



State of Idaho  
Department of Environmental Quality  
Air Quality Division

**AIR QUALITY PERMIT  
STATEMENT OF BASIS**

**Permit to Construct No. P-2009.0068**

**Project No. 0068**

**Final**

**Nu-West Industries, Inc.**

**dba Agrium Conda Phosphate Operations**

**Soda Springs, Idaho**

**Facility ID No. 029-00003**

**October 8, 2010**

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**Permit Writer**

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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## Acronyms, Units, and Chemical Nomenclature

AAC	acceptable ambient concentrations for non-carcinogens
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
Btu	British thermal unit
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hr/yr	hours per year
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards
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
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SM	Synthetic Minor
SO <sub>2</sub>	sulfur dioxide
T/yr	tons per year
TAP	toxic air pollutant
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
µg/m <sup>3</sup>	micrograms per cubic meter

## 1. FACILITY INFORMATION

### 1.1 Facility Description

The Nu-West Industries, Inc., Agrium Conda Phosphate Operations (Nu-West) facility located near Soda Springs produces phosphate fertilizers from ore. Phosphate fertilizers provide phosphorus, one of the three primary plant nutrients required by plant life. The other two primary nutrients are nitrogen and potassium. Phosphate fertilizer products, which are often made with ammonia, also provide nitrogen. The principal applications of phosphate fertilizers are in the production of corn, wheat, soybeans, barley, cotton, and other small grain crops, fruits, and vegetables. Phosphate rock, sulfur, and anhydrous ammonia are the primary raw materials used to produce ammonium phosphate fertilizers. Phosphate rock is combined with sulfuric acid to produce phosphoric acid, which is then either:

- Combined with anhydrous ammonia to produce various dry granular fertilizers that are differentiated by their NPK content (% nitrogen -% phosphorus -% potassium), including MAP (11-52-0) and APS (16 20 0), or
- Concentrated to produce liquid fertilizer products containing no nitrogen and 52%-72% P<sub>2</sub>O<sub>5</sub>.

The Conda facility produces multiple products and alters its product mix to meet the changing requirements of its customers. This includes the following: Super Phosphoric Acid (SPA); Merchant Grade Acid (MGA); Dilute Phosphoric Acid (DPA); and dry granular products including Mono-ammonium Phosphate ("MAP" or 11-52-0) and Ammonium Phosphate Sulfate ("APS" or 16-20-0).

### 1.2 Permitting Action and Facility Permitting History

This PTC is a revision of an existing PTC. This PTC will also modify the facility's existing Tier I Operating Permit. See the current Tier I permit statement of basis for the permitting history.

## 2. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

### 2.1 Application Scope

Nu-West Industries has requested to replace the NO<sub>x</sub> monitoring presently required for the SPA Oxidation Process stack with periodic NO<sub>x</sub> performance testing instead to demonstrate compliance with the NO<sub>x</sub> emission rate limit for this source. Also, PTC conditions for NESHAP and NSPS requirements were edited to be consistent with the up-to-date version of these conditions that is included in the Tier I renewal permit.

### 2.2 Application Chronology

May 15, 2009	DEQ received the permit application
May 19, 2009	The \$1000 PTC application fee was received
June 12, 2009	DEQ declared the PTC application was complete
July 22, 2009	The draft permit was issued for Regional Office and peer review
July 27, 2009	The draft permit was issued to Nu-West for review
August 4, 2009	The \$250 PTC processing fee was received
November 5, 2009	Comments on the draft permit were received from Nu-West
March 4, 2010	The draft permit was issued to Nu-West for review
March 15, 2010	Comments on the draft permit were received from Nu-West
August 12, 2010	The 30-day Public Comment period began
September 13, 2010	The 30-day Public Comment period ended

### **3. TECHNICAL ANALYSIS**

#### **3.1 Emissions Inventory**

This revised permit only involves a change with the monitoring requirements for the SPA Oxidation System. There is no physical or operational change associated with this action and there will be no change in emissions as a result of this action. For this reason, modeling is not required.

### **4. REGULATORY REVIEW**

#### **4.1 Attainment Designation (40 CFR 81.313)**

The facility is located in Caribou 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.

#### **4.2 Permit to Construct (IDAPA 58.01.01.201)**

This PTC is a “revision” as described under IDAPA 58.01.01.209.04. This permit is for changes to monitoring requirements. No physical or operational changes to the SPA Oxidation process will occur as a result of this revision, and there will be no increase in emissions as a result either. Since there is no increase in emissions then an opportunity for comment is not required for this permit action in accordance with Section 209.04 of the Rules. However, since the monitoring changes in this permit will also result in a modification of the facility’s Tier I operating permit then a comment period will be held concurrently with the modified Tier I permit in accordance with Section 209.05.b. of the Rules.

#### **4.3 Tier II Operating Permit (IDAPA 58.01.01.401)**

Tier II operating permit rules do not apply to this facility.

#### **4.4 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)**

Nu-West is defined as a major facility for purposes of the Title V Program in accordance with IDAPA 58.01.01.008.10, because it emits or has the potential to emit (PTE) a regulated air pollutant in amounts greater than or equal to major facility thresholds listed in Subsection 008.10. The facility has a PTE for SO<sub>2</sub> and NO<sub>x</sub> of over 100 T/yr for each pollutant.

#### **4.5 PSD Facility Classification (40 CFR 52.21)**

This facility is a designated facility as defined by IDAPA 58.01.01.006.30. and 58.01.01.205 [40 CFR 52.21(a)] (sulfuric acid plant). Since the facility is a designated facility, the PSD applicability threshold is 100 TPY. This facility is a major facility as defined for the PSD program by IDAPA 58.01.01.205 [40 CFR 52.21(b)] because it emits or has the potential to emit a regulated criteria air pollutant (SO<sub>2</sub> and NO<sub>x</sub>) in amounts greater than or equal to 100 tons per year. No physical or operational changes to the SPA Oxidation Process will occur, and no emissions increase will occur as a result of issuance of this permit. Therefore, for the NO<sub>x</sub> monitoring changes requested for this permit, PSD requirements do not apply.

#### **4.6 PSD Review for changes to SPA P<sub>2</sub>O<sub>5</sub> Feed Rate Limit (40 CFR 52.21)**

Given the new performance test information that recently become available, there are three primary issues that need to be addressed with regard to the P<sub>2</sub>O<sub>5</sub> feed rate to the SPA Process Line. These issues will be addressed as part of the issuance of this permit. The issues are as follows:

1. The original P<sub>2</sub>O<sub>5</sub> feed rate limit for the SPA Process Line is not a relevant or effective method for maintaining compliance with the 5 tons/yr NO<sub>x</sub> limit for the SPA Oxidation Process stack. A new method is necessary to accomplish this.

2. Further review of 40 CFR 52.21(r)(4) as it applies to PTC No. P-040320 (i.e., the project to increase the SPA P<sub>2</sub>O<sub>5</sub> feed rate limit from 225,000 to 345,000 tons/yr) is not relevant since this feed rate limit is not relevant.

**Issue 1**

The following information is written to clarify an issue where DEQ created a feed rate limit of 225,000 tons/yr of P<sub>2</sub>O<sub>5</sub> for the SPA Process Line (a production rate limit) in PTC No. 029-00003 issued on July 12, 2000. Based on new performance test information received since that time, it is now known that this production rate limit serves no practical purpose for limiting the NO<sub>x</sub> PTE from the SPA Process Line (neither at the time of permit issuance nor at the present time) and, therefore, at this time the limit is being removed from the permit. In lieu of using the production rate limit to demonstrate compliance with the 5 tons/yr NO<sub>x</sub> limit for the SPA Process Line, Nu-West will now be required to conduct periodic NO<sub>x</sub> performance tests instead. A re-evaluation of this issue is important because the 5 tons/yr NO<sub>x</sub> emission rate limit was originally established to avoid triggering PSD major modification requirements for the Sustaining/Expansion PTC project that was permitted by PTC No. 029-00003 issued on July 12, 2000.

Based on information gained since construction was completed for the Sustaining/Expansion project, it is now known that actual and potential NO<sub>x</sub> emissions from the SPA Process Line are approximately 8 times less than the PTE estimated in the permit application for the Sustaining/Expansion project. The new information includes continuous emissions monitoring data from a Horiba NO<sub>x</sub> analyzer installed on this source and NO<sub>x</sub> performance test results by TETCO.

In the Sustaining Expansion project PTC issued on July 12, 2000, NO<sub>x</sub> limits of 33 tons/yr for the new Cleaver Brooks boiler and 5 tons/yr for the SPA Process Line were established to avoid triggering PSD requirements for a major modification at a major facility. In this PTC, DEQ included three permit conditions for purposes of making the 5 tons/yr SPA NO<sub>x</sub> limit federally enforceable:

- (1) A production rate limit of 225,000 tons/yr of P<sub>2</sub>O<sub>5</sub> feed to the SPA Process Line. This limit simply corresponded to the production rate used in the PTC application to demonstrate compliance with all applicable rules for the project, including PSD avoidance for the overall project.
- (2) Requirements to install equipment to monitor and record the amount of P<sub>2</sub>O<sub>5</sub> feed to the SPA Process Line. This is also a MACT requirement under 40 CFR 63.605.
- (3) NO<sub>x</sub> performance test requirements for the SPA Oxidation Process

At the time the PTC for the Sustaining/Expansion project was issued in July, 2000 Nu-West's engineers were still designing the SPA Oxidation Process and a good estimate of NO<sub>x</sub> emissions from that source was not yet available. Therefore, to be conservative the company asked for a NO<sub>x</sub> limit of 5 tons/yr for SPA Oxidation, and a reduced NO<sub>x</sub> limit for the Cleaver Brooks boiler, to limit the NO<sub>x</sub> PTE so the overall NO<sub>x</sub> emissions increase for the project would not exceed the PSD major modification threshold. At that time, it was believed that the maximum estimated SPA P<sub>2</sub>O<sub>5</sub> feed rate of 225,000 tons/yr would result in potential NO<sub>x</sub> emissions of 5 tons/yr. For that reason, solely for purposes of making the 5 tons/yr NO<sub>x</sub> limit federally enforceable, DEQ included a SPA P<sub>2</sub>O<sub>5</sub> feed rate limit of 225,000 tons/yr in the Sustaining/Expansion project PTC. If DEQ had known at that time that maximum emissions resulting from a SPA P<sub>2</sub>O<sub>5</sub> feed rate of 225,000 tons/yr would be 0.6 tons/yr instead of 5 tons/yr, this SPA P<sub>2</sub>O<sub>5</sub> feed rate limit would not have been included in the PTC. In fact, it would take a P<sub>2</sub>O<sub>5</sub> feed rate of 1,875,000 tons/yr (see calculation below) in order to emit 5 tons/yr of NO<sub>x</sub> from this source, which is way beyond the maximum capacity of this source. For this reason, it is now apparent that no P<sub>2</sub>O<sub>5</sub> feed rate limit will be effective for purposes of limiting the NO<sub>x</sub> PTE from the SPA Process Line.

$$\frac{225,000 \text{ tons P}_2\text{O}_5/\text{yr}}{0.6 \text{ ton/yr}} = \frac{X}{5 \text{ tons/yr}} \rightarrow X = (5/0.6)(225,000 \text{ tons P}_2\text{O}_5/\text{yr}) = 1,875,000 \text{ tons P}_2\text{O}_5/\text{yr}$$

Today's PTC will correct this situation by removing the SPA Process Line P<sub>2</sub>O<sub>5</sub> feed rate limit, and by adding a new method for demonstrating compliance with the 5 tons/yr NO<sub>x</sub> limit for the SPA Process Line by incorporating the following permit conditions:

- Periodic NO<sub>x</sub> performance tests for the SPA Oxidation Process stack
- On a monthly basis, calculate and record NO<sub>x</sub> emissions from the SPA Oxidation Process Stack based on an emission factor derived from the performance test results.

## **Issue 2**

EPA Region 10 has asked DEQ questions about 40 CFR 52.21(r)(4) with regard to the project under PTC No. P-040320 issued on April 28, 2006. In particular this concerns the relaxation of an enforceable limit on the capacity of the source (i.e., relaxation of the permit's P<sub>2</sub>O<sub>5</sub> feed rate limit for the SPA Process Line from 225,000 to 345,000 tons/yr). Since it has been determined that the 225,000 tons/yr SPA P<sub>2</sub>O<sub>5</sub> feed rate limit was never a practical or relevant limit on the capacity of this source (neither at the time the original Sustaining/Expansion Permit was issued in July, 2000 nor now; see issue 1 above), then there is no further purpose for review under 40 CFR 52.21(r)(4).

### **4.7 NSPS Applicability (40 CFR 60)**

This project does not have any effect on NSPS requirements.

### **4.8 NESHAP Applicability (40 CFR 61)**

This project does not have any effect on NESHAP requirements.

### **4.9 MACT Applicability (40 CFR 63)**

This project does not have any effect on MACT requirements.

### **4.10 CAM Applicability (40 CFR 64)**

Compliance assurance monitoring (CAM) requirements do not apply to the SPA Oxidation process because this system is not required to utilize a control device to meet any emission standard.

### **4.11 Permit Conditions Review**

This section describes the permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

#### **Section 2, Facility-wide Permit Conditions and all MACT Permit Conditions**

All existing applicable MACT permit conditions under 40 CFR 63 Subparts AA and BB have been moved from the section for Facility-wide Conditions into the corresponding permit sections for the Granulation Plant and for the Phosphoric Acid/SPA Plants. Also, federal requirements throughout the permit have been re-written where it will make applicability of the federal requirements more clear, and to present these requirements more consistently with how they are shown in the Tier I permit. No new applicable requirements are created as a result of this change. The purpose of this change is only to provide for better organization of those requirements in the permits and to make the requirements more clear to the reader.

#### **Permit Condition 2.6**

This requirement is from the MACT Subpart A requirements that have applied to the facility since the Sustaining/Expansion PTC was issued on July 12, 2000. It is not a new requirement. This permit condition was added to the "facility wide section" of the PTC since it applies to multiple sections within the permit and not just to one section. For consistency with the Tier I permit, this condition was added

to provide emphasis on the allowance provided in the rules for developing a custom reporting schedule for the various reports required under multiple federal rules (e.g., MACT and NSPS). Arrangements for a mutual agreement on the schedule may be made via letter or other written form of communication between Nu-West and DEQ.

#### New Permit Condition 2.7

The standard Tier I permit condition regarding applicability of Federal rules was added. This condition clarifies that in the event there is a conflict between a permit condition and a Federal rule, it is the Federal rule that shall apply.

#### Existing Permit Condition 3.5

The existing limitation for equivalent P<sub>2</sub>O<sub>5</sub> feed to the Superphosphoric Acid Process Line was 345,000 tons per any consecutive 12-month period (tons/yr). This limit is no longer included in the permit for purposes of limiting NO<sub>x</sub> emissions from the SPA Oxidation Process to 5 tons/yr. Based on information obtained through performance testing it is now clear that the feed rate limit for purposes of demonstrating compliance with the NO<sub>x</sub> emission limit is irrelevant. For details, refer to the PSD analysis above.

#### Revised Permit Condition 3.6

Permit Condition 3.6 of PTC No. P-060310 issued on August 22, 2007 contains requirements for Nu-West to use equipment to continuously monitor NO<sub>x</sub> emissions from the SPA Oxidation Process stack. The NO<sub>x</sub> emission limit for this source is 5 tons/yr. Data obtained using this monitoring system for 2008 shows measured actual emissions of 0.54 ton/yr. In addition, Nu-West conducted a NO<sub>x</sub> performance test on this source on December 4, 2008, and the measured emission rate was 0.137 lb/hr. This data is considered to be representative of normal operation of this source. Given the amount of data showing that actual emissions from this source are almost 10 times less than the emission rate limit, it is not necessary or justified to continue to require NO<sub>x</sub> monitoring of this particular source with a continuous emission monitoring system. Therefore, the monitoring for this source is changed to require periodic NO<sub>x</sub> performance testing instead. Periodic performance testing will provide sufficient monitoring for this source in the future to demonstrate that emissions are in compliance with the 5 tons/yr emission limit.

#### Existing Permit Conditions 3.12, 3.13 and 3.18 – Remove PPA Plant

All references to the Purified Phosphoric Acid Plant have been removed from the Permit per the request received from Nu-West on June 9, 2008. The request indicates that Nu-West no longer operates this plant. Conditions for the Sulfiding Vent Scrubber and Filter Aid Silo Baghouse were removed as part of this action.

#### New Permit Condition 3.15

For purposes of demonstrating compliance with the NO<sub>x</sub> emission rate limit for the SPA Oxidation Process, a condition was added that requires the permittee to calculate and record the NO<sub>x</sub> emissions from this source on a monthly basis. The monthly calculations shall be based on actual operational information for this source and an emission factor derived from the periodic performance testing. Following is an example. All data used for the calculations shall be maintained as specified in the General Provisions of the permit. Below is an example calculation:

$$\text{NO}_x = (0.137 \text{ lb/hr})(8760 \text{ hr/yr})(\text{ton}/2000 \text{ lb}) = 0.6 \text{ ton/yr}$$

Existing Permit Condition 3.16 - NSR Projected Emissions Records for the SPA Production Increase Project, P-040320

The records for PTC No. P-040320 were re-reviewed and it was confirmed that the potential to emit method specified in paragraph 52.21(b)(41)(ii)(d) was used to determine the “projected actual emissions” for this project. The “method specified in paragraphs 52.21(b)(41)(ii)(a) through (c) of this section for calculating projected actual emissions” was not used for this project. Therefore, in accordance with the first paragraph of 52.21(r)(6), the requirements under 52.21(r)(6) do not apply to this project, and on this basis Permit Condition 3.16 was removed from the permit.

**Existing Permit Conditions 4.10 and 4.15 – Remove Urea Baghouse**

The existing permit conditions for the Urea Storage Baghouse were deleted as requested in the proposed changes for the Idaho Tier I permit renewal received from Nu-West on June 9, 2008. This equipment is not used at the facility.

**Revised Permit Condition 5.2**

Only the NSPS NOx standard for a low heat release rate boiler (i.e., 0.10 lb/MMBtu) is included in this permit condition since it is now known that the Cleaver Brooks boiler has a low heat release rate. The NOx standard for the high heat release rate (i.e., 0.20 lb/MMBtu) was removed since this does not apply.

**Permit Conditions 5.3, 5.5 - 5.12, and 5.14 - 5.17**

These permit conditions represent requirements that have applied to the Cleaver Brooks Boiler since the initial PTC was issued on July 12, 2000. In this permit, the requirements appear different because they are now shown in more detail, however, none of the existing requirements have changed. Therefore, even though the conditions appear different, the substantive requirements have not so the applicability date is still shown in the date citations as July 12, 2000.

**Permit Condition 5.13**

Requirements were added to calculate and record NOx emissions from the Cleaver Brooks Boiler on a monthly basis. These records will make it more practical to quickly determine compliance with the NOx emission rate limit, and this action will be more consistent with the monitoring and recordkeeping requirements that apply for the Tier I permit.

**5. PERMIT FEES**

Table 5.1 lists the processing fee associated with this permitting action. The facility is subject to a processing fee of \$250 because there is no emission increase associated with this project and no engineering analysis was required. Refer to the chronology for fee receipt dates.

**Table 5.1 PROCESSING FEE TABLE**

<b>Emissions Inventory</b>			
<b>Pollutant</b>	<b>Annual Emissions Increase (T/yr)</b>	<b>Annual Emissions Reduction (T/yr)</b>	<b>Annual Emissions Change (T/yr)</b>
NO <sub>x</sub>	0.0	0	0.0
SO <sub>2</sub>	0.0	0	0.0
CO	0.0	0	0.0
PM <sub>10</sub>	0.0	0	0.0
VOC	0.0	0	0.0
HAPS	0.0	0	0.0
Total:	<b>0.0</b>	<b>0</b>	<b>0.0</b>
Fee Due	<b>\$ 250.00</b>		

## 6. PUBLIC COMMENT

A public comment period for the proposed PTC application was provided concurrently with the draft Tier I Operating Permit in accordance with IDAPA 58.01.01.209.05.b from August 12, 2010 through September 13, 2010. No comments regarding this PTC were received.

**Appendix – Facility Comments  
On the Draft PTC**

## Comments received from Nu-West on November 5, 2009 for the Draft PTC

In the following comments, all references to a permit condition or other item in the document pertain to the version of the draft permit and statement of basis for which the comment was made (i.e., not the version of the draft permit or statement of basis that was revised in response to these comments), unless noted otherwise.

- **Permit Condition:** Permit Condition Date Citations
- Facility Comment: numerous
- DEQ Response and Permit Revision: Recently, DEQ began adding the date citations for PTC conditions to show the date that the condition became effective or the date that the requirements in that condition were modified. Changes of an administrative nature, like changing the permit condition title or adding the words “in accordance with [rule] are not considered to be a modification of permit condition because the same substantive requirements apply both before and after the change. When these PTC conditions are rolled into the Tier I Operating Permit, the citation at the end of the permit condition will then contain full regulatory citations such as “40 CFR 63.606”.
- **Permit Condition:** Numerous locations throughout the permit.
- Facility Comment: Numerous typographical and minor editing changes are noted.
- DEQ Response and Permit Revision: The changes were made.
- **Permit Condition:** Facility Contact information on the Permit Cover Page
- Facility Comment: Change name from Jim Cagle to Michael Bauerle
- DEQ Response and Permit Revision: The change was made.
- **Permit Condition:** Table of Contents and the title of Section 3
- Facility Comment: Remove references to PPA Plant
- DEQ Response and Permit Revision: The changes were made.
- **Permit Condition 1.1:** Description of the purpose of this PTC.
- Facility Comment: Indicate that changes to the MACT permit conditions are related to the Phosphoric Acid Process, the Superphosphoric Acid Process and the Granulation Plant and this is done for consistency with the Tier I permit; Include a reference to similar changes made for the Cleaver Brooks Boiler.
- DEQ Response and Permit Revision: The description was revised to include these changes.
- **Permit Condition 3.3:** NO<sub>x</sub> Emission Limit for SPA Oxidation Process
- Facility Comment: Add the phrase “at Section 6 below” to the end of the permit condition.
- DEQ Response and Permit Revision: The requested phrase was added.
- **Permit Condition 3.6:** MACT Standard for Evaporative Cooling Towers
- Facility Comment: This condition was included under the “Facility-Wide” conditions in both the prior draft and in the August 22, 2007 permit, which this draft permit is replacing.
- DEQ Response and Permit Revision: This condition was moved into Section 3 of the permit because it only applies to this section (i.e., to the Phosphoric Acid Processing Plant). It is not actually a “facility-wide” condition.
- **Permit Condition 3.8 and 3.9:** MACT 40 CFR 63 Subpart AA, P<sub>2</sub>O<sub>5</sub> Feed Rate Monitoring Requirements
- Facility Comment: With regard to condition 3.8, it was noted that this condition has the exact same heading title as 3.9 below. Consider revising or consolidating into one condition.
- DEQ Response and Permit Revision: The permit condition titles were changed. The requirements in conditions 3.8 and 3.9 are related, yet distinctly different. The first condition sets requirements for the equipment must be installed and operated. The second condition specifies what kind of records must be prepared using that equipment. Therefore, the permit condition titles were changed to make this more clear.

The title of Permit Condition 3.8 was changed to be “MACT 40 CFR 63 Subpart AA – P<sub>2</sub>O<sub>5</sub> Feed Rate Monitoring Equipment”. The title of Permit Condition 3.9 was changed to be “MACT 40 CFR 63 Subpart AA – P<sub>2</sub>O<sub>5</sub> Feed Rate Recordkeeping”.

- **Permit Condition 3.12:** MACT Monitoring Requirements for Scrubber Pressure Drop and Liquid Flow Rate Ranges
- Facility Comment: In addition to the insertion of “MACT 40 CFR 63 Subpart AA” in the heading, this condition was revised to include the regulatory provisions/requirements almost verbatim which had not been included in either the previously circulated draft or in the August 22, 2007 permit, which this draft permit is replacing.
- DEQ Response and Permit Revision: The permit condition was not changed. For purposes of making the applicable requirements more clear, the draft Tier I renewal permit that was previously issued to Nu-West for review contains conditions that are more detailed than the corresponding conditions in the PTC. This situation often occurs when older PTC conditions are rolled into a Tier I (Title V) operating permit. This was previously discussed with Nu-West and it was decided that the best course of action would be to update the PTC conditions so that they match the corresponding conditions in the Tier I permit. Even though the existing PTC conditions and the corresponding Tier I conditions appear different (i.e., the Tier I conditions appear in greater detail) both of these conditions ultimately specify exactly the same requirements as specified in 40 CFR 63 Subpart AA. For this reason, the substantive requirements contained in this permit condition are not changed and, therefore, the citation for the date issued still corresponds to the original permit (i.e., July 12, 2000).
- **Permit Condition 3.16.1:** NSR Projected Emissions Records, P-040320, SPA Production Increase Project
- Facility Comment: Change gypsum to be phosphogypsum
- DEQ Response and Permit Revision: The change was made.
- **Permit Conditions 3.18 and 3.20-3.23:** MACT Subpart AA Requirements
- Facility Comment: This condition was included under the “Facility-Wide” conditions in both the prior draft and in the August 22, 2007 permit, which this draft permit is replacing.
- DEQ Response and Permit Revision: These conditions were moved into Section 3 of the permit because they only apply to this section (i.e., to the Phosphoric Acid Processing Plant). These are not actually “facility-wide” conditions.
- **Permit Condition 4.9:** MACT Subpart BB, Scrubber Pressure Drop and Liquid Flow Rate Ranges
- Facility Comment: In addition to the insertion of “MACT 40 CFR 63 Subpart AA” in the heading, this condition was revised to include the regulatory provisions/requirements almost verbatim which had not been included in either the previously circulated draft or in the August 22, 2007 permit, which this draft permit is replacing.
- DEQ Response and Permit Revision: Refer to the response for Permit Condition 3.12.
- **Permit Conditions 4.13 and 4.15:** MACT Subpart BB Recordkeeping and Notification Requirements
- Facility Comment: This condition was included under the “Facility-Wide” conditions in both the prior draft and in the August 22, 2007 permit, which this draft permit is replacing.
- DEQ Response and Permit Revision: refer to the response for Permit Condition 3.18.
- **Permit Conditions 4.16 and 4.17:** NSPS Exemption and MACT General Provisions
- Facility Comment: Add “MACT 40 CFR 63 Subpart BB” to the permit condition title.
- DEQ Response and Permit Revision: The permit condition titles were corrected.
- **Permit Condition:** All NSPS permit conditions in this section.
- Facility Comment: Reference is made to permit condition titles.
- DEQ Response and Permit Revision: All of the NSPS permit condition titles were changed to be consistent with the current format DEQ is using for federal permit requirements from 40 CFR.

- **Permit Condition 5.1:** NO<sub>x</sub> Emission Limit for Cleaver Brooks Boiler
- Facility Comment: Add the phrase “at Section 6 below” to the end of the permit condition.
- DEQ Response and Permit Revision: The requested phrase was added.
- **Permit Condition 5.2:** NSPS NO<sub>x</sub> Emission Limit
- Facility Comment: Express NO<sub>2</sub> as NO<sub>x</sub>?
- DEQ Response and Permit Revision: The permit condition was changed to be exactly as printed in the CFR. It is now expressed as “...any gases that contain NO<sub>x</sub> (expressed as NO<sub>2</sub>) to be discharged...”. Also, since the NSPS shows the NO<sub>x</sub> limit as just a single limit (i.e., not plural) the title is not plural. The title for condition 5.1 was changed to be singular also.
- **Permit Condition 5.3:** PM emission limit for fuel burning equipment.
- Facility Comment: Add title to this permit condition.
- DEQ Response and Permit Revision: The title was added, consistent with the format used for this particular requirement.
- **Permit Condition 5.5:** NSPS SO<sub>2</sub> Emissions Standard
- Facility Comment: Add title to this permit condition. Also, given revisions in Condition 5.5 from the August 22, 2007 PTC and the previously circulated draft, not that neither the August 22, 2007 PTC nor the prior draft make any reference to monitoring and recordkeeping requirements for SO<sub>2</sub> emissions from the Cleaver-Brooks Boiler.
- DEQ Response and Permit Revision: The title was added to this permit condition and some others that address NSPS conditions so that the NSPS requirements are more apparent. With regard to including what appears to be new requirements, this is not the case. The requirements shown in permit condition 5.5 have applied to the boiler since the initial PTC was issued; these are not new requirements. This permit condition was not changed. Refer the to response for permit condition 3.12.
- **Permit Condition 5.6:** NSPS compliance and performance test methods for NO<sub>x</sub>.
- Facility Comment: Change to title to reflect the subject better.
- DEQ Response and Permit Revision: The title was revised to be consistent with the current permitting format.
- **Permit Condition 5.12 and 5.17:** NSPS monitoring, recordkeeping, and reporting requirements.
- Facility Comment: Conditions 5.6-5.11 were significantly expanded to include the regulatory provisions/requirements almost verbatim which had not been included in either the previously circulated draft or in the August 22, 2007 permit, which this draft permit is replacing.
- DEQ Response and Permit Revision: The permit conditions were not changed. See the response for Permit Condition 3.12.
- **Permit Condition:** Section 6, PTC Appendix, Emission Limits Table.
- Facility Comment: Changes to the title of the table are provided.
- DEQ Response and Permit Revision: The title was changed.

## Comments received from Nu-West on March 14, 2010 for the Draft PTC

- **Permit Conditions 2 and 3:** Permit Condition Date Citations Throughout the Permit
- **Facility Comment:** CPO reviewed IDEQ's response to this comment and urges IDEQ to reconsider this new format because it creates inconsistency and uncertainty for the permit holder. The references to July 12, 2000 and August 22, 2007 permits are very confusing. According to the respective Section 1 in each PTC issued by the Department, PTC #P-040320 issued 4/28/2006 replaced the July 12, 2000 permit: PTC #P-060310 issued 8/22/2007 replaced PTC #P-D40320: and this draft permit it is to replace PTC No. P-060310. Therefore, these dates refer to permits that are no longer valid. Moreover, the specific conditions likely were applicable to the source on a different date prescribed in the underlying regulation itself. It would be more appropriate to cite to the underlying IDAPA or CFR reference for these facility wide conditions and not obsolete permits. For example see Conditions 2.1 and 2.2. Also for example, 40 CFR 63.603(a) prescribes that the emissions limit applies on or after the date of the performance test conducted under the MACT, not July 12, 2000. It would be more appropriate to cite to the underlying IDAPA or CFR reference for these facility wide conditions and not obsolete permits.
- **DEQ Response and Permit Revision:** The date references to expired permits were removed. This permit now only includes a date reference to identify which conditions are changed by issuance of this new permit.
- **Permit Condition 3.5:** SPA P<sub>2</sub>O<sub>5</sub> Feed Rate Limit
- **Facility Comment:** No regulatory basis for any feed rate limit. See discussions in each SOB (#P-040320, 4/28/2006; #P-060310, 8/16/2007; draft SOB 3/4/2010) where IDEQ determined that any limitation on SPA feed rate is ineffective for compliance demonstration with the NO<sub>x</sub> emissions limit originally imposed by PTC #029-00003 issued 7/12/2000. A limit on feed rate curtails operational flexibility and could constrain CPO's ability to optimize production efficiencies while maintaining compliance with existing emissions limits. According to IDEQ's prior permit analyses this limit provides no environmental benefit and lacks a regulatory basis. In addition the emissions estimates reviewed by IDEQ in 2005 to authorize an increased SPA feed rate to 345,000 tpy were based upon maximum capacity of plant equipment (e.g., phosphoric acid plant and boiler) and accordingly reflected CPO's potential to emit. Deleting the feed rate will not jeopardize compliance with any applicable emissions limit.

Specifically, the estimated 240,000 tpy value was provided to IDEQ by a representative of CPO in response to IDEQ's January 2009 informal email request for information about the ability of CPO to achieve 345,000 tpy feed rate under the plant's current configuration. This value was provided based upon a snapshot assessment of production levels at that time and without the benefit of information regarding continuous efforts by plant personnel to maximize efficiencies that could enable an increased feed rate to the SPA process line. The imposed value is not representative of the production potential of the plant's current equipment which CPO is working continuously to optimize.

- **DEQ Response and Permit Revision:** As described in the Statement of Basis, it was determined that the feed rate limit serves no practical purpose for limiting NO<sub>x</sub> emissions from the SPA Oxidation Process. This operating limit was removed from the permit. The permit now relies upon periodic NO<sub>x</sub> performance tests to demonstrate compliance with the NO<sub>x</sub> emission rate limit.
- **Permit Condition 3.16:** NSR Projected Emissions Records for the SPA Production Increase Project, P-040320
- **Facility Comment:** CPO reviewed the permitting background for these provisions and now requests deletion of this recordkeeping requirement. PTC #P-040320 issued on 4/28/2006 authorized a feed rate increase for the SPA process line to 345,000 tpy. This increase and the emissions estimated to support it were based upon maximum capacity of plant equipment (e.g., phosphoric acid plant and boiler) and accordingly reflected CPO's potential to emit. The supporting paperwork incorrectly referred to the predicted emissions as "projected actual emissions." The increased feed rate represented a theoretical maximum for the plant.

The requirements of 40 CFR 52.21(r)(6) and (7) apply only to projects evaluated using the "projected actual emissions" method at 40 CFR 52.21(b)(41)(ii) and only if that method reveals a projected increase in emissions greater than fifty percent of the applicable significant emissions rate. The emissions increases estimated for issuance of PTC #P-040320 were based upon the maximum capacity of plant equipment (e.g. phosphoric acid plant and boiler) from which CPO derived a theoretical increase in feed rate to the SPA

process line or 345,000 tpy. Accordingly, the projected emissions represented CPO's potential to emit, although the paperwork was incorrectly labeled. Calculating the estimated emissions based upon potential to emit is allowed under 40 CFR 52.21 (b)(41)(ii)(d) and does not trigger the reporting required here.

If the requirements of 40 CFR 52.21(r)(6) and (7) apply, then the pollutants covered by Condition 3.16.2 are over inclusive. As the SOB for PTC #P-040320 confirmed, only the predicted emissions increase for NOx and Fluorides were in excess of fifty percent of the applicable significant emissions rate. Again, these increases reflected the potential to emit and incorrectly labeled "projected actual emissions."

- DEQ Response and Permit Revision: For the project evaluated for PTC No. P-040320, the records were reviewed and it was confirmed that the potential to emit method specified in paragraph 52.21(b)(41)(ii)(d) was used to determine the "projected actual emissions" for this project. The "method specified in paragraphs 52.21(b)(41)(ii)(a) through (c) of this section for calculating projected actual emissions" was not used for this project. Therefore, in accordance with the first paragraph of 52.21(r)(6), the requirements under 52.21(r)(6) do not apply to this project, and on this basis Permit Condition 3.16 was removed from the permit.