Subpart U, or Subpart NN. To be exempt, a source must have a current operating permit pursuant to Title V of the CAA and the source must be in compliance with all requirements of 40 CFR 63, Subpart AA. For each affected source, this exemption is effective the date that the owner or operator demonstrates to the Administrator that the requirements of §§63.604, 63.605 and 63.606 have been met.

EMISSIONS UNIT GROUP 13: SUPERPHOSPHORIC ACID PLANT / SUPERPHOSPHORIC ACID  
PROCESS LINE

NSPS Subpart T, Subpart U, or Subpart NN

Superphosphoric acid plant / superphosphoric acid process line is subject to 40 CFR 63, Subpart AA (i.e., 40 CFR 63.600 – 63.611.) In accordance with 40 CFR 63.610, any affected source subject to the provisions of 40 CFR 63, Subpart AA is exempted from any otherwise applicable new source performance standard contained in 40 CFR 60, Subpart T, Subpart U, or Subpart NN. To be exempt, a source must have a current operating permit pursuant to Title V of the CAA and the source must be in compliance with all requirements of 40 CFR 63, Subpart AA. For each affected source, this exemption is effective the date that the owner or operator demonstrates to the Administrator that the requirements of §§63.604, 63.605 and 63.606 have been met.

EMISSIONS UNIT GROUP 14: SULFURIC ACID PLANT NO. 300

*40 CFR 60, Subpart Cd—Emissions Guidelines and Compliance Times for Sulfuric Acid Production Units*

Sulfuric acid plant No.300 is not subject to 40 CFR 60, Subpart Cd because it is not an existing facility as defined in 40 CFR 61.2. The plant was modified after the proposed date of 40 CFR 60, Subpart Cd.

EMISSIONS UNIT GROUP 15: SULFURIC ACID PLANT NO. 400

*40 CFR 60, Subpart Cd—Emissions Guidelines and Compliance Times for Sulfuric Acid Production Units*

Sulfuric acid plant No.300 is not subject to 40 CFR 60, Subpart Cd because it is not an existing facility as defined in 40 CFR 61.2. The plant was modified after the proposed date of 40 CFR 60, Subpart Cd.

## **6.5 NESHAP Applicability (40 CFR 61)**

EMISSIONS UNIT GROUP 8: GYPSUM STACK (PILE)

40 CFR 61.200 Designation of facilities reads as follows:

“The provisions of this subpart apply to each owner or operator of a phosphogypsum stack, and to each person who owns, sells, distributes, or otherwise uses any quantity of phosphogypsum which is produced as a result of wet acid phosphorus production or is removed from any existing phosphogypsum stack.”

Simplot owns and operates of a phosphogypsum stack, in accordance with 40 CFR 61.200, Simplot is subject to 40 CFR 61, Subpart R--National Emission Standards for Radon Emissions from Phosphogypsum Stacks

As of 2011, EPA is the administrator for 40 CFR 61, Subpart R.

## **6.6 MACT Applicability (40 CFR 63)**

The test data and approved operating ranges required by the MACT for Simplot can be found in TRIM (DEQ’s document management system) with record number of 2008AAI383 and titled “J R SIMPLOT COMPANY-DON SIDING POCATELLO - Simplot-Don Plant MACT Test Data and Approved Operating Ranges.XLS.”

### EMISSIONS UNIT GROUP 1: EMERGENCY GENERATORS

Simplot is subject to 40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Simplot owns and operates five emergency stationary RICEs, two CI RICEs and three SI RICEs. In accordance with 40 CFR 63.6590(b)(iii), the two CI RICEs (i.e., Caterpillar Boiler Generator and Cummins Ore Receiving Generator) do not have to meet any requirements in 40 CFR 63, Subpart ZZZZ and in 40 CFR 63, Subpart A as long as they are only for emergency use, and the emergency use consists with the description provided in 40 CFR 63.6640(f)(2). The three SI RICEs are subject to the requirements in the subpart.

Detailed regulatory analysis can be found in Appendix A.

40 CFR 63, Subpart ZZZZ is delegated to DEQ for Title V sources. Because Simplot is a Title V source, DEQ is the administrator for this subpart.

### EMISSIONS UNITS GROUP 5 AND GROUP 6: GRANULATION NO. 1 AND NO.2 PROCESSES

Simplot is a major source for HAPs. Granulation No.1 and No.2 processes are subject to 40 CFR 63, Subpart BB—National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants in accordance with 40 CFR 63.620 Applicability. It reads “...the requirements of this subpart apply to the owner or operator of each phosphate fertilizers production plant.”

40 CFR 63, Subpart BB was proposed in December 27, 1996. Granulation No.1 and No.2 processes were constructed or reconstructed prior to the proposed date of this regulation; therefore, Granulation No.1 and No.2 processes are existing sources as defined in 40 CFR 63.2. New source means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part establishing an emission standard applicable to such source.

In accordance with 40 CFR 63.620(b)(1), the requirements of this subpart apply to the following emission points which are components of a diammonium and/or monoammonium phosphate process line: reactors, granulators, dryers, coolers, screens, and mills.

40 CFR 63, Subpart BB has been delegated to DEQ; therefore, DEQ is the administrator for this subpart.

EMISSIONS UNIT GROUP 10: PHOSPHORIC ACID MANUFACTURING PLANT - PHOSPHORIC ACID PLANT NO. 400 / WET PROCESS PHOSPHORIC ACID PROCESS LINE

According to §63.600 Applicability, 40 CFR 63, Subpart AA applies to the following equipment at Simplot's phosphoric acid manufacturing plant:

- Each wet-process phosphoric acid process line. The requirements of this subpart apply to the following emission points which are components of a wet-process phosphoric acid process line: reactors, filters, evaporators, and hot wells

The phosphoric acid plant no. 400 was installed in 1985 and last modified in 1992 according to the information in 2000 Tier I/II OP application. In accordance with 40 CFR 63, Subpart A, because the plant construction date is prior to the subpart proposed date - December, 27 1996, the plant is an existing source.

40 CFR §63.2 reads as follows:

“New source means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part establishing an emission standard applicable to such source.” “Existing source means any affected source that is not a new source.”

40 CFR 63, Subpart AA has been delegated to DEQ; therefore, DEQ is the administrator for this subpart.

EMISSIONS UNIT GROUP 12: RECLAIM COOLING TOWER CELLS PLANT (DIRECT CONTACT) /EVAPORATIVE COOLING TOWERS

A few processes at Simplot are subject to 40 CFR 63, Subpart AA. The scrubber water from these processes cannot be introduced into the cooling towers in accordance with 40 CFR 63.602(e). Simplot's cooling towers are subject to this requirement.

The cooling towers shall also comply with 40 CFR 63.402 in 40 CFR 63, Subpart Q National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers.

“*Industrial process cooling tower*, also written as “IPCT,” means any cooling tower that is used to remove heat that is produced as an input or output of a chemical or industrial process(es), as well as any cooling tower that cools industrial processes in combination with any heating, ventilation, or air conditioning system.”

“No owner or operator of an IPCT shall use chromium-based water treatment chemicals in any affected IPCT.”

40 CFR 63, Subpart Q has been delegated to DEQ; therefore, DEQ is the administrator for this subpart.

EMISSIONS UNIT GROUP 13: SUPERPHOSPHORIC ACID PLANT / SUPERPHOSPHORIC ACID PROCESS LINE

According to §63.600 Applicability, 40 CFR 63, Subpart AA applies to the following equipment at

Simplot's superphosphoric acid plant: evaporators, hot wells, acid sumps, and cooling tanks.

The superphosphoric acid plant was installed in 1972 and was last modified in 1996 according to the information in 2000 Tier I/II OP application. In accordance with 40 CFR 63, Subpart A, because the plant construction date is prior to the subpart proposed date - December, 27 1996, the plant is an existing source and is subject to the requirements applicable to an existing source.

40 CFR §63.2 reads as follows:

“New source means any affected source the construction or reconstruction of which is commenced after the Administrator first proposes a relevant emission standard under this part establishing an emission standard applicable to such source.” “Existing source means any affected source that is not a new source.”

40 CFR 63, Subpart AA has been delegated to DEQ; therefore, DEQ is the administrator for this subpart.

### **Boiler MACT**

#### EMISSIONS UNIT GROUP 3: HPB&W BOILER AND EMISSIONS UNIT GROUP 4: BABCOCK AND WILCOX BOILER

In the comments on the facility draft permit, received on October 3, 2011, Simplot discussed the proposed boiler MACT that would potentially affect Simplot's two boilers. At this time, the rule is not in effect, and there are no requirements applicable to the boilers.

Here are the discussions about the boiler MACT provided in the comments:

*“40 CFR Part 63 Subpart DDDDD-National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

*It is anticipated that this federal regulation will apply to the HPB&W Boiler (Emissions Unit Group 3) and the Babcock and Wilcox Boiler (Emissions Unit Group 4). A final version of this rule was published in the Federal Register on March 21, 2011 with a compliance date for existing boilers of Marcy 21, 2014. Both boilers at the J.R. Simplot Don Plant will be considered existing boilers under this rule.*

*However, on May 16, 2011, the U.S. EPA signed a notice delaying the effective date for this rule in order to allow for completion of a judicial review of the rule, or reconsideration of the rule, whichever is earlier. This notice was published in the Federal Register on May 18, 2011. Therefore, at this time, the rule is not in effect and there are no requirements applicable to the boilers noted above.”*

### **Non-applicable**

#### EMISSIONS UNIT GROUP 7: GRANULATION NO. 3 PROCESS, EAST BULKING STATION, AND DEFLUORINATION PROCESS

40 CFR Part 63, Subpart BB National Emission Standards for Hazardous Air Pollutants from Phosphate Fertilizers Production Plants.

As discussed in the technical memorandum for PTC issued on October 16, 2001, this regulation specifically applies to each granular triple superphosphate line. 40 CFR 63.621 Definitions defines a granular triple superphosphate line as “any process line, not including storage buildings, manufacturing granular triple superphosphate by reacting phosphate rock with phosphoric acid.” A granular triple

superphosphate storage building is defined as "any building curing or storing fresh granular triple superphosphate." This regulation does not apply to the Granulation No.3 plant because the process used to manufacture the calcium phosphate-based products does not involve the reaction of phosphate rock with phosphoric acid. Detailed discussions can be found under sections for NSPS W and NSPS X non-applicability determination.

## 6.7 CAM Applicability (40 CFR 64)

According to the information provided by the applicant, the following is the CAM applicability determination. Simplot's CAM applicability table can be found at the end of this section.

### EMISSIONS UNITS GROUP 3 AND GROUP 4: HPB&W BOILER AND BABCOCK AND WILCOX BOILER

For the purpose of CAM, the low NO<sub>x</sub> burner is not a control device as defined in 40 CFR 64.1(2). Therefore, the boilers do not meet CAM criteria and is not subject to CAM.

### EMISSIONS UNIT GROUP 5: GRANULATION NO. 1 PROCESS

- Fluoride emissions

Granulation No.1 process is subject to 40 CFR 63, Subpart BB. The regulation was proposed on December 27, 1996 after November 15, 1990; therefore, in accordance with 40 CFR 64.2(b)(i), fluorides emission limit of 0.060 lb total fluoride/T equivalent P<sub>2</sub>O<sub>5</sub> feed (all stacks combined) in 40 CFR 63, Subpart BB is exempt from CAM requirements. Consequently, emissions limit of 7.8 lb/hr (all stacks combined) taken from the Tier II, issued 12/3/99 can be exempt from the CAM requirements too because it is less stringent than the limit in 40 CFR 63, Subpart BB. Conservatively multiplying 0.060 lb total fluoride/T equivalent P<sub>2</sub>O<sub>5</sub> feed (all stacks combined) with reactor capacity of 54.2 T/hr phosphate production gives 3.25 lb/hr total fluoride emissions rate that is about half of the emissions limit taken from the Tier II, issued 12/3/99.

- PM and PM<sub>10</sub> emissions

Emissions units at Granulation No.1 process with point identification number from 400.0 through 414.2 (except for 401.0 and 403.0) as listed in Table 7.1 of the permit are subject to CAM requirements for PM and PM<sub>10</sub> because they meet the applicability criteria under 40 CFR 64.2(a); specifically, the emissions units use control devices to achieve compliance with emissions limits for PM/PM<sub>10</sub>, and pre-control potential emissions for PM/PM<sub>10</sub> from these emissions units are greater than 100 T/yr, respectively.

The granulator (ID 401.0) and the reactor (ID 403.0) do not meet CAM applicability criteria under 40 CFR 64.2(a).

In accordance with information in Simplot's response to DEQ's incompleteness letter received on October 19, 2007, Granulation No.1 baghouse (also called vent baghouse) and the dryer scrubber are subject to CAM requirements, and the reactor/granulator scrubber is not subject to CAM.

Even though 40 CFR 63, Subpart BB is for controlling total fluorides, DEQ staff reviewed the regulation and determined that the requirements in the regulation for scrubbers meet CAM requirements for the dryer scrubber except for 40 CFR 63.625(f)(2). CAM indicator ranges need to be approved by DEQ.

#### EMISSIONS UNIT GROUP 6: GRANULATION NO. 2 PROCESS

- Fluoride emissions

Granulation No.2 process is subject to 40 CFR 63, Subpart BB. The regulation was proposed on December 27, 1996 after November 15, 1990; therefore, in accordance with 40 CFR 64.2(b)(i), fluorides emission limit of 0.060 lb total fluoride/T equivalent P<sub>2</sub>O<sub>5</sub> feed (all stacks combined) in 40 CFR 63, Subpart BB is exempt from CAM requirements. Consequently, emissions limit of 6.8 lb/hr taken from the Tier II issued December 3, 1999 can be exempt from the CAM requirements too because it is less stringent than the limit in 40 CFR 63, Subpart BB. Conservatively multiplying 0.060 lb total fluoride/T equivalent P<sub>2</sub>O<sub>5</sub> feed (all stacks combined) with reactor capacity of 52.1 T/hr phosphate production gives 3.13 lb/hr total fluoride emissions rate that is about half of the emissions limit taken from the Tier II issued December 3, 1999.

- PM and PM<sub>10</sub> emissions

Emissions units at Granulation No.2 process with point identification number from 450.0 through 470.3 as listed in Table 8.1 of the permit are subject to CAM requirements for PM and PM<sub>10</sub> because they meet the applicability criteria under 40 CFR 64.2(a); specifically, the emissions units use control devices to achieve compliance with emissions limits for PM/PM<sub>10</sub>, and pre-control potential emissions for PM/PM<sub>10</sub> from these emissions units are greater than 100 T/yr, respectively.

#### EMISSIONS UNIT GROUP 7: GRANULATION NO. 3 PROCESS, EAST BULKING STATION, AND DEFLUORINATION PROCESS

Emissions units (i.e., mixer, blunger, dryer, defluorination reactors, screens, rotex screen (conveyors), fines loadout (recycle drag), production elevator (screen feed elevator), reject elevator, and reject hopper) at Granulation No.3 process are subject to CAM requirements for total fluorides, PM and PM<sub>10</sub> because they meet the applicability criteria under 40 CFR 64.2(a); specifically, the emissions units use control devices to achieve compliance with emissions limits for fluorides and PM/PM<sub>10</sub>, and pre-control potential emissions for fluorides and PM/PM<sub>10</sub> from these emissions units are greater than 100 T/yr, respectively.

#### EMISSIONS UNIT GROUP 10: PHOSPHORIC ACID MANUFACTURING PLANTS - PHOSPHORIC ACID PLANT NO. 400 / WET PROCESS PHOSPHORIC ACID PROCESS LINE

The PM control efficiency of the scrubber is unknown. If PM control efficiency of the scrubber is greater than 85.2%, the source is subject to CAM for PM. The source is currently subject to 40 CFR 63, Subpart AA that was proposed in 1999. According to 40 CFR 64.2 (b), CAM requirements are exempt for a source that is subject to emission limitations or standards proposed by EPA after November 15, 1990 pursuant to section 111 or 112 of the Act.

Even though 40 CFR 63, Subpart AA is for HAP control, DEQ staff reviewed the requirements in 40 CFR 63, Subpart AA and determined that the requirements in 40 CFR 63, Subpart AA meet CAM requirements for PM.

#### EMISSIONS UNIT GROUP 14: SULFURIC ACID PLANT NO. 300

Sulfuric acid plant No. 300 is subject to CAM requirements for SO<sub>2</sub>, sulfuric acid mist, and PM/PM<sub>10</sub> because sulfuric acid plant No. 300 meets the applicability criteria under 40 CFR 64.2(a); specifically, the emissions units use control devices to achieve compliance with emissions limits for SO<sub>2</sub>, sulfuric acid mist, and PM/PM<sub>10</sub>; and pre-control potential emissions for SO<sub>2</sub>, sulfuric acid mist, and PM/PM<sub>10</sub> from sulfuric acid plant No. 300 are greater than 100 T/yr, respectively. According to 40 CFR 64.5(a),

sulfuric acid plant No. 300 is a large SO<sub>2</sub> emissions unit because the controlled SO<sub>2</sub> emissions are greater than 100 T/yr.

**Non-applicable**

EMISSIONS UNIT GROUP 2: AMMONIUM SULFATE PLANT

Because pre-control potential emissions for PM/PM<sub>10</sub> from Ammonium Sulfate Plant are less than 100 T/yr, CAM does not apply to Ammonium Sulfate Plant. To support this conclusion, Simplot provided source test data in the application Table 6 and the DEQ's approval letters for the source tests in the comments on the facility draft received on October 3, 2011.

EMISSIONS UNIT GROUP 12: RECLAIM COOLING TOWER CELLS PLANT (DIRECT CONTACT) /EVAPORATIVE COOLING TOWERS

In Simplot's comments on the facility draft permit, Simplot provided the justification using EPA's criteria regarding process equipment vs. control device and concluded that mist-eliminator of the cooling tower was process equipment. Therefore, CAM requirements did not apply to cooling tower. Here are the discussions provided in Simplot's comments:

*The EPA has historically made the distinction between control devices and process equipment based on the following three questions:*

- 1) Is the primary purpose of the equipment to control air pollution?*
- 2) Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment?*
- 3) Would the equipment be installed if no air quality regulations are in place?*

*The answer to the first question is "no". The primary purpose of the mist eliminators is to retain water in the system (which would otherwise need to be replaced with make-up water, increasing the overall cost of the process) and to prevent excess deposition of salts in the area of the plant near the cooling towers.*

*The system is not recovering product, so the second criteria doesn't apply.*

*The answer to the third question is "yes". The first of these cooling towers was installed in 1966, at a time when air pollutant control requirements were minimal, and these towers included mist eliminators. In general, contact cooling water systems would not be installed without mist eliminators to preserve water in the system and prevent the deposition of contact cooling water chemical components within the facility. Even non-contact water cooling towers typically have mist eliminators to minimize loss of water in the system to avoid the additional cost of providing make-up water.*

*Based on these criteria, the mist eliminators on the Reclaim cooling towers should be considered process equipment, not control equipment, and 40 CFR Part 64 CAM requirements do not apply.*

EMISSIONS UNIT GROUP 13: SUPERPHOSPHORIC ACID PLANT / SUPERPHOSPHORIC ACID PROCESS LINE

Superphosphoric acid plant / superphosphoric acid process line is exempt from CAM requirements for fluorides emissions in accordance with 40 CFR 64.2(b)(i) because superphosphoric acid plant / superphosphoric acid process line is subject to 40 CFR 63, Subpart AA that was proposed on December 27, 1996, after November 15, 1990.

The proposed date in the e-CFR was incorrect; and the correct proposed date is December 27, 1996 (61 FR 68430) as mentioned in 64 FR 31359 June 10, 1999, Judicial Review.

EMISSIONS UNIT GROUP 15: SULFURIC ACID PLANT NO. 400

Sulfuric acid plant no. 400 is not subject to CAM because the mist eliminator at the sulfuric acid plant is determined to be inherent process equipment and is not a control device as mentioned in Simplot's application. The same CAM non-applicability determination was made for a same process in a different facility as follows:

*“With regard to the mist eliminator at the sulfuric acid plant, this device is determined to be inherent process equipment and not a control device. Refer to the information that follows. CAM does not apply to this device because it is not a control device.*

*(1) Is the primary purpose of the equipment to control air pollution? No. The sulfuric acid plant was originally constructed in 1964 and included installation of mist eliminators. The primary purposes for installing an acid mist eliminator are to prevent acid from attacking the metal equipment downstream and to capture product.*

*(2) Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment? Exact cost information for the mist eliminator installed in 1964 is not readily available; however, we know that the mist eliminators can recover approximately 62 pounds per ton of acid produced -- up to the permitted production level of 1,550 tons per day. That recovered acid is available for sale at an estimated price of \$44 per ton. While the mist eliminators recover product, another important purpose of the device is to remove acid from the gas stream to protect the downstream metal components from corrosion (reducing maintenance/equipment costs).*

*(3) Would the equipment be installed if no air quality regulations are in place? Yes, mist eliminators are, and were historically, utilized by the plant to recover product and to extend the useful life of the metal equipment downstream in the plant. Mist eliminator efficiencies have improved over time to enhance product recovery.”*

CAM applicability table provided in the application and with DEQ's changes is as follows:

Table 6  
CAM Applicability Calculations  
JR Simplot Don Siding Plant, Pocatello, ID

Source Group <sup>a</sup>	Control Device	Emission Factor Type	Pollutant <sup>(1)</sup>	Emission Factor (Permit Limit or Source Test Result)	Hours of Operation (hrs/yr)	Controlled Annual Emissions <sup>(2)</sup> (tons/year)	Conservative Control Efficiency (%)	Estimated Uncontrolled Emissions (tons/yr)	CAM Applicable? (Yes/No)	
Ammonium Sulfate Plant	Dryer Scrubber	Source Test Average	PM	0.62 lb/hr (3)	8,760	--	90	27 (a)	No	
		Maximum	PM	1.5 lb/hr (3)	8,760	--	90	66 (a)		
	Cooler Scrubber	Source Test Average	PM	0.69 lb/hr (3)	8,760	--	90	30 (a)	No	
		Maximum	PM	2.13 lb/hr (3)	8,760	--	90	93 (a)		
Granulation 1	Granulation No. 1 Baghouse	Source Test Average	PM	0.26 lb/hr (3)	8,760	--	99.9	1,139 (a)	Yes	
		Maximum	PM	0.51 lb/hr (3)	8,760	--	99.9	2,234 (a)		
	Reactor/Granulator Scrubber	Source Test Average	PM	0.70 lb/hr (3)	8,760	--	90	31 (a)	No	
		Maximum	PM	1.26 lb/hr (3)	8,760	--	90	55 (a)		
	Dryer Scrubber	Source Test Average	PM	1.8 lb/hr (3)	8,760	--	90	79 (a)	Yes (conservative assessment)	
		Maximum	PM	2.4 lb/hr (3)	8,760	--	90	105 (a)		
Granulation 2	Granulation No. 2 Baghouse & Cooler Baghouse	Source Test Average	PM	2.17 lb/hr (3)	8,760	--	99.9	9,505 (a)	Yes	
		Maximum	PM	4.24 lb/hr (3)	8,760	--	99.9	18,571 (a)		
	Tailgas Scrubber	Source Test Average	PM	4.69 lb/hr (3)	8,760	--	90	205 (a)	Yes	
		Maximum	PM	7.53 lb/hr (3)	8,760	--	90	330 (a)		
Granulation 3 <sup>(4)</sup>	Entoleter Scrubber	Source Test Average	PM	4.00 lb/hr (3)	8,760	--	90	175 (a)	Yes	
		Maximum	PM	6.92 lb/hr (3)	8,760	30.7	90	307 (b)		
		Defluorination Scrubber	Average	Fluorides	0.19 lb/hr (3)	8,760	--	90	8 (a)	Yes (conservative assessment)
	Maximum		Fluorides	0.27 lb/hr (3)	8,760	5.6	90	56 (b)		
		Baghouse		PM	Included above - no independent data available				Yes (conservative assessment)	
			PM	Included above - no independent data available				Yes (conservative assessment)		
Sulfuric Acid 300	DynaWave scrubber followed by AmmSOx packed-bed ammonia scrubber	Limit	H <sub>2</sub> SO <sub>4</sub>	3 lb/hr (2)	8760	13	98	650 (b)	Yes	
		Limit Inventory	PM	11.4 52 lb/hr (4)	8760	49.8 20.6	85	332 137	Yes	
		Source Test	SO <sub>2</sub>	99.7 lb/hr (5)	8760	436.9	> 90	> 100		

<sup>a</sup> Sources with pollutants subject to an emissions limitation or standard, that uses a control device to achieve compliance with the limitation or standard, and is not subject to a federal regulation issued after 1990. CAM will apply if uncontrolled emissions are above 100 tons/yr.

Notes:

- (a) Uncontrolled emissions (tons/yr) = (source test results [lbs/hr]) x (hours of operation [hrs/yr]) / (1-(assumed control efficiency [%]/100)) / (2000 lbs/ton)
- (b) Uncontrolled emissions (tons/yr) = (permit limit or emissions inventory controlled annual emissions [tons/yr]) x (1-(assumed control efficiency [%]/100))

References:

- (1) If CAM is not applicable for PM based on uncontrolled emissions, then CAM is also not applicable for PM<sub>10</sub>. If CAM is applicable for PM based on uncontrolled emissions, then CAM is assumed to be applicable to PM<sub>10</sub> based on uncontrolled emissions; however, the CAM approach for PM<sub>10</sub> is identical to the approach for PM.
- (2) Permit limit from Simplot Tier 1 Permit No. T1-040313.
- (3) Source test results, past three years.
- (4) Calculated emissions from emissions inventory.
- (5) Source test data 2004-2011.

## 6.8 Acid Rain Permit (40 CFR 72-75)

In its application, Simplot states that the facility is not subject to acid rain permit because the facility is not in the source category to which these regulations apply.

## 6.9 Approval and Promulgation of Implementation Plans (SIP) Subpart N—Idaho (40 CFR 52.670)

On July 13, 2006 (71 FR 39574), EPA approved the PM<sub>10</sub> maintenance plan for Portneuf Valley and also granted Idaho's request to re-designate the Portneuf Valley PM<sub>10</sub> nonattainment area to attainment for PM<sub>10</sub> NAAQS. The final rule as part of Idaho SIP was effective on August 14, 2006. The details can be found in the following table.

<a href="#">J.R. Simplot, Pocatello, ID</a>		T1-9507-114-1	4/5/04	8/14/06	<a href="#">7/13/06 71 FR 39574</a>	The following conditions: Cover page, facility identification information only, #300 Sulfuric Acid Plant, Permit Conditions 16.1, 16.10, 16.11, #400 Sulfuric Acid Plant, Permit Condition 17.1, 17.7, 17.10, 17.11, Phosphoric acid plant, Permit Condition 12.3, 12.13, Granulation No. 3 Process, Permit Condition 9.2.1, Granulation No. 3 stack, 9.17 (except 9.17.1 through 9.17.6), Reclaim Cooling Towers, Permit Condition 14.2, 14.6.1, Babcock&Wilcox Boiler, Permit Condition 6.4, 6.12, HPB&W Boiler, Permit Condition 5.3, 5.13 through 5.18, 5.21.
<a href="#">J.R. Simplot, Pocatello, ID</a>		39-116A	4/16/04	8/14/06	<a href="#">7/13/06 71 FR 39574</a>	The following conditions: No. 300 Sulfuric Acid Plant; Condition 8 and 9. No. 400 Sulfuric Acid Plant; Condition 10, 11, and 12. Granulation No.1 Plant; Condition 14. Granulation No.2 Plant; Condition 15. Compliance and Performance Testing; Condition 16.

## 6.10 IDAPA 58.01.01.322.10 — Compliance Schedule and Progress Reports

- In 2007, 2008, and 2009, the source test reports have shown fluoride emissions exceedance from Reclaim Cooling Tower at Simplot. The cases have been referred to EPA. EPA is leading the cases to resolve the issues.
- Old Permit Condition 18.1 is removed because the compliance issue of fluorides was resolved

through the consent order issue on August 7, 2009, and the ambient monitoring of SO<sub>2</sub> is no longer consider a compliance issued – refer to the discussion on Permit Condition 16.15 under Section 5.2 of this SOB.

- The Tier I, issued on April 5, 2004, requires the permittee to submit a permit application no later than September 30, 2005 to revise PM<sub>10</sub> emissions limits to reflect the performance testing results using EPA Methods 5 and 202 or Methods 201A and 202. This requirement applies to the plants/processes listed as follows:
  - Ammonium Sulfate Plant contained in the Tier II issued on December 3, 1999.
  - Granulation No. 1 Process contained in the Tier II issued on December 3, 1999.
  - Granulation No.2 Process contained in the Tier II issued on December 3, 1999
  - Granulation No.3 Process contained in the PTC issued on December 12, 2001.
  - Phosphoric Acid Manufacturing Plants contained in the Tier II issued on December 3, 1999.
  - Reclaim Cooling Tower Cells Plant (Direct Contact) /Evaporative Cooling Towers contained in the Tier II issued on December 3, 1999.

Simplot submitted the application on September 30, 2005. However, the application requires modifications to the Tier I operating permit to change PM<sub>10</sub> testing method specified in Tier I from EPA Methods 5 and 202 to EPA Method 5. The PM<sub>10</sub> compliance issues remain unresolved. The Tier I renewal includes the compliance schedule to address the same issues that we faced back in 2004.

Since 2004, Simplot has been conducting source test using EPA Methods 5 and 202 as required by 2004 Tier I. The source test results, summarized in the following table, show that only emissions from Phosphoric Acid Manufacturing plant and Reclaim Cooling Tower Cells plant are higher than the permit limits. Therefore, the compliance plan for this Tier I renewal will focus on these two plants though Simplot is free to include other plants and to take lower permit emissions limits of the plants to offset emissions from Phosphoric Acid Manufacturing plant and/or Reclaim Cooling Tower Cells plant.

It was decided at the DEQ's internal meeting with regional office staff, the program manager, enforcement coordinator, and the DEQ's attorney on September 8, 2010 that the compliance plan for this renewal would focus on resolving past PM<sub>10</sub> issues only. PM<sub>2.5</sub> facility-wide modeling would not be required in the compliance plan.

Process/Plant	Underlying Permits or Consent Order	EPA Test Methods Specified in Tier I Permit Condition 2.10.1	Test Frequency and the Corresponding Permit Condition No. in Tier I	PM <sub>10</sub> Permit Limit lb/hr	From Simplot's 2005 Submittal		From DEQ's Emission Test Review Letters					
					2004	2005	2006	2007	2008	2009	2010	2011
					lb/hr							
Ammonium Sulfate Plant	Tier II Permit No. 077-00006, 12/3/99	5 and 202, or 201A and 202	Annual (PC 4.11)	2.0	0.99	1.99	0.78	0.88	0.44	0.49	0.84	0.35
Granulation No. 1 Process	Consent Order (RACT requirements, 4/16/04)	5 and 202, or 201A and 202	Annual (PC 7.13.1)	10.9	2.6	2.53	2.89	2.9	4.07	3.54	4.81	---
Granulation No. 2 Process	Consent Order (RACT requirements, 4/16/04)	5 and 202, or 201A and 202	Annual (PC 8.13.1)	10.7	7.8	5.78	7.7 <sup>a</sup>	2.32 <sup>a</sup>	2.71	2.60	4.43	---
Granulation No. 3 Process, East Bulking Station, and Defluorination Process	PTC No. 077-00006, 12/12/01	5 and 202	Tier approach based on tested emissions level (PC 9.17.6)	5.7	6.11	2.65	3.2	2.17	2.12	1.88	2.9	4.47
Phosphoric Acid Manufacturing Plants	Tier II Permit No. 077-00006, 12/3/99	5 and 202, or 201A and 202	Annual (PC 12.7.1)	2.77	2.99	3.07	3.45	2.79	3.18	2.88	4.04	1.13

<sup>a</sup>Taken from source test log

Process/plant	Underlying Permits/Consent Order	Permit Limit	Test Method and Frequency Specified in Tier I	From 2005 Submittal		From DEQ' Emission Test Review Letters					
				2004	2005	2006	2007	2008	2009	2010	2011
Reclaim Cooling Tower Cells Plant (Direct Contact) /Evaporative Cooling Towers	Tier II Permit No. 077-00006, 12/3/99	3.53 lb/hr for each cell	5 and 202 (PC 2.10.1)  Refer to PC 14.6.2 for test frequency	2004	2005	2006	2007	2008	2009	2010	2011
		Cell 1		17.81	---	26.3	28.1	---	18.07	16.4	---
		Cell 2		---	24.93	22.2	---	26.56	13.9	---	10.1
		Cell 3		---	29.09	---	23.9	17.92	---	18.4	---
		Cell 4		13.4	---	27.9	17.5	---	33.85	7.9	---
		Cell 5		---	21.93	22.5	---	30.44	10.4	---	7.55
		Cell 6		---	12.85	---	20.8	14.25	---	7.92	---
		Cell 7		5.8	14.19	20.8	15.9	9.99	19.49	10.1	8.85
Cell 8	---	12.27	13	9.9	10.0	6.3	4.8	---			

## **7. PUBLIC COMMENT**

As required by IDAPA 58.01.01.364, a public comment period will be made available to the public.

A review of the site location information included in the permit application indicates that the facility is not located within 50 miles of a state border.

## **9. EPA REVIEW OF PROPOSED PERMIT**

As required by IDAPA 58.01.01.366, DEQ will provide the proposed permit to EPA Region 10 for its review and comment.

**APPENDIX A.1– REGULATORY ANALYSIS FOR 40 CFR PART 63 SUBPART ZZZZ**

Applicant submitted and DEQ reviewed

## 40 CFR Part 63 Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

### What This Subpart Covers

#### § 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

#### § 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

**Simplot owns and operates 5 emergency stationary RICE. Two generators are compression ignition (CI) >500 brake hp, the remaining three are spark ignition (SI) <500 brake hp. These are identified at the plant as follows:**

Description	Ignition	Fuel	Manuf. Date	Horsepower	Use
Caterpillar Boiler Generator	Compression	Diesel	<1980	755	Emergency
Cummins Ore Rec. Generator	Compression	Diesel	1994	535	Emergency
TG Turning Gear	Spark	Natural Gas	1987	42.5	Emergency
Sub 3400	Spark	Natural Gas	1997	90	Emergency
PPA Generator (Phone system)	Spark	Natural Gas	1995	58	Emergency

**For the remainder of this analysis, portions of the rule pertaining to the two CI >500 hp engines will be shown in bold text and portions of the rule pertaining to the three SI <500 hp engines will be shown in bold/underline text.**

**Note that those portions of the rule that are clearly not applicable are not included in this assessment due to the length of the full rule.**

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

**Simplot is a major source of HAP emissions.**

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

*Simplot's RICEs are Existing stationary RICEs because they commenced construction before the triggered dates.*

(b) **Stationary RICE subject to limited requirements.**

(3) **The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:**

(iii) **Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;**

***The two CI RICE operated by Simplot are emergency stationary RICE, as defined in §63.6675, and each has a site rating greater than 500 brake hp. As stated above, Simplot is a major source of HAP emissions. Therefore, the two CI RICE engines (> 500 hp) do not have to meet any requirements in this rule as long as they operate for emergency use only. Simplot should therefore confirm that these units continue to operate as emergency use only consistent with the description provided in § 63.6640***

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.

***The three existing Simplot emergency stationary SI RICE are less than 500 brake hp, and must be in compliance with the applicable operating limitations no later than October 19, 2013. These engines do not have any applicable emission limitations.***

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6600 *What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?*

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6602 *What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?*

**If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c** to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[75 FR 51589, Aug. 20, 2010]

***Simplot has read and understands the requirement that the three existing emergency stationary SI RICE must comply with the emission limitations in Table 2c.***

§ 63.6605 *What are my general requirements for complying with this subpart?*

**(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.**

**(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.**

[75 FR 9675, Mar. 3, 2010]

***The three existing emergency stationary SI RICE are subject to this section, and Simplot understands that these may become permit conditions.***

§ 63.6612 *By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?*

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

**No initial performance testing is required in the Tables to this rule.**

§ 63.6625 *What are my monitoring, installation, collection, operation, and maintenance requirements?*

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by

more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

***The monitoring, installation, collection, operation, and maintenance requirements shown above apply to the three existing SI <500 hp engines.***

**§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?**

***Not applicable***

**§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?**

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

***Does not apply - there are no applicable monitoring requirements.***

***§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?***

**(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.**

**(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance**

test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) Requirements for emergency stationary RICE. (1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low

frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

(2) If you own or operate an emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed prior to June 12, 2006, you must operate the engine according to the conditions described in paragraphs (f)(2)(i) through (iii) of this section. If you do not operate the engine according to the requirements in paragraphs (f)(2)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.

(iii) You may operate your emergency stationary RICE for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

***Simplot has read §63.6640(f)(1) and (2) and understands that if the emergency stationary RICE are not operated in the manner described above, then they will no longer be considered emergency RICE, and must comply with the requirements for non-emergency engines.***

§ 63.6645 *What notifications must I submit and when?*

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

***Simplot only operates existing stationary emergency RICE. As such, notifications are not required.***

§ 63.6650 *What reports must I submit and when?*

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or

40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

**No reports are required for the IC engines at the Simplot facility.**

§ 63.6655 *What records must I keep?*

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation ( i.e., process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE:

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010]

***These recordkeeping requirements apply to the three SI <500 hp engines as appropriate.***

§ 63.6660 *In what form and how long must I keep my records?*

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

§ 63.6665 *What parts of the General Provisions apply to me?*

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. **If you own or operate** a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, **or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8:** An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, **an existing emergency stationary RICE**, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

***Reiterates that there are no requirements for the two >500 hp existing emergency CI engines. The Table 8 requirements apply to the three <500 hp existing emergency SI engines except for 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b)-(e), (g) and (h).***

§ 63.6675 *What definitions apply to this subpart?*

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

*Area source* means any stationary source of HAP that is not a major source as defined in part 63.

*Associated equipment* as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

*Black start engine* means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101–549, 104 Stat. 2399).

*Commercial emergency stationary RICE* means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

**Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.**

***Simplot has read and understands this definition and used it in providing this regulatory analysis.***

*Custody transfer* means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

*Diesel engine* means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties ( e.g. biodiesel) that is suitable for use in compression ignition engines.

*Digester gas* means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO<sub>2</sub>.

*Dual-fuel engine* means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

**Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary RICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.**

***Simplot has read and understands this definition and used it in providing this regulatory analysis.***

*Engine startup* means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

*Four-stroke engine* means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

*Gaseous fuel* means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

*Gasoline* means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

*Glycol dehydration unit* means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

*Hazardous air pollutants (HAP)* means any air pollutants listed in or pursuant to section 112(b) of the CAA.

*Institutional emergency stationary RICE* means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

*ISO standard day conditions* means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

*Landfill gas* means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO<sub>2</sub>.

*Lean burn engine* means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

*Limited use stationary RICE* means any stationary RICE that operates less than 100 hours per year.

*Liquefied petroleum gas* means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

*Liquid fuel* means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

*Major Source*, as used in this subpart, shall have the same meaning as in §63.2, except that:

- (1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;
- (2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;
- (3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and
- (4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

*Natural gas* means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

*Non-selective catalytic reduction (NSCR)* means an add-on catalytic nitrogen oxides (NO<sub>x</sub>) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO<sub>x</sub>, CO, and volatile organic compounds (VOC) into CO<sub>2</sub>, nitrogen, and water.

*Oil and gas production facility* as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded ( *i.e.*, remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

*Oxidation catalyst* means an add-on catalytic control device that controls CO and VOC by oxidation.

*Peaking unit or engine* means any standby engine intended for use during periods of high demand that are not emergencies.

*Percent load* means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

*Potential to emit* means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

*Production field facility* means those oil and gas production facilities located prior to the point of custody transfer.

*Production well* means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

*Propane* means a colorless gas derived from petroleum and natural gas, with the molecular structure C<sub>3</sub>H<sub>8</sub>.

*Residential emergency stationary RICE* means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Rich burn engine* means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO<sub>x</sub> (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

*Site-rated HP* means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

***Simplot has read and understands this definition and used it in providing this regulatory analysis.***

**Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.**

***Simplot has read and understands this definition and used it in providing this regulatory analysis.***

*Stationary RICE test cell/stand* means an engine test cell/stand, as defined in subpart P P P P P of this part, that tests stationary RICE.

*Stoichiometric* means the theoretical air-to-fuel ratio required for complete combustion.

*Storage vessel with the potential for flash emissions* means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

*Subpart* means 40 CFR part 63, subpart Z Z Z Z.

*Surface site* means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

*Two-stroke engine* means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011]

*Table 2cto Subpart Z Z Z Z of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions*

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
<a href="#">6. Emergency stationary SI RICE and black start stationary SI RICE.</a> <sup>1</sup>	<a href="#">a. Change oil and filter every 500 hours of operation or annually, whichever comes first;</a> <sup>2</sup>	
—	<a href="#">b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;</a>	
—	<a href="#">c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.</a> <sup>3</sup>	

<sup>1</sup>[If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.](#)

<sup>2</sup>[Sources have the option to utilize an oil analysis program as described in §63.6625\(i\) in order to extend the specified oil change requirement in Table 2c of this subpart.](#)

<sup>3</sup>Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 51593, Aug. 20, 2010]

**Simplot will comply with the requirements in Table 2cto for the three existing SI <500 hp backup generators.**

*Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices*

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
<p>9. <u>Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP</u>, existing non-emergency stationary RICE &lt;100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that operate 24 hours or less per calendar year</p>	<p><u>a. Work or Management practices</u></p>	<p><u>i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or</u>  <u>ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</u></p>

<sup>a</sup>After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[76 FR 12870, Mar. 9, 2011]

**Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.**

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.

<b>General provisions citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)–(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.

<b>General provisions citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes.	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.

<b>General provisions citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes.	
§63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)–(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to	Yes	For CO standard if using RATA

General provisions citation	Subject of citation	Applies to subpart	Explanation
	RATA		alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010]

***The Table 8 requirements apply to the three <500 hp existing emergency SI engines except for 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b)-(e), (g) and (h).***

**APPENDIX A.2 - REGULATORY ANALYSIS FOR 40 CFR PART 60 SUBPART PP**

Applicant submitted and DEQ reviewed

[Code of Federal Regulations]  
[Title 40, Volume 6]  
[Revised as of July 1, 2010]  
From the U.S. Government Printing Office via GPO Access  
[CITE: 40CFR60]

[Page 483-485]

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 60 STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES--Table of Contents

Subpart PP Standards of Performance for Ammonium Sulfate Manufacture

Source: 45 FR 74850, Nov. 12, 1980, unless otherwise noted.

Sec. 60.420 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each ammonium sulfate dryer within an ammonium sulfate manufacturing plant in the caprolactam by-product, synthetic, and coke oven by-product sectors of the ammonium sulfate industry.

(b) Any facility under paragraph (a) of this section that commences construction or modification after February 4, 1980, is subject to the requirements of this subpart.

J.R. Simplot Co. reconstructed an ammonium sulfate dryer in 1998, and may have triggered applicability at that time.

Sec. 60.421 Definitions.

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

Ammonium sulfate dryer means a unit or vessel into which ammonium sulfate is charged for the purpose of reducing the moisture content of the product using a heated gas stream. The unit includes foundations, superstructure, material charger systems, exhaust systems, and integral control systems and instrumentation.

Ammonium sulfate feed material streams means the sulfuric acid feed stream to the reactor/crystallizer for synthetic and coke oven by-product ammonium sulfate manufacturing plants; and means the total or combined feed streams (the oxidation ammonium sulfate stream and the rearrangement reaction ammonium sulfate stream) to the crystallizer stage, prior to any recycle streams.

Ammonium sulfate manufacturing plant means any plant which produces ammonium sulfate.

Caprolactam by-product ammonium sulfate manufacturing plant means any plant which produces ammonium sulfate as a by-product from process streams generated during caprolactam manufacture.

Coke oven by-product ammonium sulfate manufacturing plant means any

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plant which produces ammonium sulfate by reacting sulfuric acid with ammonia recovered as a by-product from the manufacture of coke.

Synthetic ammonium sulfate manufacturing plant means any plant which

produces ammonium sulfate by direct combination of ammonia and sulfuric acid.

J.R. Simplot Company has read and understands these definitions and used them in proving this regulatory analysis.

Sec. 60.422 Standards for particulate matter.

On or after the date on which the performance test required to be conducted by Sec. 60.8 is completed, no owner or operator of an ammonium sulfate dryer subject to the provisions of this subpart shall cause to be discharged into the atmosphere, from any ammonium sulfate dryer, particulate matter at an emission rate exceeding 0.15 kilogram of particulate per megagram of ammonium sulfate produced (0.30 pound of particulate per ton of ammonium sulfate produced) and exhaust gases with greater than 15 percent opacity.

J.R. Simplot Company is subject to this standard and has provided a documented emission inventory which shows compliance.

Sec. 60.423 Monitoring of operations.

(a) The owner or operator of any ammonium sulfate manufacturing plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate flow monitoring devices which can be used to determine the mass flow of ammonium sulfate feed material streams to the process. The flow monitoring device shall have an accuracy of  $\pm 5$  percent over its range. However, if the plant uses weigh scales of the same accuracy to directly measure production rate of ammonium sulfate, the use of flow monitoring devices is not required.

(b) The owner or operator of any ammonium sulfate manufacturing plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate a monitoring device which continuously measures and permanently records the total pressure drop across the emission control system. The monitoring device shall have an accuracy of  $\pm 5$  percent over its operating range.

J.R. Simplot Company is subject to this standard and has equipment in place that meets the requirements of the standard.

Sec. 60.424 Test methods and procedures.

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

(b) The owner or operator shall determine compliance with the particulate matter standards in Sec. 60.422 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = (c_s Q_{sd}) / (PK)$$

where:

E=emission rate of particulate matter, kg/Mg (lb/ton) of ammonium sulfate produced.

$c_s$ =concentration of particulate matter, g/dscm (g/dscf).

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

P=production rate of ammonium sulfate, Mg/hr (ton/hr).

K=conversion factor, 1000 g/kg (453.6 g/lb).

(2) Method 5 shall be used to determine the particulate matter concentration ( $c_s$ ) and volumetric flow rate ( $Q_{sd}$ ) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 1.50 dscm (53 dscf).

(3) Direct measurement using product weigh scales, or the result of computations using a material balance, shall be used to determine the rate (P) of the ammonium sulfate production. If production rate is determined by material balance, the following equations shall be used:

(i) For synthetic and coke oven by-product ammonium sulfate plants:

$P=ABCK^{1/4}$

where:

A=sulfuric acid flow rate to the reactor/crystallizer averaged over the time-period taken to conduct the run, liter/min.

B=acid density (a function of acid strength and temperature), g/cc.

C=acid strength, decimal fraction.

$K^{1/4}$ =conversion factor, 0.0808 (Mg-min-cc)/(g-hr-liter) [0.0891 (ton-min-cc)/(g-hr-liter)].

Simplot has read and understands the requirement to follow prescribed test methods and determine emissions and the production rate.
---

(ii) For caprolactam by-product ammonium sulfate plants:

$$P = DEFK^*$$

where:

D = total combined feed stream flow rate to the ammonium crystallizer before the point where any recycle streams enter the stream averaged over the time-period taken to conduct the test run, liter/min.

E = density of the process stream solution, g/liter.

F = percent mass of ammonium sulfate in the process solution, decimal fraction.

K\* = conversion factor,  $6.0 \times 10^{-5} (\text{Mg-min})/(\text{g-hr})$  [ $6.614 \times 10^{-5} (\text{ton-min})/(\text{g-hr})$ ].

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

J.R. Simplot Company is subject to this standard. Simplot has read and understands the requirement that Method 9 and the procedures in Section 60.11 will be used to determine opacity.
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[54 FR 6676, Feb. 14, 1989, as amended at 65 FR 61760, Oct. 17, 2000]

## APPENDIX B – EMISSIONS INVENTORY

Summary of Facility-Wide Maximum Estimated Emissions J.R. Simplot Don Plant, Pocatello, Idaho. (Taken from Tier I renewal application dated June 2007.)		
Pollutant ID	Pollutant Name	(tpy)
1	2-Methylnaphthalene	<i>Negligible</i>
2	Acetaldehyde	0.002
3	Anthracene	<i>Negligible</i>
4	Antimony	<i>Negligible</i>
5	Arsenic	<i>Negligible</i>
6	Benzene	0.005
7	Benzo(a)anthracene	<i>Negligible</i>
8	Beryllium	<i>Negligible</i>
9	Cadmium	0.011
10	Chromium	0.006
11	Chrysene	<i>Negligible</i>
12	CO	<b>149.6</b>
13	Cobalt	<i>Negligible</i>
14	Dichlorobenzene	0.001
15	Fluoranthene	<i>Negligible</i>
16	Fluorene	<i>Negligible</i>
17	Fluorides	<b>336</b> <b>(335.9+0.06) *</b>
18	Formaldehyde	0.095
19	H <sub>2</sub> S	39.5
20	H <sub>2</sub> SO <sub>4</sub>	67.8
21	Hexane	2.306
22	Lead	<i>Negligible</i>
23	Manganese	<i>Negligible</i>
24	Mercury	<i>Negligible</i>
25	Naphthalene	<i>Negligible</i>
26	NH <sub>3</sub>	235.7
27	Nickel	0.010
28	NO <sub>x</sub>	<b>214.2</b>
29	Phenanthrene	<i>Negligible</i>
30	PM	1140.5 (1138.8+1.67)*
31	PM <sub>10</sub>	<b>464.9</b> <b>(463.8+1.11)*</b>
32	Pyrene	<i>Negligible</i>
33	Reduced S	41.47
34	SO <sub>2</sub>	<b>2276.9</b>
35	Toluene	0.005
36	VOC	7.592
37	Xylenes	0.001

\*Emissions from the exempted units, specialty liquids reactor and ammonium polyphosphate reactor, are added to the total.

## **APPENDIX C – FACILITY COMMENTS FOR FACILITY DRAFT PERMIT**

Simplot's comments on the 1<sup>st</sup> facility draft permit received on October 3, 2011 and 2<sup>nd</sup> facility draft permit received on January 27, 2012 are discussed throughout the SOB, mainly under the Emissions Limits and MRRR Section.

## **APPENDIX D – INSIGNIFICANT SOURCES UNDER IDAPA 58.01.01.317.01.B**

Taken from June 29, 2000 applicant Table 8 and  
Simplot's comments on the facility draft Tier I received on October 3, 2011

**Table 8. Insignificant Sources Under Section b of Rule 317**

Source Group	ID	Source Description	Type	Emission Point	Idaho Rule 317	Reason for Insignificant Classification
Sulfuric Acid Plant #300	101.0	AmSO <sub>x</sub> Liquor Pump Pit	Fug	Outside	30b	Negligible emissions of SO <sub>2</sub> (< 0.1 lb/hr estimated); neutral salt solution at ambient temperature. (< 10% significant emissions and < 1 tpy HAPs)
	105.1	Start-Up Bypass Vent (Manual)	Pt	Bypass Stack	30b	Start-up/Shutdown only, < 100 ppm SO <sub>2</sub> estimated when venting (< 10% significant emissions and < 1 tpy HAPs)
Sulfuric Acid Plant #400	113.0	Loading Stations - H <sub>2</sub> SO <sub>4</sub> , Other Prod.	Fug	Loading Points	30b	Based on calculations by Westar, there are trace amounts of regulated pollutants emitted from this source (e.g. 9 x 10 <sup>-13</sup> lb/hr sulfuric acid mist) (< 10% significant emissions and < 1 tpy HAPs)
	119.0	Start-Up Bypass Vent (Manual)	Pt	Bypass Stack	30b	Start-up/Shutdown only, < 100 ppm SO <sub>2</sub> estimated when venting (< 10% significant emissions and < 1 tpy HAPs)
Phosphoric Acid Plant	211.0	Tank Farm Splitter Box	Fug	Outside	30b	Negligible emissions, opening to covered/vented tank, emissions of all pollutants estimated < 0.01 lb/hr; (< 10% significant emissions and < 1 tpy HAPs)
	219.0	Cold Pit	Fug	Outside	30b	Negligible emissions from cold solution; < 1% total fluorides; HF emissions estimated less than 1 lb/yr (< 10% significant emissions and < 1 tpy HAPs)
	224.0	Cooling Tower Cold Pit	Fug	Outside	30b	Negligible emissions from cold solution; < 1% total fluorides; HF emissions estimated less than 1 lb/yr (< 10% significant emissions and < 1 tpy HAPs)
Ammonia Plant 100	312.0	CO <sub>2</sub> Gas Vent (Acid Gas Cond. Outlet)	Fug	Outside Vent	30b	This gas stream contains 99% CO <sub>2</sub> and trace amounts of Hydrogen and Nitrogen; no known regulated air pollutants
	315.0	After Methanator Vent	Fug	Outside Vent	30b	Based on methanator analysis, there are no regulated pollutants emitted from this source.
Granulation #2	458.0	Wet Sump	Fug	Outside	30b	Solution contains no known regulated air pollutants.

**Table 8. Insignificant Sources Under Section b of Rule 317**

Source Group	ID	Source Description	Type	Emission Point	Idaho Rule 317	Reason for Insignificant Classification
Ammonium Sulfate	507.0	Sump	Fug	Inside/Outside	30b	Ammonium sulfate solution; contains no known regulated air pollutants
Solutions	817.0	Nitric Acid Sump Vent	Fug	Outside Vent	30b	Negligible emissions @ ambient temp., <53% HNO <sub>2</sub> ; estimated emissions of acid mist less than 0.1 lb/hr (< 10% significant emissions and < 1 tpy HAPs)
Super Phosphoric Acid	1100.0	Nitric Acid Sump	Fug	Outside	30b	Negligible emissions (contains approx. 1/2% nitric acid and is at ambient temperature); estimated emissions of acid mist less than 0.001 lb/hr (< 10% significant emissions and < 1 tpy HAPs)
	1104.0	Leaf Filters	Fug	Inside	30b	Negligible emissions @ ambient temp., <70% H <sub>3</sub> PO <sub>4</sub> (< 10% significant emissions and < 1 tpy HAPs)
	1105.0	East Aging Tank	Pt	Extended Absorber	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1106.0	Filtered Acid Surge Tank (69% P2O5)	Fug	Outside Vent	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1107.0	Filter Feed Tank (69% P2O5)	Fug	Outside Vent	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1108.0	West Aging Tank	Pt	Extended Absorber	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1110.0	Nitric Acid Storage Tank	Fug	Inside	19b	Enclosed tank; <70% HNO <sub>3</sub>
	1111.0	Super Acid Unloading	Fug	Outside	19b	Enclosed pumping equipment; <99% H <sub>3</sub> PO <sub>4</sub>
Tube Shop	1203.0	Solvent/Glue Usage	Fug	Bldg Vents	32a, 30b	Negligible emissions -- individual units are sealed (< 10% significant emissions and < 1 tpy HAPs)
	1204.0	Welding	Fug	Bldg Vents	9b, 12a	<1 ton welding rod/day
Machine Shop	1205.0	Natural Gas Heaters	Fug	Bldg Vents	18b	Natural gas; < 5 MMBTU/hr
	1206.0	Welding	Fug	Bldg Vents	9b, 12a	<1 ton welding rod/day
	1207.0	Welding	Fug	Snorkel Vents	9b, 12a	<1 ton welding rod/day
	1208.0	Part Washers	Fug	Bldg Vents	26b	Cleaning solution having <1% VOCs; low volume of cleaning solution used ensures low emissions (< 10% significant emissions and < 1 tpy HAPs)

**Table 8. Insignificant Sources Under Section b of Rule 317**

Source Group	ID	Source Description	Type	Emission Point	Idaho Rule 317	Reason for Insignificant Classification
Machine Shop (cont)	1209.0	Plasma Cutting	Fug	Bldg Vents	30b	<0.5 g/min (March, 1994 reference, Swedish Institute of Production Engineering Research). Therefore, less than 600 lbs/yr of any pollutant. (< 10% significant emissions and < 1 tpy HAPs)
Stores Building	1212.0	Gas Water Heater	Fug	Roof Vent	18b	Natural gas; < 5 MMBTU/hr
	1213.0	Gas Heaters	Fug	Bldg Vents	18b	Natural gas; < 5 MMBTU/hr
Ore Thickner	1215.0	Solvent Storage	Fug	Bldg Vents	30b	Negligible emissions -- individual units are sealed, < 1,000 gal. solvent used plant-wide; assume << 0.1% lost during storage/opening (< 10% significant emissions and < 1 tpy HAPs)
Slurry Storage	1215.1	Gas Heater	Fug	Vent	18b	Natural Gas; < 5 MMBTU/hr
Ore Thickner	1216.0	Gas Heater	Fug	Outside Vent	18b	Natural gas; < 5 MMBTU/hr
Water Silo Shops	1217.0	Gas Heaters	Fug	Bldg Vents	18b	Natural gas; < 5 MMBTU/hr
Slurry Storage Dome Shop	1218.0	Welding	Fug	Bldg Vents	9b	<1 ton welding rod/day
	1219.0	Gas Heaters	Fug	Bldg Vents	18b	Natural gas; < 5 MMBTU/hr
Contractor Area	1221.0	Stored Chemicals	Fug	Outside	30b	Negligible emissions -- individual units are sealed; < 1,000 gal. solvent used plant-wide; assume << 0.1% lost during storage/opening (< 10% significant emissions and < 1 tpy HAPs)
Vibration Shop	1223.0	Welding	Fug	Bldg Vents	9b, 12a	<1 ton welding rod/day
Reclaim Bldg	1226.0	Parts Cleaner	Fug	Bldg Vents	26b	Cleaning solution having <1% VOCs; low volume of cleaning solution used ensures low emissions (< 10% significant emissions and < 1 tpy HAPs)
Portable Equipment	1230.0	Welders - Welding Emissions	Fug	Outside	9b, 12a	<1 tons welding rod/day
	1231.0	Welders - Combustion Emissions	Fug	Outside	5b	Welding (diesel, gasoline, propane) approx. 250,000 BTU/hr each
	1723.4	Welders	Fug	Exhaust Pipe	6b	Less than 196 hp
	1723.5	Compressors	Fug	Exhaust Pipe	6b	Less than 196 hp

**Table 8. Insignificant Sources Under Section b of Rule 317**

Source Group	ID	Source Description	Type	Emission Point	Idaho Rule 317	Reason for Insignificant Classification
Maintenance	1242.0	Press. Wash Room-N.G. Htr. Flue	Fug	Stacks Thru Roof	18b	Natural gas; 1,300,000 BTU/hr
	1248.0	Mobile Equip. Shop-Rad. Htr. Flues	Fug	Shop S. Wall	5b	Natural Gas; 1,125,000 BTU/hr
	1252.0	Silo Maint. Shop-N.G. Htr. Flue	Fug	Shop N. Wall	5b	Natural gas; 320,000 BTU/hr
	1253.0	Silo Maint. Shop-Flammable Storage	Fug	Shop N. Wall	30b	Negligible emissions -- individual units are sealed; < 1,000 gal. solvent used plant-wide; assume << 0.1% lost during storage/opening (< 10% significant emissions and < 1 tpy HAPs)
	1258.0	Gauze Cleaning Bldg.- Lab Hood Vent	Fug	Bldg. E. Wall	30b	Negligible chemical usage; 1/2 L of HCl replaced per year (< 10% significant emissions and < 1 tpy HAPs)
	1259.0	Pump Shop Heater	Fug	Heater Vents	5b	Natural Gas; < 5 MMBTU/hr
Solvents	1324.0	Plant-Wide Solvent Usage and Associated Storage & Handling	Fug	Bldg Vents	30b	Individual containers are small and sealed when not in use; < 1,000 gal. solvent used plant-wide; assume <10% lost during use (< 10% significant emissions and < 1 tpy HAPs)
Tech Building Analytical Lab	1319.0	Chemical Storage Bldg.	Fug	Vented Outside	30b	Individual containers are small and sealed when not in use; < 1,000 gal. solvent used plant-wide; assume << 0.1%% lost during use (< 10% significant emissions and < 1 tpy HAPs)
Tech Building Process Lab	1322.0	Chemical Storage Hood	Fug	Roof Vent	30b	Individual containers are small and sealed when not in use; < 1,000 gal. solvent used plant-wide; assume << 0.1%% lost during use (< 10% significant emissions and < 1 tpy HAPs)
Tanks-Tank Farm	1408.0	New Tank 19A (28%, Clar.)	Pt	T.F. Scrubber	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1408.1	New Tank 19A (28% Clar.)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1409.0	Tank 19B (28%, Clar.)	Pt	T.F. Scrubber	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1409.1	Tank 19B (28% Clar.)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1412.0	Tank 22 (42%, Clar.)	Pt	T.F. Scrubber	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1412.1	Tank 22 (42% Clar.)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1414.0	Tank 50 (28%, Clar.)	Pt	T.F. Scrubber	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1414.1	Tank 50 (28% Clar.)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>

**Table 8. Insignificant Sources Under Section b of Rule 317**

Source Group	ID	Source Description	Type	Emission Point	Idaho Rule 317	Reason for Insignificant Classification
Tanks-Tank Farm (cont.)	1415.0	Tank 51 (28%)	Pt	T.F. Scrubber	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1415.1	Tank 51 (28%)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1416.0	Tank 52 (52%, Clar.)	Pt	T.F. Scrubber	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1416.1	Tank 52 (52% Clar.)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1417.1	Tank 53 (52% Clar.)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1418.1	Tank 54 (52% Clar.)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1419.1	Tank 55 (42%)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1420.1	Tank 56	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1420.3	Tank 57	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
Tanks-NH <sub>3</sub> Plant	1427.0	#100 NH <sub>3</sub> Cooling Tower 93% H <sub>2</sub> SO <sub>4</sub>	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1434.0	#200 NH <sub>3</sub> Cooling Tower 93% H <sub>2</sub> SO <sub>4</sub>	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1441.0	Low Press. NH <sub>3</sub> Storage	Fug	Outside	30b	Releases are vented to the Ammonia Flare and oxidized; no significant emission rate exists for NH <sub>3</sub> and it is not a HAP, therefore meets the emission threshold requirements (< 10% significant emissions and < 1 tpy HAPs)
	1450.0	Demineralization Acid (93% H <sub>2</sub> SO <sub>4</sub> )	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
Tanks-Nitrogen Soln. Plant	1451.0	#1 Nitric Acid Ox. Reactor (68%)	Fug	Outside	19b	Enclosed tank; <70% HNO <sub>3</sub>
	1452.0	#1 UN32 Hill Storage Tank (Urea)	Fug	Outside	19b	Enclosed tank; aqueous salt solution
	1453.0	#2 UN32 Hill Storage Tank (Urea)	Fug	Outside	19b	Enclosed tank; aqueous salt solution
	1455.0	Old Nitric Acid Tank	Fug	Outside	19b	Enclosed tank; <70% HNO <sub>3</sub>
	1456.0	UN32 Day Tank Storage	Fug	Outside	19b	Enclosed tank; aqueous salt solution
	1457.0	New Nitric Acid Tank	Fug	Outside	19b	Enclosed tank; <70% HNO <sub>3</sub>
Tanks	1459.0	Hill Diesel Storage	Fug	Outside	20b	Enclosed tank; IBP > 150 °C; vapor pressure < 5 mm Hg @ 21 °C

**Table 8. Insignificant Sources Under Section b of Rule 317**

Source Group	ID	Source Description	Type	Emission Point	Idaho Rule 317	Reason for Insignificant Classification
Tanks (cont.)	1460.0	Gasoline Storage Tanks (3000 gal)	Fug	Underground Outside	3b	Enclosed tank; 3000 gal; vapor pressure < 80 mm Hg @ 21 °C
Tanks-Sulfuric Acid Plant	1461.0	#4 98% Main Acid Pump Tank	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1462.0	#4 98% Mix Tank	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1463.0	#4 Product Dilution Tank	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1466.0	#4 Demineralizer Acid Day Tank	Fug	Inside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1468.0	#1 Sulfuric Acid Storage	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1469.0	#2 Sulfuric Acid Storage	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1470.0	#4 H <sub>2</sub> SO <sub>4</sub> Product Storage	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1471.0	#5 H <sub>2</sub> SO <sub>4</sub> Product Storage	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1472.0	#6 H <sub>2</sub> SO <sub>4</sub> Product Storage	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1476.0	#3 H <sub>2</sub> SO <sub>4</sub> Plant 98% Pump Tank	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1477.0	#3 Product Dilution Tank	Fug	Outside	19b	Enclosed tank; <99% H <sub>2</sub> SO <sub>4</sub>
	1478.0	East AMSO <sub>x</sub> Day Tank Storage	Fug	Outside	19b	Enclosed tank; Ammonium sulfate salt solution
1479.0	West AMSO <sub>x</sub> Day Tank Storage	Fug	Outside	19b	Enclosed tank; Ammonium sulfate salt solution	
Tanks-Super Phosphoric Acid	1481.0	Phos Acid Tank #6	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1482.0	Phos Acid Tank #7	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
Tanks-Super Phosphoric Acid (cont.)	1482.1	Phos Acid Tank #8	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1482.2	Phos Acid Tank #9	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
Tanks-Gran. #1	1483.0	Tank 33 (H <sub>3</sub> PO <sub>4</sub> )	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
Tanks-Gran. #3	1484.0	Feed Acid Tank (42%)	Fug	Inside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1485.0	Acid Wash Water Tank	Fug	Inside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1486.0	Feed Acid Tank	Fug	Inside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
Tanks-Liquid Plant	1492.0	C.T. Sulfuric Tank	Fug	Inside	19b	Enclosed tank; < 99% H <sub>2</sub> SO <sub>4</sub>
	1494.0	Dilution Tank	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>

**Table 8. Insignificant Sources Under Section b of Rule 317**

Source/Group	ID	Source Description	Type	Emission Point	Idaho Rule 317	Reason for Insignificant Classification
<i>Tanks-Liquid Plant (cont.)</i>	1495.0	Tank #2: 0-54-0 Storage	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1496.0	Evap #3 Seal Can (68%)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1497.0	Evap Feed Tank (52%)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1498.0	Effluent Tank (low conc)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1499.0	Evap #2 Seal Can (68%)	Fug	Inside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1500.0	Evap #1 Seal Can (68%)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1502.0	Repul Tank	Fug	Inside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
	1505.0	Filter Feed Tank (68%)	Fug	Outside	19b	Enclosed tank; <99% H <sub>3</sub> PO <sub>4</sub>
WWDLI System	1709.0	Soda Ash Bins	Fug	Outside/Bin Vent	30b	Negligible emissions; Used for neutralizing low pH waste water (< 10% significant emissions and < 1 tpy HAPs)

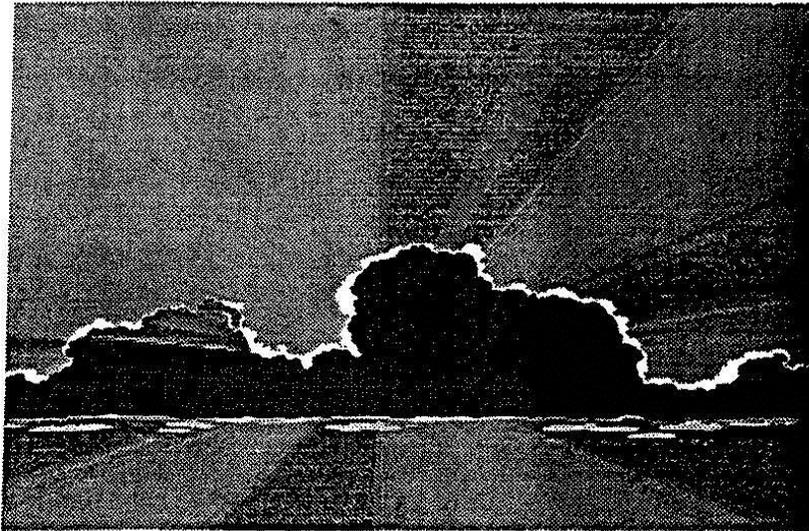
317.01 (6) Storage of solid material, dust-free handling  
317.01 (7) Boiler water treatment operations, not including cooling towers  
317.01 (11) Recreational fireplaces including use of barbeques, campfires, and ceremonial fires  
317.01 (18) Process water filtration systems  
317.01 (19) Portable electrical generators that can be moved by hand from one location to another.  
317.01 (28) Plant maintenance activities – housekeeping, janitorial, equipment cleaning, painting, re-roofing, insulating, landscaping  
317.01 (30) Maintenance of paved streets  
317.01 (37) Portable drums and totes  
317.01 (38) Light tube and can crushers.  
317.01 (40) Vehicle maintenance  
317.01 (41) Comfort cooling systems  
317.01 (42) Natural draft hoods, stacks, ventilators for sanitary and storm drains  
317.01 (43) Natural and forced draft bathroom/toilet facility vents  
317.01 (44) Office activities  
317.01 (53) Temporary construction activities – that comply with applicable permitting requirements  
317.01 (58) Structural changes not having air emissions  
317.01 (63) Bench scale lab equipment  
317.01 (69) Solid waste containers  
317.01 (76) Totally enclosed conveyor systems.  
317.01 (77) Steam vents and safety relief valves  
317.01 (79) Steam leaks  
317.01 (80) Boiler blow down tank  
317.01 (86) Clean condensate tanks  
317.01 (102) Pond dredging  
317.01 (104) Non-PCB oil filled circuit breakers, etc.  
317.01 (106) Lab-scale electric or steam-heated drying ovens/autoclaves  
317.01 (109) Process waste water and ponds

**APPENDIX E –COMPLIANCE METHOD SPECIFIED IN AIR QUALITY IMPROVEMENT  
PLAN FOR POWER AND BANNOCK COUNTIES DATED MAY 1993 FOR PM10  
FUGITIVE EMISSIONS FROM PHOSPHORIC ACID PLANT**

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# Power-Bannock Counties Particulate Matter (PM-10) Air Quality Improvement Plan

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Idaho Department  
of Health and Welfare

Division of  
Environmental  
Quality

Eastern Idaho  
Regional Office



United States  
Environmental  
Protection  
Agency  
Region X  
Seattle, Washington

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Emissions Calculations for J.R. Simplot point sources

90JRSPT.WK1

INT SOURCES	Material Type	Emission Factor lb/Ton	Source	Fugitive Emissions			Controlled		
				Capture Eff.	Maximum Daily PM10 (lbs/day)	Average Annual PM10 (Tons/yr)	Control Eff.	Maximum Daily PM10 (lbs/day)	Average Annual PM10 (Tons/yr)
Phosphate DUST SILO #13 BH Elevator => Phos. Dust Silo #13 Fugitives	Ore	1.00	SCC 3-05-019-03 for PM10	99.50%	24.00 24.00	0.75 0.75	99.90% (1)	4.78	0.15
Phosphate DUST SILO #14 BH Elevator => Phos. Dust Silo #14 Fugitives	Ore	1.00	SCC 3-05-019-03 for PM10	99.50%	24.00 24.00	0.75 0.75	99.90% (1)	4.80	0.15
400 Phosphoric Acid Plant 400 Phos. Acid Reactor 400 flash cooler Fugitives	D-M Scrubber phos ore, H2SO4 H3PO4	0.16 (lb/hr)	SET 9/90/PM10 Frac. Frm TB 8.18-2	99.50%	0.16	0.03	90.00% (2)	3.15	0.52
400 Phosphoric Acid Plant 400 flash clr hot wells 400 Evap. hot wells 400 belt filters 400 bit flt. filtrte tanks Fugitives	POLYCON Scru H3PO4 H3PO4 H3PO4 H3PO4	0.00 (lb/hr)	SET 11/90/PM10 Frac. Frm TB 8.18-2	99.50%	0.00	0.00	90.00% (2)	0.00	0.00
AP reactor/granulator AP reactor/granulator Dryer => Triple Screen Fines => Fine Conveyor Coarse => Cage Mill Cage Mill => Fines Conveyor Medium => Vib. Pan Vib. Pan Fines => Fines Conveyor Vib. Pan => Cooler Fines Conv. => Granulator Cooler => Storage conv. Fugitives	Venturi Scrubber NH3, phos acid, gyp	1.46 (lb/hr)	SET 5/90/PM10 Frac. Frm TB 8.18-2	99.50%	1.44	0.18	90.00% (2)	28.73	3.59
1100 Ammonium Phosphate BH MAP screens Stor. Conv. => Storage Fugitives	MAP	0.28 (lb/hr)	SET 5/90/PM10 Frac. Frm TB 8.18-2	99.50%	27.69	3.46	99.90% (2)	5.51	0.69
Running Total					5609.77	384.23		2166.74	149.98

Footnotes:

- Control efficiency provided by J.R. Simplot
- Source Emission Test (SET) performed by J.R. Simplot.  
Daily emissions calculated by: [SET lbs./hr.(TSP) \* hrs/dy/2000] \* PM10 Fraction