

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NSPS and NESHAP SOURCE --  
RENEWAL

PERMITTEE

PCS Phosphate Company, Inc.  
Attn: Robert L. Startzer, Jr.  
2660 East U.S. Route 6  
Marseilles, Illinois 61341

<u>Application No.:</u> 72121009	<u>I.D. No.:</u> 099817AAI
<u>Applicant's Designation:</u>	<u>Date Received:</u> March 29, 2010
<u>Subject:</u> Mono and Dicalcium Phosphate Production Plant	
<u>Date Issued:</u>	<u>Expiration Date:</u>
<u>Location:</u> 2660 East U.S. Route 6, Marseilles, LaSalle County	

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of

Limestone Unloading System;  
Two (2) Limestone Grinding Mills Controlled by Two (2) Baghouses;  
Surge Silo Controlled by the Baghouse;  
Pug Mill Mixer Controlled by the Scrubber;  
Pellet Dryer Controlled by Two (2) Cyclones and Scrubber;  
Pellet Cooling Area Controlled by Baghouse;  
Seven (7) Product Screens Controlled by Baghouse;  
Product Recycling System Comprised of Five (5) Conveyors and Four (4) Cage Mills Controlled by Baghouse;  
Product Truck and Railcar Load-Out Area Controlled by Baghouse;  
Product Barge Load-Out Area comprised of Two (2) Conveyors and One (1) Clam-Shell Loader, and Barge Loading Operations;  
Two (2) 280,000 gal Phosphoric Acid Storage Tanks;  
One (1) 13.4 mmBtu/hr Natural Gas-Fired Boiler; and  
One (1) 250 kW Natural Gas-Powered Generator

pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/yr for Particulate Matter less than 10 microns (PM<sub>10</sub>)). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) for this location.

- 2a. The 250 kW Natural Gas-Powered Generator is subject to the New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60 Subparts A and JJJJ. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Pursuant to 40 CFR 60.4233(e), owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to 40 CFR 60 Subpart JJJJ for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR Part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to 40 CFR 60 Subpart JJJJ, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

Table 1 to Subpart JJJJ of Part 60 –NO<sub>x</sub>, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥ 100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards <sup>a</sup>					
			g/HP-hr			ppmvd at 15% O <sub>2</sub>		
			NO <sub>x</sub>	CO	VOC <sup>d</sup>	NO <sub>x</sub>	CO	VOC <sup>d</sup>
Emergency	HP≥130	1/1/2009	2.0	4.0	1.0	160	540	86

<sup>a</sup> Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O<sub>2</sub>.

<sup>d</sup> For purposes of 40 CFR 60 Subpart JJJJ, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

- c. Pursuant to 40 CFR 60.4233(h), owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in 40 CFR 60.4233(e).
  - d. Pursuant to 40 CFR 60.4236(c), for emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in 40 CFR 60.4233 after January 1, 2011.
- 3a. The 250 kW Natural Gas-Powered Generator is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, 40 CFR 60 Subpart ZZZZ. The

Illinois EPA is administering the NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

- b. Pursuant to 40 CFR 63.6590(c), an affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, must meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR Part 60 subpart IIII, for compression ignition engines or 40 CFR Part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under 40 CFR Part 63.
- 4a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.
- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
- d. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).

5. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to excess 2000 ppm.
6. Pursuant to 35 Ill. Adm. Code 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.
7. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Prepared Feeds Manufacturing, 40 CFR 63 Subpart DDDDDDD because the source does not use a material containing chromium or a material containing manganese in the production of prepared feeds.
8. Pursuant to 35 Ill. Adm. Code 212.314, 35 Ill. Adm. Code 212.301 shall not apply and spraying pursuant to 35 Ill. Adm. Code 212.304 through 212.310 and 35 Ill. Adm. Code 212.312 shall not be required when the wind speed is greater than 40.2 km/hr (25 mph). Determination of wind speed for the purposes of this rule shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to this rule is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements.
9. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- 10a. Pursuant to 40 CFR 60.4234, owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine.
  - b. Pursuant to 40 CFR 60.4243(a), if you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in 40 CFR 60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. You must also meet the requirements as specified in 40 CFR Part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be

considered out of compliance. In addition, you must meet one of the requirements specified in 40 CFR 60.4243(a)(1) and (2).

- i. If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator.
- ii. If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to 40 CFR 60.4243(a)(2)(i) through (iii), as appropriate.

If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

- c. Pursuant to 40 CFR 60.4243(b), if you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in 40 CFR 60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in 40 CFR 60.4243(b)(1) and (2).
  - i. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR 60.4243(a).
  - ii. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(d) or (e) and according to the requirements specified in 40 CFR 60.4244, as applicable, and according to 40 CFR 60.4243(b)(2)(i) and (ii).

If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

- d. Pursuant to 40 CFR 60.4243(d), emergency stationary ICE may be operated 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. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Illinois EPA or USEPA 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 ICE beyond 100 hours per year. Emergency stationary ICE may operate 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. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.
- e. Pursuant to 40 CFR 60.4243(e), owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of 40 CFR 60.4233.
- f. Pursuant to 40 CFR 60.4243(f), if you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in 40 CFR 60.4243, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).
- g. Pursuant to 40 CFR 60.4243(g), it is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.
- 11a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to

minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.

- b. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the baghouses associated with the limestone grinding mills, the baghouse associated with the surge silo, the scrubber associated with the pug mill mixer, the cyclones and scrubber associated with the pellet dryer, the baghouse associated with the pellet cooling area, the baghouse associated with the product screens, the baghouse associated with the product recycling system, and the baghouse associated with the truck and railcar load-out area such that the baghouses, scrubbers, and cyclones are kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
  - c. The boiler shall only be operated with natural gas as the fuel. The use of any other fuel in the boiler requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
  - d. The 250 kW generator shall only be operated with natural gas as the fuel, except as provided in 40 CFR 60.4243(e). The use of any other fuel in the generator, except as provided in 40 CFR 60.4243(e), requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- 12a. Operations and emissions of the phosphate production plant shall not exceed the following limits:

<u>Unit of Equipment</u>	<u>Production Rate</u>		<u>Emission Factor (lb/Ton)</u>	<u>Control Efficiency (%)</u>	<u>PM Emissions</u>	
	<u>(T/Mo)</u>	<u>(T/Yr)</u>			<u>(lb/Mo)</u>	<u>(T/Yr)</u>
Unloading System	21,463	171,700	0.003*	-	64	0.26
2 Grinding Mills	21,463	171,700	1.46**	99.7	94	0.38
Surge Silo	21,463	171,700	0.003	99.7	1	0.01
2 Phosphoric Acid Storage Tanks	26,800	214,500	0.0002	--	6	0.02
Pug Mill Mixer	45,075	306,600	0.014	***	631	2.15
Pellet Dryer	45,075	306,600	0.101	***	4,553	15.48
Cooling Area	45,075	306,600	0.036	***	1,623	5.52
7 Screens	45,075	306,600	0.048	***	2,164	7.36
Recycling System	45,075	306,600	0.024	***	1,082	3.70
Truck & Rail Car Load-Out Area	45,075	306,600	0.003*	50.0	68	0.23
Barge Load-Out Area	45,075	306,600	0.003*	***	136	0.46
					Total	35.57

\* SIC 305-020-06

\*\* SIC 305-019-07

\*\*\* Emission Factor was derived from the stack test performed in 1995 and accounts for control device efficiency. It is assumed that replacement of some scrubbers with baghouses after testing resulted in no increase in emissions.

These limits are based upon maximum production rate, emission factor derived from the stack test data, and standard emission factors (Factor Information Retrieval (FIRE), version 6.25, September 2004). Note that there is a "nested" limit on the emissions of PM<sub>10</sub> as a result of the limit on PM emissions. The emissions of PM<sub>10</sub> from this source are within the size for PM and therefore limiting PM emissions also limits PM<sub>10</sub> emissions.

b. Operation and emissions of the natural gas fired dryer and boiler shall not exceed the following limits:

i. Natural Gas Usage: 59 mmscf/Month, 590 mmscf/Year

ii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	<u>Emission Factor</u> (lb/mmscf)	<u>Emissions</u>	
		(Tons/Mo)	(Tons/Yr)
Carbon Monoxide (CO)	84	2.48	24.78
Nitrogen Oxides (NO <sub>x</sub> )	100	2.95	29.50
Particulate Matter (PM)	7.6	0.22	2.24
Sulfur Dioxide (SO <sub>2</sub> )	0.6	0.02	0.18
Volatile Organic Material (VOM)	5.5	0.16	1.62

These limits are based on the maximum fuel usage and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

c. Emissions and operation of the 250 kW natural gas-fired generator shall not exceed the following limits:

i. The runtime for 250 kW natural gas-fired generator shall not exceed 500 hours/year.

ii. Emissions from the 250 kW natural gas-fired generator shall not exceed:

<u>Pollutant</u>	<u>Emission Factor</u> (lb/HP-hr)	<u>Emissions</u>	
		(lb/hour)	(Tons/Year)
Carbon Monoxide (CO)	0.008816	2.96	0.74
Nitrogen Oxides (NO <sub>x</sub> )	0.004408	1.48	0.37
Particulate Matter (PM)	0.0000908	0.03	0.01
Sulfur Dioxide (SO <sub>2</sub> )	0.00000587	0.01	0.01
Volatile Organic Material (VOM)	0.002204	0.74	0.18

The above limits are based on the maximum hours of operation, emission factors for CO, NO<sub>x</sub>, and VOM are derived from Table 1 to Subpart JJJJ of Part 60, PM and SO<sub>2</sub> are derived from standard factors (Table 3.2-3, AP-42, Fifth Edition, Volume I, Supplement F, August 2000) at the generator's fuel usage at 100% load (3,446 scf/hr).

- d. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
13. This permit is issued based on the Potential to Emit (PTE) for Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from the source being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program (CAAPP) Permit.
- 14a. Pursuant to 40 CFR 60.8(a), at such times as may be required by the Illinois EPA or USEPA under section 114 of the Clean Air Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Illinois EPA or USEPA a written report of the results of such performance test(s).
- b. Pursuant to 40 CFR 60.8(b), performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart of 40 CFR Part 60 unless the Illinois EPA or USEPA:
    - i. Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
    - ii. Approves the use of an equivalent method;
    - iii. Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance;
    - iv. Waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Illinois EPA's or USEPA's satisfaction that the affected facility is in compliance with the standard; or
    - v. Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Illinois EPA's or USEPA's authority to require testing under section 114 of the Clean Air Act.
  - c. Pursuant to 40 CFR 60.8(c), performance tests shall be conducted under such conditions as the Illinois EPA or USEPA shall specify to the plant operator based on representative performance of the affected facility.

The owner or operator shall make available to the Illinois EPA or USEPA such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

- d. Pursuant to 40 CFR 60.8(e), the owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
  - i. Sampling ports adequate for test methods applicable to such facility. This includes:
    - A. Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test 1 methods and procedures; and
    - B. Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
  - ii. Safe sampling platform(s).
  - iii. Safe access to sampling platform(s).
  - iv. Utilities for sampling and testing equipment.
- e. Pursuant to 40 CFR 60.4244, owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in 40 CFR 60.4244(a) through (f).
  - i. Pursuant to 40 CFR 60.4244(a), each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 to 40 CFR 60 Subpart JJJJ.
  - ii. Pursuant to 40 CFR 60.4244(b), you may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.
  - iii. Pursuant to 40 CFR 60.4244(c), you must conduct three separate test runs for each performance test required in 40 CFR 60.4244, as specified in 40 CFR 60.8(f). Each test run must be conducted

within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

- iv. Pursuant to 40 CFR 60.4244(d), to determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1 of 40 CFR 60.4244.
  - v. Pursuant to 40 CFR 60.4244(e), to determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of 40 CFR 60.4244.
  - vi. Pursuant to 40 CFR 60.4244(f), for purposes of 40 CFR 60 Subpart JJJJ, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of 40 CFR 60.4244.
  - v. Pursuant to 40 CFR 60.4244(g), if the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR Part 60, appendix A, or Method 320 of 40 CFR Part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of 40 CFR 60.4244.
- 15a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.

- ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
  - b. Testing required by Condition 16 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
16. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
17. Pursuant to 40 CFR 60.4237(a), starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.
- 18a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- b. Pursuant to 40 CFR 60.7(f), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
  - c. Pursuant to 40 CFR 60.4245(a), owners and operators of all stationary SI ICE must keep records of the information in 40 CFR 60.4245(a) (1) through (4).
    - i. All notifications submitted to comply with this subpart and all documentation supporting any notification.

- ii. Maintenance conducted on the engine.
  - iii. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.
  - iv. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards.
19. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 20a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
- i. Records addressing use of good operating practices for the baghouses associated with the limestone grinding mills, the baghouse associated with the surge silo, the scrubber associated with the pug mill mixer, the cyclones and scrubber associated with the pellet dryer, the baghouse associated with the pellet cooling area, the baghouse associated with the product screens, the baghouse associated with the product recycling system, and the baghouse associated with the truck and railcar load-out area:
    - A. Records for periodic inspection of the baghouses, scrubbers, and cyclones with date, individual performing the inspection, and nature of inspection; and
    - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
  - ii. Phosphate production (tons/month and tons/year);
  - iii. Natural gas consumption (mmscf/month and mmscf/year);
  - iv. Runtime for the 250 kW natural gas-fired generator (hours/month and hours/year); and
  - v. Monthly and annual emissions of CO, NO<sub>x</sub>, PM, PM<sub>10</sub>, SO<sub>2</sub>, and VOM with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall

be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

- 21a. Pursuant to 40 CFR 60.7(a), any owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Illinois EPA or USEPA written notification or, if acceptable to both the Illinois EPA and USEPA and the owner or operator of a source, electronic notification, as follows:
    - i. A notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
    - ii. A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
    - iii. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Illinois EPA or USEPA may request additional relevant information subsequent to this notice.
  - b. Pursuant to 40 CFR 60.4245(d), Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in 40 CFR 60.4244 within 60 days after the test has been completed.
22. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 23a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.

- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Illinois EPA  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Illinois EPA  
Division of Air Pollution Control  
5415 North University  
Peoria, Illinois 61614

It should be noted that this permit has been revised so as to include the operation of the equipment described in Construction permit 10030059.

It should also be noted that this permit has been revised so as to include the operation of a 250 kW natural gas-fired generator.

If you have any questions on this permit, please call Valeriy Brodsky at 217/782-2113.

Edwin C. Bakowski, P. E.  
Manager, Permit Section  
Division of Air Pollution Control

ECB:VJB:

cc: Illinois EPA, FOS Region 2  
Lotus Notes

Attachment A

This attachment provides a summary of the maximum emission from Mono and Dicalcium Phosphate Production Plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is a maximum production rate of phosphates 306,600 tons per year. The resulting maximum emissions are below the levels (i.e., 100 tons/yr for PM<sub>10</sub>) at which this source would be considered a major source for purposes of the Clean Air Act Program Permit (CAAPP). Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	Emissions (Tons/Year)				
	CO	NO <sub>x</sub>	PM	<u>SO<sub>2</sub></u>	VOM
Unloading System			0.26		
Grinding Mills			0.38		
Surge Silo			0.01		
Phosphoric Acid Storage Tanks			0.02		
Pug Mill Mixer			2.15		
Pellet Dryer			15.48		
Cooling Area			5.52		
Screens			7.36		
Recycling System			3.70		
Truck & Rail Car Load-Out Area			0.23		
Barge Load-Out Area			0.46		
Natural Gas Fired Dryer & Boiler	24.78	29.50	2.24	0.18	1.62
250 kW Natural Gas-Fired Generator	<u>0.74</u>	<u>0.37</u>	<u>0.01</u>	<u>0.01</u>	<u>0.18</u>
Totals:	25.52	29.87	37.82	0.19	1.80

ECB:VJB: