

State of Kansas
Kansas Department of Health and Environment
Notice Concerning Proposed Kansas Air Quality
Construction Permit and Public Hearing

Notice is hereby given that the Kansas Department of Health and Environment (KDHE) is soliciting comments regarding a proposed air quality construction permit. Abengoa Bioenergy Biomass of Kansas, LLC (ABBK) located at 16150 Main Circle Drive, Suite 200, Chesterfield, Missouri 63017, has applied for an air quality construction permit in accordance with the provisions of K.A.R. 28-19-300 to modify two permits previously issued by the KDHE for a biomass to ethanol and a biomass-to-energy production facility located in Section 18, Township 33 South, Range 37 West, Stevens County, Kansas, near Hugoton, Kansas. On September 16, 2011, the KDHE issued a Prevention of Significant Deterioration (PSD) air quality permit and on January 13, 2013, KDHE subsequently issued a PSD permit for four (4) natural gas fired emergency generator engines. The proposed permit will supersede these two permits and will include several modifications, including: operating two of the natural gas fired generators as non-emergency; increasing the size of the emergency fire pump; addition/changes in process tanks; addition of a thermal oxidizer for ethanol load-out; addition of miscellaneous material handling activities; addition of reheat burner to the biomass boiler; reconfiguration of the biomass storage pile area and ash handling system and other miscellaneous changes.

Emissions of particulate matter (PM), PM equal to or less than 10 microns in diameter (PM₁₀), PM equal to or less than 2.5 microns in diameter (PM_{2.5}), volatile organic compounds (VOCs), oxides of nitrogen (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), sulfuric acid mist (H₂SO₄), hazardous air pollutants (HAPs), ozone (O₃), and greenhouse gases (GHGs) were evaluated during the permit review process.

The proposed permit is to be issued in accordance with the provisions of K.A.R. 28-19-350, *Prevention of Significant Deterioration* (PSD), which adopts the federal standards, procedures and requirements of 40 CFR 52.21 by reference. These air quality regulations apply to major stationary emission sources located in areas designated as “attainment” under the federal Clean Air Act (CAA). Attainment areas are areas where the air quality meets or is better than the National Ambient Air Quality Standards (NAAQS).

The PSD regulations require evaluation of emission reduction techniques to identify the best available control technology (BACT) for each regulated pollutant, including GHGs, for which the emission rate exceeds the PSD significant level. The purpose of BACT is to affect the maximum degree of reduction achievable, taking into account energy, environmental and economic impacts for each regulated pollutant under review. Evaluation of the estimated emissions for the ABBK project indicates that the emission rates of NO_x, CO, SO₂, VOCs, PM, PM₁₀, PM_{2.5}, and CO_{2e} all exceed the significance levels. The facility conducted the required BACT analyses. This modified permit required an updated BACT review for: two natural gas fired generators operating as non-emergency, larger size emergency fire pump, ethanol load out thermal oxidizer, facility berm, reheat burner, methanol storage tank, fugitive leaks and loading losses, storage tanks, lignin-rich stillage storage, and Enzymatic Hydrolysis (EH) fermentation process. The KDHE has reviewed the BACT analyses for the ABBK modifications to the previous permits and concurs with its findings. The BACT analysis and findings are summarized in Section VI. of the Permit Summary Sheet.

An ambient impact analysis was performed on the potential air emissions of NO₂, SO₂, PM₁₀, PM_{2.5}, and CO from the ABBK Project.

- Detailed modeling for the 1-hour and annual NO₂ demonstrated that the proposed project will not cause or significantly contribute to any violation of the 1-hour or annual NO₂ NAAQS. It also demonstrated that 1.3% of the annual NO₂ Class II area maximum allowable increment is expected to be consumed by the proposed project. EPA has not established a Class II area maximum allowable increment for 1-hour NO₂. Accordingly, no calculation of the potential consumption of such increment is possible.
- Detailed modeling for PM₁₀ demonstrated that the proposed project will not cause or significantly contribute to any violation of the 24-hour PM₁₀ NAAQS. It also demonstrated that 99.5% of the 24-hour PM₁₀ and 46.8% of the annual PM₁₀ Class II area maximum allowable increment is expected to be consumed by the proposed project.
- Detailed modeling for PM_{2.5} demonstrated the proposed project will not cause or significantly contribute to any violation of the 24-hour or annual PM_{2.5} NAAQS. It also demonstrated that 7.2% of the 24-hour

PM_{2.5} and 40.2 % of the annual PM_{2.5} Class II area maximum allowable increment are expected to be consumed by the proposed project.

- Detailed modeling for SO₂ demonstrated the proposed project will not cause or significantly contribute to any violation of the 1-hour, 3-hour, 24-hour or annual SO₂ NAAQS. It also demonstrated that 5.4% of the 3-hour SO₂, 13.2% of the 24-hour SO₂, and 7.4% of the annual SO₂ Class II area maximum allowable increment are expected to be consumed by the proposed project.
- The CO screening modeling analysis demonstrated no significant impact on the 1- hour or 8-hour ambient air quality and that the emissions would not cause or contribute to any violation of ambient air standards. EPA has not established any Class II maximum allowable increments for CO. Accordingly, no calculation of the potential consumption of such increment is possible.
- An analysis of visibility was conducted for Hugoton Municipal Airport and Cimarron National Grasslands. The VISCREEN model results indicate minimal visibility impacts at Hugoton Municipal Airport, and no adverse impacts on Cimarron National Grasslands. No adverse impacts on soils and vegetation in the area are expected.
- Any federal land manager who has reason to believe they may have a class I area adversely impacted by the emissions from the proposed project has the opportunity to present KDHE with a demonstration of the adverse impact on the air quality-related values of the federal class I area during the comment period.

A public comment period has been established to allow citizens the opportunity to express any concerns they may have about this proposed permitting action. The public comment period is to begin on February 20, 2014, and will end on March 24, 2014 at noon. All comments should be submitted in writing to Lynelle Ladd, Bureau of Air, 1000 SW Jackson, Suite 310, Topeka, KS 66612-1366.

Any member of the public may request to hold a public hearing to provide comments on the proposed issuance of the draft air quality construction permit. A written request to hold a public hearing should be sent to the attention of Lynelle Ladd at the address listed above or by FAX to (785) 291-3953 and must be received by

noon on March 24, 2014. *If a pertinent request is received, a public hearing is tentatively scheduled by the Kansas Department of Health and Environment (KDHE), on March 31, 2014, beginning at 7:00 p.m. and continuing until audience members have an opportunity to submit comments. The hearing is tentatively scheduled to be held at the Stevens County Library located at 500 S. Monroe St., Hugoton, KS 67951.* **If no pertinent requests to hold the public hearing are received by noon March 24, 2014, the public hearing will be cancelled. A notice of the cancellation will be posted at the KDHE website at <http://www.kdheks.gov/bar/publicnotice.html>**

If a hearing is conducted, all interested parties will be given a reasonable opportunity to present their views orally or by submission of written materials during the hearing. In order to give all parties an opportunity to present their views, it may be necessary to limit oral presentations to a specific time limit.

Any individual with a disability may request accommodation in order to participate in the public hearing and may request the proposed materials in an accessible format. Requests for accommodation must be made no later than March 24, 2014 by contacting *Linda Vandevord* at (785) 296-6423.

A copy of the proposed permit, permit application, all supporting documentation, and all information relied upon during the permit application review process for the PSD permit are available for public review for a period of 30 days from the date of publication during normal business hours (8:00 AM to 5:00 PM) at the KDHE, Bureau of Air (BOA), 1000 SW Jackson, Suite 310, Topeka, KS 66612-1366 and at the KDHE Southwest District Office, 302 West McArtor Road, KS 67801-6014. To obtain or review the proposed permit and supporting documentation, contact Lynelle Ladd, (785) 296-1719, at the KDHE central office, or Erich Glave, (785) 225-0596, at the KDHE Southwest District Office. The standard departmental cost will be assessed for any copies requested.

These same materials are available, free of charge, at the KDHE Bureau of Air website, <http://www.kdheks.gov/bar/index.html>

Robert Moser, MD, Secretary

Kansas Department of Health and Environment