AIR QUALITY

PERMIT TO CONSTRUCT

Permittee	Nu-West Industries, Inc. dba Nu-West Conda Phosphate Operations
Permit Number	P-2013.0001
Project ID	61142
Facility ID	029-00003
Facility Location	3010 Conda Road Soda Springs, ID 83276

Permit Authority

This permit (a) is issued according to the "Rules for the Control of Air Pollution in Idaho" (Rules), IDAPA 58.01.01.200–228; (b) pertains only to emissions of air contaminants regulated by the State of Idaho and to the sources specifically allowed to be constructed or modified by this permit; (c) has been granted on the basis of design information presented with the application; (d) does not affect the title of the premises upon which the equipment is to be located; (e) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (f) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; and (g) in no manner implies or suggests that the Idaho Department of Environmental Quality (DEQ) or its officers, agents, or employees assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment. Changes in design, equipment, or operations may be considered a modification subject to DEQ review in accordance with IDAPA 58.01.01.200–228.

Date Issued DRAFT XX, 2013

Kelli Wetzel, Permit Writer

Mike Simon, Stationary Source Manager

Contents

1. Permit Scope

Purpose

1.1 This is an initial permit to construct (PTC) for a modification to an existing Tier I facility.

Regulated Sources

Table 1.1 lists all sources of regulated emissions in this permit.

Table 1.1. Regulated sources.

Permit Section	Source	Control Equipment
2	Superphosphoric Acid (SPA) process (SPA #3) Maximum production rate: 336 T/day equivalent P_2O_5 feed	Existing multi-stage horizontal cross flow scrubber
	Therminol heater *Allowable fuel type(s): natural gas only	Low NO_x burner

2. No. 3 Superphosphoric Acid Evaporation System

2.1 Process Description

The Nu-West facility produces phosphate fertilizer products including, among others, Super Phosphoric Acid (SPA). The feed for the SPA process, concentrated phosphoric acid, is produced onsite. The SPA process uses evaporators with natural gas-fired Therminol heaters to evaporate water from the concentrated phosphoric acid stream. The new No. 3 SPA train will allow for an increase in production in SPA at the facility.

2.2 Control Device Descriptions

Table 2.1. No. 3 SPA evaporation system description.

Emissions Units / Processes	Control Devices
Superphosphoric acid process, SPA #3 (S-Pb-1)	Multi-stage horizontal cross-flow scrubber (A-Pb-1)
No. 3 SPA Therminol heater	Low NO_x burner

Emission Limits

2.3 MACT 40 CFR 63 Subpart AA – Superphosphoric Acid Process Line Fluoride Standard

In accordance with 40 CFR 63.603(b), the owner or operator shall not cause to be discharged into the atmosphere from the Superphosphoric Acid Process Line any gases which contain total fluorides in excess of 4.350 gram/metric ton of equivalent P_2O_5 feed (0.00870 lb/ton). 40 CFR 63.601 defines a superphosphoric acid process line as *"any process line which concentrates wet-process phosphoric acid to 66% or greater P_2O_5 by weight."*

2.4 Therminol Heater

The permittee shall not discharge to the atmosphere from any fuel burning equipment with a maximum rated input of ten million BTU per hour or more, PM in excess of 0.015 gr/dscf corrected to 3% oxygen, in accordance with IDAPA 58.01.01.676-677.

2.5 NO_x – Superphosphoric Acid Oxidation Process

Emissions of nitrogen oxides (NO_x) from the Superphosphoric Acid Oxidation Process shall not exceed five tons per any consecutive 12-month period.

Operating Requirements

2.6 Fuel Type Restriction

The No. 3 SPA Therminol heater shall be fired on natural gas exclusively.

2.7 MACT 40 CFR 63 Subpart AA – Operating Requirements, Pressure Drops, and Flow Rates for Wet Scrubbers

In accordance with 40 CFR 63.604, the owner/operator using a wet scrubbing emission control system must maintain daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber within the allowable ranges established pursuant to the requirements of 40 CFR 63.605(d)(1) or (2).

2.8 MACT 40 CFR 63 Subpart AA – Standard for Evaporative Cooling Towers

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, in accordance with 40 CFR 63.603(e).

2.9 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:

- National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart AA.

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.

Monitoring and Recordkeeping Requirements

2.10 NO_x Performance Test for Superphosphoric Acid Oxidation Process

- The permittee shall conduct performance tests on the Superphosphoric Acid Oxidation Process Stack to demonstrate compliance with the NO_x emission limit. The permittee is encouraged to submit a source testing protocol for approval 30 days prior to conducting the performance test. The permittee shall test in accordance with IDAPA 58.01.01.157, the conditions of this permit, and General Provisions 3.7 through 3.9. General Provisions 3.7 through 3.9 include notification requirements, testing procedures and reporting requirements.
- The source test shall be conducted under "worst case normal" conditions as required by IDAPA 58.01.01.157 and General Provisions 3.7 through 3.9 and the source test report shall contain documentation that the test was conducted under these conditions. As part of this documentation, the P_2O_5 feed rate and the production rate of the Superphosphoric Acid Oxidation Process shall be monitored and recorded during the test.
- Performance testing shall be performed according to the following schedule. If the pollutant emission rate measured in the most recent test is less than or equal to 75% of the emission standard in Permit Condition 3.3, the next test shall be conducted within five years of the test date. If the pollutant 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 Permit Condition 2.5, the next test shall be conducted within two years of the test date (no more than 26 calendar months following the previous performance test). If the pollutant emission rate measured during the most recent performance test is greater than 90% of the emission standard in Permit Condition 2.5, the next test shall be conducted within one year of the test date (no more than 14 calendar months following the previous performance test).

2.11 MACT 40 CFR Subpart AA – P_2O_5 Feed Rate Monitoring Equipment

In accordance with 40 CFR 63.605(a), the owner or operator shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the Superphosphoric Acid Process Line. The monitoring system shall have an accuracy of ± 5% over its operating range.

2.12 MACT 40 CFR 63 Subpart AA – P_2O_5 Feed Rate Recordkeeping

In accordance with 40 CFR 63.605(b)(1), each owner or operator of a new or existing wet-process phosphoric acid process line or superphosphoric acid process line subject to the provisions of 40 CFR Part 63, Subpart AA shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in metric ton/hour of phosphorus-bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of 40 CFR 63.605(a) and then proceeding according to 40 CFR 63.606(c)(3).

2.13 MACT 40 CFR 63 Subpart AA – Monitoring Requirements, Scrubber Pressure Drop

In accordance with 40 CFR 63.605(c)(1), each owner or operator of a Superphosphoric Acid Process Line using a wet scrubbing emission control system shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ±5% over its operating range.

2.14 MACT 40 CFR 63 Subpart AA – Monitoring Requirements, Scrubber Liquid Flow Rate

In accordance with 40 CFR 63.605(c)(2), each owner or operator of a Superphosphoric Acid Process Line using a wet scrubbing emission control system shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ±5% over its operating range.

2.15 MACT 40 CFR 63 Subpart AA – Monitoring Requirements, Scrubber Pressure Drop, and Liquid Flow Rate Ranges

In accordance with 40 CFR 63.605(d), the owner or operator of an affected source using a wet scrubbing emission control system and subject to emissions limitations for total fluorides or particulate matter contained in 40 CFR 63, Subpart AA must establish allowable ranges for operating parameters using the methodology specified in either (1) or (2) of this section:

(1) The allowable range for the daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system is ±20% of the baseline average value determined as a requirement of 40 CFR 63.606(c)(4), (d)(4), or (e)(2). The Administrator retains the right to reduce the ±20% adjustment to the baseline average values of operating ranges in those instances where performance test results indicate that a source's level of emissions is near the value of an applicable emissions standard, but, in no instance shall the adjustment be reduced to less than ±10%. The owner or operator must notify the Administrator of the baseline average value and must notify the Administrator each time that the baseline value is changed as a result of the most recent performance test. When a source using the methodology of this paragraph is retested, the owner or operator shall determine whether new allowable ranges of baseline average values will be based upon the new performance test or (if the new performance test results are within the previously established range) whether there will be no change in the operating parameters derived from previous tests. When a source using the methodology of this paragraph is retested and the performance test results are submitted to the Administrator pursuant to 40 CFR 63.607(c)(1), 63.7(g)(1), and/or 63.10(d)(2), the owner or operator will indicate whether the operating range will be based on the new performance test or the previously established range. If the Administrator has not denied approval of the new operating ranges within 30 days of submission of the performance test results, the new ranges shall be deemed approved and the new baseline value shall then be effective on the 31st day following submission.

(2) The owner or operator of any new or existing affected source shall establish, and provide to the Administrator for approval, allowable ranges for the daily averages of the pressure drop across and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system for the purpose of assuring compliance with 40 CFR 63 Subpart AA. Allowable ranges may be based upon baseline average values recorded during previous performance tests using the test methods required in 40 CFR 63.606(c)(4), (d)(4), or (e)(2). As an alternative, the owner or operator can establish the allowable ranges using the results of performance tests conducted specifically for the purposes of this paragraph using the test methods required in 40 CFR 63, Subpart AA and established in the manner required in 40 CFR 63.606(c)(4), (d)(4), or (e)(2). The source shall certify that the control devices and processes have not been modified subsequent to the testing upon which the data used to establish the allowable ranges were obtained. The allowable ranges developed pursuant to the provisions of this paragraph must be submitted to the Administrator for approval. The owner or operator must request and obtain approval of the Administrator for changes to the allowable ranges. When a source using the methodology of this paragraph is retested, the owner or operator shall determine new allowable ranges of baseline average values unless the retest indicates no change in the operating parameters outside the previously established ranges. If the Administrator has not denied approval of the new operating ranges within 30 days of submission of the performance test results, the new ranges shall be deemed approved and the new baseline value shall then be effective on the 31st day following submission.

2.16 MACT 40 CFR 63 Subpart AA – Performance Testing

In accordance with 40 CFR 63.606(a), once per annum, the owner or operator shall conduct a performance test to demonstrate compliance with the applicable emission standards for the Superphosphoric Acid Process Line. The owner or operator shall conduct the performance test according to the procedures in 40 CFR 63, Subpart A and in 40 CFR 63.606.

2.17 MACT 40 CFR 63 Subpart AA – Performance Test Methods

In accordance with 40 CFR 63.606(b), in conducting performance tests, each owner or operator of an affected source shall use as reference methods and procedures the test methods in 40 CFR 60, Appendix A, or other methods and procedures as specified in 40 CFR 63.606, except as provided in 40 CFR 63.7(f).

2.18 MACT 40 CFR 63 Subpart AA – Performance Testing – Fluorides

In accordance with 40 CFR 63.606(c), each owner or operator of a Superphosphoric Acid Process Line shall determine compliance with the applicable total fluorides standards specified in 40 CFR 63.602 and 40 CFR 63.603 as specified in 40 CFR 63.606(c).

2.19 NO_x Emissions from SPA Oxidation Process

On a monthly basis, the permittee shall calculate and record the NO_x emissions from the Superphosphoric Acid Oxidation Process stack, based on an emission factor derived from NO_x performance testing conducted under Permit Condition 2.10. The emissions shall be recorded for the month and for the most recent consecutive 12 calendar month period to demonstrate compliance with the NO_x emission rate limit.

2.20 MACT 40 CFR 63 Subpart AA – Recordkeeping Requirements

In accordance with 40 CFR 63.607(b), each owner or operator subject to the requirements of 40 CFR 63, Subpart AA shall comply with the recordkeeping requirements in 40 CFR 63.10.

Reporting Requirements

2.21 MACT 40 CFR 63 Subpart AA – Reporting Requirements

In accordance with 40 CFR 63.607(c), the owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR 63.10 as follows:

- In accordance with 40 CFR 63.607(c)(1), as required by 40 CFR 63.10 the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in 40 CFR 63.9.
- In accordance with 40 CFR 63.607(c)(2), as required by 40 CFR 63.10 the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in 40 CFR 63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved, as described in 40 CFR 63.10.
- In accordance with 40 CFR 63.607(c)(3), if the total duration of control system exceedances for the reporting period is less than 1% of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in 40 CFR 63.10, rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.
- In accordance with 40 CFR 63.607(c)(4), if the total duration of control system operating parameter exceedances for the reporting period is 1% or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and excess emissions report.

2.22 MACT 40 CFR 63 Subpart AA – Notification Requirements

In accordance with 40 CFR 63.607(a), each owner or operator subject to the requirements of 40 CFR 63, Subpart AA shall comply with the notification requirements in 40 CFR 63.9.

2.23 MACT 40 CFR 63 Subpart AA – Evaporative Cooling Tower Annual Report

In accordance with 40 CFR 63.603(e), each owner or operator of an affected source subject to the evaporative cooling tower requirements in 40 CFR 63.603(e) must certify to the Administrator annually that he/she has complied with the requirements contained in that section. This action may be completed as part of the annual Tier I permit compliance certification.

MACT 40 CFR 63 Subpart AA – Phosphoric Acid Manufacturing Plant Exemption from New Source Performance Standards

2.24 In accordance with 40 CFR 63.610, the affected sources at the phosphoric acid manufacturing plant that are subject to the provisions of 40 CFR 63 Subpart AA are 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 Act and the source must be in compliance with all requirements of 40 CFR 63, Subpart AA.

MACT 40 CFR 63 Subpart AA – Applicability of General Provisions

2.25 In accordance with 40 CFR 63.608, the owner or operator shall comply with the requirements of the general provisions in 40 CFR 63, Subpart A as shown in Appendix A to 40 CFR 63, Subpart AA.

3. General Provisions

General Compliance

3.1 The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the "Rules for the Control of Air Pollution in Idaho." The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit, the "Rules for the Control of Air Pollution in Idaho," and the Environmental Protection and Health Act (Idaho Code §39-101, et seq.)

[Idaho Code §39-101, et seq.]

3.2 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.

[IDAPA 58.01.01.211, 5/1/94]

3.3 Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules, and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

Inspection and Entry

3.4 Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:

- Enter upon the permittee's premises where an emissions source is located, emissions-related activity is conducted, or where records are kept under conditions of this permit;
- Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
- 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 §39-108]

Construction and Operation Notification

3.5 This permit shall expire if construction has not begun within two years of its issue date, or if construction is suspended for one year.

[IDAPA 58.01.01.211.02, 5/1/94]

3.6 The permittee shall furnish DEQ written notifications as follows:

- A notification of the date of initiation of construction, within five working days after occurrence; except in the case where pre-permit construction approval has been granted then notification shall be made within five working days after occurrence or within five working days after permit issuance whichever is later;
- A notification of the date of any suspension of construction, if such suspension lasts for one year or more;

- A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date; and
- A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date; and
- A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211.03, 5/1/94]

Performance Testing

3.7 If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

3.8 All performance 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, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

3.9 Within 30 days, or up to 60 days when requested following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00]

Monitoring and Recordkeeping

3.10 The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Monitoring records 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 58.01.01.211, 5/1/94]

Excess Emissions

3.11 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130–136 for excess emissions due to start-up, shut-down, scheduled maintenance, safety measures, upsets, and breakdowns.

[IDAPA 58.01.01.130–136, 4/5/00]

Certification

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

[IDAPA 58.01.01.123, 5/1/94]

False Statements

3.13 No person shall knowingly 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]

Tampering

3.14 No person shall knowingly 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]

Transferability

3.15 This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

Severability

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

[IDAPA 58.01.01.211, 5/1/94]