UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

AIR PERMITTING AND
COMPLIANCE BRANCH

July 19, 2006

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

RE: Cargill, Incorporated, Blair, Nebraska
Draft PSD construction permit comments

Dear Mr. Smith:

On June 22, 2006, EPA Region 7 received hardcopy notification of NDEQ's intent to approve the Prevention of Significant Deterioration (PSD) construction permit to allow Cargill, Incorporated (Cargill), located in Blair, Nebraska to expand a wet milling ethanol production facility from 100 million to 240 million gallons per year and to construct a 1,500 MMBtu/hr circulating fluidized bed (CFB) coal-fired boiler. The EPA Region 7 has completed its review of the draft permit, and we are providing the following comments.

1) The new millhouse/feedhouse operations, condition XIII(C), gives the emission limit from the wet scrubber for VOC emissions as a pound per hour value. To assure that Cargill operates the wet scrubber at peak performance over the entire range of operation, we encourage the department to establish the VOC emissions limit a percent control efficiency (95%) or not to exceed 20 ppmvd as has been the department's practice in previously issued ethanol permits. Similar questions arise for the VOC emission units covered by conditions XIII (E) – new steephouse, germ rotary steam tube dryers and fiber steam tube dryer operations (controlled by RTO); XIII (F) – new gluten drying operations (controlled by wet scrubber); and XIII (I) – new fermentation column (wet scrubber for product recovery), expansion rectifier column (wet scrubber for product recovery), and expansion stillage evaporator (controlled by wet scrubber).

2) The fact sheet and the application state that Powder River Basin (PRB) coal, a low sulfur subbituminous coal, will be the primary fuel for the CFB boiler. However for SO_2, the Best Available Control Technology (BACT) analysis bases the emission limits on a more moderate sulfur containing eastern bituminous coal assuming a 95% control efficiency. Additionally, the 95% control efficiency is not stated in the permit. Instead, the department determined that SO_2 BACT (0.135 lb/MMBtu) could be based on an

undetermined average use of low sulfur PRB coal and higher sulfur containing eastern bituminous coal. For the department to allow as much flexibility as possible in the use of available coals and to assure that BACT is met, we suggest that the department set the CFB boiler BACT limit for SO_2 at 95% control efficiency. Another alternative to achieve the BACT limit is for the department to set the SO_2 BACT emission limits at a range of mass per MMBtu values with a 95% control efficiency or a two tier limit, one for PRB coal and one for eastern bituminous coal that reflects meeting BACT at 95% control efficiency. Compared to the recently published draft PSD permit for ADM Corn Wet Milling and Ethanol Production Facility, Columbus, Nebraska, these suggestions will contribute to the department issuing more consistent BACT emission limits in their air permits. Additionally, when the source fires biomass with very low sulfur content, the SO_2 emission limits should reflect the lower inlet amount of sulfur in the combined fuels, and we suggest that this condition be stated in the permit.

3) It appears that Cargill did not evaluate NO_x emission limits less than 0.08 lbs NO_x/MMBtu, and have not adequately justified this higher limit where other boilers are achieving the lower limit of 0.07 lbs./MMBtu. Therefore, we ask NDEQ to require Cargill to supplement its application with additional detail on why 0.07 lbs/MMBtu or lower can't be met. It generally isn't sufficient to rely only on the vendor considerations when setting BACT.

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

Sincerely,

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