



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
901 N. 5th STREET
KANSAS CITY, KANSAS 66101

AIR PERMITTING AND
COMPLIANCE BRANCH

June 16, 2006

W. Clark Smith
Permitting Section Supervisor
Air Quality Division
Nebraska Department of Environmental Quality
P.O. Box 98922
Lincoln, Nebraska 68509-8922

RE: Archer Daniels Midland Company, Columbus, Nebraska
Draft PSD construction permit comments

Dear Mr. Smith:

On May 22, 2006, EPA Region 7 received hardcopy notification of NDEQ's intent to approve the Prevention of Significant Deterioration (PSD) construction permit to modify an existing air contaminant source for the Archer Daniels Midland Company (ADM), located in Columbus, Nebraska. The project includes the installation of two circulating fluidized bed steam generating units, one natural gas-fired steam generating unit and various other emission units and control equipment. The permit also addresses requirements negotiated in the Consent Decree that was filed on August 21, 2003 with the U.S. District Court – Central District of Illinois. The EPA Region 7 has completed its review of the draft permit, and we are providing the following comments.

- 1) A copy of the ADM *Road Silt Loading Management Plan, Truck Traffic Fugitive Control Strategy and Monitoring Plan for Haul Roads* (Management Plan) for the Columbus, Nebraska site is included in Appendix F of the December 2003 PSD Application and Associated Modeling Submittal. At a minimum, the requirements of the control methods and frequency, compliance demonstration and recordkeeping provisions from this document should be stated as applicable requirements within the PSD permit. As an alternative the Management Plan in its entirety may be attached to the permit with reference to its requirements. This requirement is needed since ADM is basing their request to remove the truck per day limit from their current permit and requesting an adjustment factor of 1/9.1 to the AP-42 equation for paved road emission factor.

- 2) For the fermentation and distillation operations, the August 2003 consent decree requires control efficiency for VOCs of at least 95 percent (or control to 20 ppmvd). These emission limits for VOCs should be documented in the Permit as 95 percent VOC control (or control to 20 ppmvd) and not just as a mass per time (lb/hr) limit. The Fact Sheet states that the VOC limit is 13.5 lb/hr which represents, a greater than 95% control efficiency; however, this limit should be clearly stated in the permit as, percent control efficiency or a minimum ppmvd value.
- 3) Additional comments are attached regarding modeling at the site. Please see the attachment.

As always, we appreciate the opportunity to provide what we hope you will find to be constructive comments. Please contact Patricia Scott of my staff at (913) 551-7312 if you have any questions or comments regarding this letter.

Sincerely,

JoAnn M. Heiman
Branch Chief
Air Permitting and Compliance Branch
Air, RCRA, and Toxics Division

Attachment: Comments
(Richard L. Daye, ARTD/APDB)



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VII
901 NORTH 5th STREET
KANSAS CITY, KANSAS 66101**

June 15, 2006

MEMORANDUM

SUBJECT: ADM Corn Processing, Columbus, Nebraska – PSD Revision

FROM: Richard L. Daye
Regional Meteorologist
ARTD/APDB

TO: Pat Scott
Environmental Protection Specialist
ARTD/APCO

My review of the modeling for the ADM Columbus PSD application indicates that the modeling is not complete. Haul roads were not modeled. We have advised the NDEQ that its policy on modeling haul roads is contrary to EPA's policy of modeling emissions from a source that may have significant impact. The purpose of an air quality modeling analysis is to determine whether any air quality NAAQS and/or increment standards will be violated. Emissions from a source(s) are one of the most important parameters in the analysis. All emissions must be considered. PM₁₀ concentrations resulting from haul road emissions can be very high. This is especially true of short-term concentrations. The modeled PM₁₀ increment and NAAQS concentrations near the ADM facility are very close to the standards. There is a very good chance that these standards would have been exceeded if the haul roads had been modeled. Also, the modeling of combined or, merged, stacks was not modeled as described in the modeling protocol.

Comments on the AIR QUALITY MODELING PROTOCOL For ADM CORN PROCESSING PSD APPLICATION dated July, 2005 are:

Page 3, Section 3.0, 3rd paragraph: The haul roads were not modeled. They should be modeled. I did not see any proposed best management practices (BMP) that ADM is proposing. The BMP must be part of the permit and it must be demonstrated that the BMP will not allow any NAAQS or increment to be exceeded.

The next three comments are related.

Page 6, Section 5.4, List of stack configurations: Germ Cooling Baghouses 1, 2, & 3 (SV9, SV10 & SV11) combined into a raised 65 meter stack. Gluten Cooling Baghouses 1 & 2 (SV17 & SV19) combined into a raised 65 meter stack.

Page 9, Section 5.6, 2nd paragraph: Described how stacks would be combined and modeled, i.e., at the new stack height and location but using the pre-merged stack exit temperatures, exit speeds, and exit diameters. The proposed method follows EPA's policy but it was not followed (see next comment).

TABLE 1, Stack Parameters: This shows Germ Cooling Baghouses (SV9) as having only one set of parameters. The same is true of the Gluten Cooling Baghouses (SV17). The modeling files show that the Germ Cooling Baghouses were not modeled as proposed in Section 5.6. Gluten Cooling Baghouse #1 was modeled at a new height (65 meters) but Baghouse 2 was modeled at a shorter height (35.18 meters). The combining of PM₁₀ emissions into the raised stacks must be modeled as described in Section 5.6 of the protocol.

Page 13, 3rd paragraph: Why wasn't CO data from Nebraska used for background concentrations?

Page 14, Section 8.0: More details should be provided for impact on soils, vegetation and wildlife, e.g., what crops are in the area and what pollutants are they susceptible too. What areas were analyzed for the visibility impacts? Local areas should be include, e.g., Columbus airport.