



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Environmental
Conservation

DIVISION OF AIR QUALITY
Air Permits Program

PO Box 111800
Juneau, Alaska 99811-1800
Main: 907.465.5100
Toll free: 866.241.2805
www.dec.alaska.gov

July 22, 2022

Frederick C. Werth, Manager, Kenai Plant
Agrium U.S. Inc.
PO Box 575
Kenai, AK 99611

Subject: PSD Permit and Approval to Construct – Extension Request dated June 7, 2022 for Agrium U.S. Inc.'s Kenai Nitrogen Operations Facility, Air Quality Control Construction Permit AQ0083CPT07

Dear Mr. Werth:

The Alaska Department of Environmental Conservation (the Department) received a request from Agrium U.S. Inc. (Agrium) for an extension to the deadline for commencing construction of the Kenai Nitrogen Operations (KNO) Facility in a letter dated June 7, 2022. In accordance with 40 C.F.R. 52.21(r), AS 46.14, and the Prevention of Significant Deterioration (PSD) rules adopted in 18 AAC 50; the KNO facility was required to commence construction within 18 months after issuance of the permit. Since the PSD permit was issued on March 26, 2021, the date for commencing construction would have been September 26, 2022.

After reviewing EPA's Memorandum dated January 31, 2014, titled "Guidance on Extension of PSD Permits under 40 C.F.R. 52.21(r)(2)" (Extension Memorandum), and in accordance with 40 C.F.R. 52.21(r)(2), a Permittee's PSD permit extension request should include a detailed justification of why the source cannot commence construction within the initial 18-month period. Relevant justification could include ongoing litigation over the PSD permit, natural disasters that directly affect the facility, significant or unusual economic impediments (including inability to secure financial resources necessary to commence construction), and/or delays in obtaining other required permits. The Department must evaluate the extension request on a case-by-case basis.

Agrium is requesting an extension because it is having difficulties securing the necessary contracts with natural gas suppliers to ensure that sufficient natural gas will be available for the facility to meet its target production levels at the time the plant begins operation. Agrium has worked to secure necessary natural gas contracts for the facility since the issuance of this permit, for a variety of reasons these negotiations are still on-going. Agrium continues to believe that it will ultimately be able to obtain contracts for sufficient natural gas in order to assure viable operations at KNO. Agrium does not, however, wish to begin construction on the modifications necessary to the plant, which will involve a substantial capital investment, until such time as it has contractual assurances that sufficient natural gas is available to operate the facility at target production levels.

In the absence of regulations or guidance specifically addressing PSD permit amendments, the regulatory definitions of Best Available Control Technology (BACT) and the information requirements for PSD permits suggest that permit issuers must evaluate proposed PSD permit amendments on a case-by-case basis to determine whether new information relating to the BACT analysis underlying the original permit warrants revisiting that analysis because such information is “necessary” to ensure that BACT will be applied.

While the New Source Review Manual does not specifically address PSD permit modifications, the manual’s methodology for BACT analysis suggests principles which permit issuers may use on a case-by-case basis in evaluating whether revisiting a BACT analysis is required in the context of a proposed PSD permit amendment.

In the June 7, 2022 letter, Agrium provided additional information related to the BACT limits established on March 26, 2021. Although EPA guidance states that a review or redo of substantive permit analyses such as BACT, air quality impacts analysis, or PSD increment consumption analyses should generally not be necessary for a first permit extension request, Agrium researched the RACT/BACT/LAER Clearinghouse (RBLC) and indicated that no new permits have been issued since the date of the Construction Permit for KNO that contain BACT limits that are more stringent than those reviewed as part of the BACT determination for KNO.

Agrium and the Department reviewed the RBLC database for the permitted emission unit types at the KNO facility for permits issued after March 26, 2021 and found that the existing BACT limits are consistent with those contained in more recent permit approval determinations and that the proposed facility is technologically consistent with recent BACT determinations.

The following emissions unit types were evaluated:

- Primary Reformer (Unit 12) - New permit limits have been added to the RBLC database for El Dorado Chemical Company (AR-0170) and Midwest Fertilizer Company LLC (IN-0324). The BACT limits contained in the El Dorado Chemical Company permit are no more stringent than limits contained in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.
The BACT limits found for the Midwest Fertilizer Company LLC are slightly lower than those required by Construction Permit No. AQ0083CPT07 for KNO. They are listed as follows: 59.61 lb/MMBtu CO_{2e}, 0.0194 lb/MMBtu CO, 9 ppmvd NO_x, 0.0024 lb/MMBtu PM-10, 0.0024 lb/MMBtu PM-2.5, and 0.0014 lb/MMBtu VOC. This facility is technologically consistent with the proposed KNO facility.
- CO₂ Vent (Unit 14) - New permit limits have been added to the RBLC database for El Dorado Chemical Company (AR-0170) and Midwest Fertilizer Company LLC (IN-0324). The BACT limits contained in these permits are no more stringent than limits contained in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.
- Urea Granulation (Units 35 and 36) - No new RBLC entries were identified in the database for urea granulation units.
- Package Boilers (Units 44, 48, and 49) - The current RBLC summary includes a number of new entries for sources with boilers or process heaters with a heat input above 100 MMBtu/hr but less than 250 MMBtu/hr. The BACT limits contained in these permits are no more stringent than limits contained

in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.

- Solar Turbine/Generator Sets (Units 55, 56, 57, 58, and 59) - New permit limits have been added to the RBLC database for Norfolk Naval Shipyard (RBLC VA-0333) and Sabine Pass LNG Terminal (LA-0375). The CO BACT limit found for the Norfolk Naval Shipyard is slightly lower than that required by PSD Permit No. AQ0083CPT07 for KNO. The emission limit for CO from the combined cycle turbine <25 MW is listed as 25 ppm @ 15% O₂ at all loads. This facility is technologically consistent with the proposed KNO facility.

The Department notes that it issued PSD Permit No. AQ1539CPT01 for the Alaska Gasline Development Corporation's (AGDC's) Liquefaction Plant in Nikiski on July 7, 2022. This permit contains four 384 MMBtu/hr combined cycle power generation turbines. These turbines went through the top down BACT analysis which resulted in slightly lower NO_x emission limits of 2 ppmv at 15% O₂ with selective catalytic reduction, dry low NO_x combustors, and good combustion practices.

- Urea Ship Loading (Unit 47) - No recent permits were identified with BACT emission limits for urea ship loading.
- Urea Material Handling Units (Unit 47A, 47B, 47C, and 47D) - One new permit limit has been added to the RBLC database for Pallas Nitrogen LLC (OH-0368) with BACT limits for urea transfer operations. The BACT limit contained in this permit is no more stringent than limits contained in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.

Upon review, the Department concurs with the conclusion that the proposed KNO facility is technologically consistent with recent BACT determinations and therefore finds that the technology does not require additional top down BACT review beyond that in the existing record.

As a part of its PSD application, KNO provided an air quality impact analysis demonstrating that the project would not result in an ambient impact that exceeded permissible increments under PSD rules, nor would the project cause an exceedance of National Ambient Air Quality Standards (NAAQS). Although the Extension Memorandum does not indicate that the air quality impact analysis must be revisited as a part of a first permit extension request, KNO reevaluated air quality in the area of its site as a part of this request.

Agrium reviewed the ADEC website to identify Construction Permits for major sources that had been issued since the PSD permit was issued to Agrium in March 2021. Agrium identified no Title I Construction Permits that have been issued since the date of its permit in March 2021. The Department notes that it issued PSD Permit No. AQ1539CPT01 for AGDC's Liquefaction Plant on July 7, 2022. There are currently no impacts resulting from the Liquefaction Plant because construction has not commenced as of the transmittal date of this PSD extension approval letter.

The region surrounding the KNO facility has experienced little change in population since the PSD permit was issued in March 2021, nor have any significant plant expansions occurred in the area since this time. Because there has been no significant growth in the area over the past eighteen months, the Department finds that the air quality data collected to characterize the area are still an accurate representation of background air quality.

EPA guidance indicates that extension requests should be made for 18-month intervals as PSD decisions and the associated control devices may change. Therefore, the Department is granting an 18-month extension to the deadline for commencing construction because no reanalysis of substantive conditions of the permits needs to be conducted at this time. This extension requires that construction of KNO commence no later than **March 26, 2024**. The Department is not requiring a public comment period since this is a decision to extend the deadline for commencing construction without any changes to the permit.

If you have any further questions, please feel free to contact the undersigned or Aaron Simpson of my staff at 907-465-5123. Please note that Alaska's air quality statutes, regulations and permit application information can be obtained from the Department's web page at the following address:
<http://dec.alaska.gov/air/air-permit/permit-regulations/>

A person who has a private, substantive, legally protected interest under state law that may be adversely affected by the permit action, the owner and operator, or, if a public comment process is required or solicited, a person who participated in the public comment process may request an adjudicatory hearing in accordance with 18 AAC 15.195 - 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, PO Box 111800, Juneau, Alaska 99811-1800, within 15 days of receipt of the permit decision by email, facsimile, or mail whichever is earlier. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, PO Box 111800, Juneau, Alaska 99811-1800, within 30 days of issuance of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived. More information on how to appeal a Department decision is available at:
<http://dec.alaska.gov/commish/review-guidance/>

Sincerely,



for: James R. Plosay, Manager
Air Permits Program

cc: Aaron Simpson, ADEC/APP, Juneau
Jesse Jack, ADEC/APP, Anchorage
Moses Coss, ADEC/ACP, Fairbanks
Dave Jones, ADEC/APP, Juneau
Alan Pefley, ADEC/ACP, Anchorage
Ted Hartman, Nutrien, ted.hartman@nutrien.com
Dan Meyer, EPA Region 10, meyer.dan@epa.gov
Catherine Collins, FWS, Catherine_Collins@fws.gov
Frederick C. Werth, Nutrien, frederick.werth@nutrien.com

Jason Olds, ADEC/ACP, Juneau
Sam Hoover, ADEC/ACP, Anchorage
Denise Wiltse, ADEC/ACP, Juneau
Dylan Morrison, ADEC/ACP, Juneau
Dave Jordan, ERM, dave.jordan@erm.com
Andrea Stacy, NPS, andrea_stacy@nps.gov
EPA Region 10, R10_Air_Permits@epa.gov