UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

JUL 30 2013

Brad Reid
Construction Permitting Unit Supervisor
Air Quality Division
Nebraska Department of Environmental Quality
P.O. Box 98922
Lincoln, NE 68509-8922

RE: Cargill Incorporated, draft Prevention of Significant Deterioration permit comments

Dear Mr. Reid:

On July 2, 2013, the United States Environmental Protection Agency (EPA) received notice from the Nebraska Department of Environmental Quality (NDEQ) of its intent to issue a Prevention of Significant Deterioration (PSD) construction permit to Cargill Incorporated (Cargill), located at 650 Industrial Park Drive, Blair, Nebraska. We have completed our review of the draft permit and have the following comments.

Comment 1.
The draft permit sets a ton per year (tpy) Best Available Control Technology (BACT) limit for carbon dioxide equivalent (CO_2e) in condition III.(A)(2)(a). The limit seems to be based on the potential to emit of the emission unit. We recommend that the BACT limit for CO_2e not be a tpy limit since the stringency of the BACT limit then depends on the amount the source is actually operated. Instead, we recommend a limit on an output basis. For example, we recommend a limit for Boiler K based on pounds of CO_2e emissions per unit of steam generated or pounds of corn processed. The permit needs to set BACT limits with incentives for Cargill to achieve and maintain good combustion practices and energy efficient design. The CO_2e emitted from Boiler K will increase or decrease proportionally to the amount of fuel combusted regardless of the presence or absence of any controls; hence, the need for a limit based on pounds of CO_2e emissions per unit of steam generated, pounds of corn processed, or similar measure.

Output based BACT limits fully consider the efficiency of the unit and better reflect the good combustion practices and selected energy efficiency measures that are selected as BACT for the Boiler K unit. In some cases, it may not be practical to set an output based limit. In those cases we would suggest input based limits such as pounds of CO_2e emissions per BTU of fuel fired. Of course, where technological or economic limitations on the application of a measurement methodology make it infeasible to impose an emissions standard, then a design, equipment, operational standard, or combination may be prescribed for the BACT limit. 40 C.F.R. 51.166(b)(12).

The permit needs to clarify how compliance with the CO_2e BACT limits is determined. For example, the draft permit states:

> EU-20K (Boiler K) shall not combust more than 2,576.5 MMscf of natural gas per any 12-consecutive month period. The 12-consecutive month total of natural gas combusted shall be calculated each month by summing the monthly natural gas usage for the previous twelve months. (Condition III.(A)(3)(c))

The fact sheet further states:

> This condition limits the quantity of fuel that may be combusted by Boiler K for Cargill to demonstrate compliance with the CO_2e emission limitation. This methodology for demonstrating compliance with the emission limitation is acceptable because the emission limitation was based on the boiler fuel input and the GHG emission factors from 40 CFR 98 (as amended December 17, 2010) which provide the theoretical maximum amount of GHGs that are emitted during combustion. By combusting less than 2,576.4 MMscf of natural gas per any 12 consecutive months Cargill will remain in compliance with their CO_2e limitation. (Page 19, condition III.(A)(3)(c))

Despite these references above, the permit also needs to specify how the CO_2e mass emitted is determined. Procedures in 40 CFR Part 98 could be used for these calculations.

Comment 2.

The Fremont meteorological data (2003-2007) that were used in the modeling have too many calms and missing hours (17.67%). These data should not be used for any future modeling in the Blair, Nebraska area. Meteorological data from Tekamah, Nebraska have been used in the past when modeling Blair facilities. The EPA modeled the project with Tekamah and Omaha data as well as the Fremont data. The use of the Tekamah data is marginal (10.01% calms and missing hours). The Omaha data have only 3.83% calms and missing hours. We have the most confidence in using the Omaha data. The predicted NO_2 values, plus a background value, from the use of each of the meteorological stations were less than half the 1-hour NO_2 NAAQS (188 ug/m^3). We believe that the latest five year meteorological period and ozone data should have been used. Our recommendation to NDEQ would be to use the latest Omaha meteorological data and ozone data from a representative site for any future projects in the Blair, Nebraska area.

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,

Mark A. Smith, Chief
Air Permitting and Compliance Branch
Air and Waste Management Division