



Air Quality Permitting Response to Public Comments

November 17, 2017

Permit to Construct No. P-2017.0050

Project No. 61835

**Nu-West Industries, Inc.
dba Agrium Conda Phosphate Operations
Soda Springs, Idaho**

Facility ID No. 029-00003

Prepared by:
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AIR QUALITY DIVISION

A handwritten signature in black ink, appearing to be "ML", is written over the text "Permit Writer".

Final

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BACKGROUND

The Idaho Department of Environmental Quality (DEQ) provided for public comment on the proposed permit to construct for Nu-West Industries, Inc. dba Agrium Conda Phosphate Operations from September 28 through October 30, 2017, in accordance with IDAPA 58.01.01.209.01.c. During this period, comments were submitted in response to DEQ's proposed action. Each comment and DEQ's response is provided in the following section. All comments submitted in response to DEQ's proposed action are included in the appendix of this document.

PUBLIC COMMENTS AND RESPONSES

Public comments regarding the technical and regulatory analyses and the air quality aspects of the proposed permit are summarized below. Questions, comments, and/or suggestions received during the comment period that did not relate to the air quality aspects of the permit application, the Department's technical analysis, or the proposed permit are not addressed. For reference purposes, a copy of the Rules for the Control of Air Pollution in Idaho can be found at: <http://adminrules.idaho.gov/rules/current/58/0101.pdf>.

Comment 1: A comment was submitted concerning DEQ's decision to not require a SMC modeling demonstration, citing Section 161 provisions in IDAPA 58.01.01 requiring that assurances be met to protect human health and the environment.

Response 1: DEQ made the determination that New Source Review (NSR) ambient air impact modeling analyses and preconstruction air quality monitoring of fluorides were not required for this application. As provided in 40 CFR 52.21(m)(1)(b)(ii), with respect to any pollutant for which no NAAQS exists, the analysis shall contain such air quality monitoring data as DEQ determines necessary to assess ambient air quality for that pollutant in any area that the emissions of that pollutant would affect.

A Significant Monitoring Concentration (SMC) modeling demonstration was foregone because there is no NAAQS established for fluorides. Consistent with the approach prescribed in IDAPA 58.01.01.210.20, no preconstruction demonstration of compliance with the acceptable ambient concentration (AAC) established for fluoride was required pursuant to Section 210 and Section 161.

Fluoride emissions from gyp stacks and cooling ponds are regulated by 40 CFR 63 Subpart AA. Although preconstruction monitoring could potentially be required by DEQ to show preconstruction compliance for pollutants without NAAQS, DEQ did not require such monitoring for fluorides because the weight of evidence did not support the need for such an evaluation. This weight-of-evidence determination was based on information provided in recent updates to 40 CFR 63 Subpart AA, including the supporting residual risk assessment.

It should be noted that although this project has been proposed and analyzed as an expansion of CPO's dewatering stack system without any emission offsets, actual emissions from existing stacks is anticipated to decrease to a certain extent while the proposed gyp stack (Gyp-3) is brought online. Nu-West plans to close one gyp stack (F-Gyp-0) in the near future, and the proposed gyp stack (Gyp-3) will provide additional storage space for phosphogypsum produced by the existing Phosphoric Acid Plant as the storage capacities of the two remaining gyp stacks decrease over time (F-Gyp-1 and F-Gyp-2). An increase in Phosphoric Acid Plant throughput has not been proposed, and plant output will remain limited to 560,000 T/yr of P₂O₅ equivalent feed material (T1-060308, as modified January 12, 2012; and P-2009.0002, revised February 20, 2009) and limited based on the capacities of the existing cooling ponds servicing the stack system.

Comment 2: A comment was submitted that it would be prudent to include additional fluoride monitoring provisions as permit requirements, noting that factors beyond area footprint influence actual emissions. Periodic monitoring throughout the lifespan of this permit was requested to ensure that actual emissions reflect emissions as estimated in the application. Language stipulating that the permit can be reopened if monitored emissions differ from these estimates was also requested.

Response 2: Most federal and state requirements incorporated into the permit address the control and monitoring of fluoride and particulate emissions, including compliance with Best Available Control Technology (BACT) and 40 CFR 63 Subpart AA work practices (Permit Conditions 2.5–2.6), 40 CFR 63 Subpart AA Gypsum Dewatering Stack and Cooling Pond Management Plan requirements (Permit Conditions 2.7–2.8), footprint area limits (Permit Conditions 2.10 and 2.12), and reasonable control of fugitive emission requirements (Permit Conditions 2.3 and 2.13).

Though monitoring of visible emissions and use of best work practices provide the most direct impact on limiting fugitive fluoride and dust emissions, DEQ recognizes that the emission estimates for these pollutants and the below PM₁₀ significant impact level (SIL) analysis rely upon specific engineering assumptions regarding seasonal, operational, and material parameters.

Upon further review, DEQ considers monitoring the validity of these assumptions appropriate within the context of a fugitive dust plan. The requirement to develop a Fugitive Dust Plan that includes monthly monitoring of engineering assumptions and calculation of actual emissions has been included as an extension of the monitoring for reasonable control of fugitive emissions requirement (Permit Condition 2.3). In addition, the inspection frequency for potential sources of fugitive emissions has been increased to at least weekly (Permit Condition 2.13).

Because this permit will be incorporated into the T1 permit at the time of renewal, the effectiveness of monitoring of fugitive fluoride and dust emissions – including the fugitive dust plan – will be evaluated at the time of renewal. The T1 can also be re-opened for cause by DEQ in accordance with T1 procedures and requirements (IDAPA 58.01.01.322.15.c); including such language in the PTC was not considered necessary.

APPENDIX

Public Comments Submitted for P-2017.0013 Project 61854



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October 30, 2017

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Re: Permit to Construct No. P-2017.0050

Dear Ms. Chin and Mr. Lewis:

Thank you for considering our comments on the Nu-West Conda Phosphate Operations PTC (No. P-2017.0050).

Since 1973, the Idaho Conservation League has had a long history of involvement with air quality issues. As Idaho's largest state-based conservation organization we represent over 30,000 supporters who have a deep personal interest in ensuring that our air quality is protected throughout the state.

We thank you for the opportunity to submit comments and ask that you please send us subsequent documents for this project. We look forward to continuing to work with the Department of Environmental Quality on this project and others in the future. Please feel free to contact us if you have any questions or require additional information.

Sincerely,

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Gaseous Fluoride Emissions

Table 3 in the Statement of Basis reports that the gaseous fluoride emissions from the proposed Gyp-3 modification total 47.0 T/yr, *15 times* higher than the PSD significant threshold of 3 T/yr for fluorides. DEQ has elected not to perform a SMC modeling demonstration, citing a lack of NAAQS for fluorides.

While a NAAQS for fluoride does not exist, Idaho's Air Quality Rules (IDAPA 58.01.01) stipulate additional assurances that must be met in order to protect human health and the environment. Among these additional requirements is IDAPA 58.01.01.161 ("Toxic Substances" rule), which states that "Any contaminant which is by nature toxic to human or animal life or vegetation shall not be emitted in such quantities or concentrations as to alone, or in combination with other contaminants, injure or unreasonably affect human or animal life or vegetation." DEQ has yet to satisfy this requirement for this proposed permit to construct.

Gaseous fluorides are recognized by the World Health Organization as harmful to human health¹ and have noted impacts to animal life and vegetation^{2,3}. For example, the EPA's *Final Guideline Document Control Of Fluoride Emissions From Existing Phosphate Fertilizer Plants* (Fluoride Guidance Document) documents that atmospheric fluoride concentration as low as 0.7 ppb sustained for 15 days can damage plant health, and can further impact foraging animals due to bioaccumulation. Impacts to plant life include accumulation, foliar lesions, and alteration to plant development. Animals that ingest fluoride from foraging can experience bone lesions, lameness, and impairment of appetite that can result in decreased weight gain or diminished milk yield³.

In order to issue this permit, DEQ must perform and provide to the public analyses that demonstrate that the gaseous fluoride concentrations emitted from this facility will not negatively impact the health of human, plant, or animal communities. This is a concern because the CPO facility is less than 10 miles from the city of Soda Springs, ID (pop. 3,058) and is in close proximity to numerous agricultural lands and livestock farms. After appropriate analyses have been performed, it may be necessary for this facility to modify their operations in order to ensure that fluoride emissions remain within a safe level and adhere to the Toxic Substances rule.

Furthermore, it would be prudent for this permit to include additional fluoride monitoring provisions as a permit requirement. As noted in the Statement of Basis, limitation of fluoride emissions from this facility was based solely upon the acreage of the facility's footprint. In reality, there are a number of variables that could influence actual emissions beyond footprint alone. As such, DEQ should require periodic monitoring throughout the lifespan of this permit to ensure that actual emissions verify the emissions estimated using the site footprint. Given the potential for a discrepancy to occur, we encourage DEQ to include language within this permit stipulating that this permit can be reopened at anytime if monitored emissions differ from those initially estimated.

¹ WHO. "Fluorides." http://www.euro.who.int/data/assets/pdf_file/0018/123075/AQG2ndEd_6_5Fluorides.PDF?ua=1

² Weinstein, L.H. & Davison, Alan. (2004). *Fluorides in the Environment: Effect on Plants and Animals*. 10.1079/9780851996837.0000

³ EPA. "Final Guideline Document Control Of Fluoride Emissions From Existing Phosphate Fertilizer Plants." (1977). <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=2000UNFK.txt> (see: Sections 2-5 & 2-6)