

## 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, MO 63017 has applied for an air quality construction permit in accordance with the provisions of K.A.R. 28-19-300 to construct a biomass to ethanol manufacturing and biomass to energy facility in Section 18, Township 33 South, Range 37 West, Stevens County, Kansas, near Hugoton, Kansas. Emission of particulate matter (PM), PM equal to or less than 10 microns in diameter (PM<sub>10</sub>), PM equal to or less than 2.5 microns in diameter (PM<sub>2.5</sub>), volatile organic compounds (VOCs), oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), hazardous air pollutants (HAPs) 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 adopt 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 greenhouse gases (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 proposed ABBK project indicates that the emission rate of oxides of nitrogen, sulfur dioxide, carbon monoxide, particulate matter, and GHGs all exceed the significance levels. ABBK conducted the required BACT analyses. The department has reviewed ABBK’s BACT analyses and concurs with its findings that for the biomass-fired stoker boiler, rated at 500 MMBtu/hr maximum design heating input, selective catalytic reduction is BACT for NO<sub>x</sub>, the injection of sorbent, (trona (sodium sesquicarbonate) or lime) in combination with a dry flue gas desulfurization (dry FGD) system is BACT for SO<sub>2</sub>, good combustion practices (GCP) is BACT for carbon monoxide (CO), emissions, fabric filters is BACT for PM, PM<sub>10</sub> and PM<sub>2.5</sub> and energy efficient design, incorporating cogeneration, process integration, combustion of co-products and heat recovery are BACT for GHGs.

An ambient impact analysis was performed on the potential air emissions of NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and CO from this project.

- Detailed modeling for the annual NO<sub>2</sub> averaging period demonstrated no significant impact of the annual ambient air quality standard and demonstrated that 9.3% of the annual Class II maximum allowable increment for NO<sub>2</sub> is

expected to be consumed. Subsequent detailed modeling for the 1-hour NO<sub>2</sub> ambient air quality standard demonstrated that the planned source will not contribute significantly to any modeled ambient air quality violation. EPA has not established a 1-hour Class II maximum allowable increment for NO<sub>2</sub>. Accordingly, no calculation of the potential consumption of such increment is possible.

- The SO<sub>2</sub> screening modeling demonstrated no significant impact on the 3-hour ambient air quality standard and 4.1% of the Class II maximum allowable increment is expected to be consumed. Detailed modeling for SO<sub>2</sub> demonstrated that the emissions from the planned source will not cause or contribute to any violation of the 1-hour, 24-hour or annual ambient air quality standard and that 10.7% of the 24-hour, and 6.2% of the annual Class II maximum allowable increments for SO<sub>2</sub> are expected to be consumed. EPA has not established a 1-hour Class II maximum allowable increment for SO<sub>2</sub>. Accordingly, no calculation of the potential consumption of such increment is possible.
- Detailed modeling for PM<sub>10</sub> demonstrated that the emissions will not cause or contribute to any violation of the 24-hour or annual ambient air quality standard and that 91.5% of the 24-hour, and 41.5% of the annual Class II maximum allowable increments for PM<sub>10</sub> are expected to be consumed.
- Detailed modeling for PM<sub>2.5</sub> demonstrates that the emissions will not cause or contribute to any violation of the annual ambient air quality standard and that 54.6% of the annual Class II maximum allowable increment for PM<sub>2.5</sub> is expected to be consumed. Subsequent detailed modeling for the 24-hour PM<sub>2.5</sub> ambient air quality standard demonstrated that the planned source will not contribute significantly to any modeled ambient air quality violation and that 92.3% of the 24-hour Class II maximum allowable increment for PM<sub>2.5</sub> is expected to be consumed.
- 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 the Cimarron National Grasslands and the Hugoton Municipal Airport. The VISCREEN model results indicate no adverse impacts at Cimarron National Grasslands. The VISCREEN model results indicated minimal visibility impacts at Hugoton Municipal Airport. 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 August 11, 2011, and will end on September 12, 2011 at noon. All comments should be submitted in writing to Terry T. Tavener, Bureau of Air,

1000 SW Jackson, Suite 310, Topeka, KS 66612-1366, or presented at the tentatively scheduled public hearing (see below).

Any member of the public may request to hold a public hearing to receive comments on the proposed issuance of the draft air quality construction permit. Written request to hold a public hearing should be sent to the attention of Ms. Sharon Burrell at the address listed above or by FAX to (785) 291-3953 and must be received by noon on September 12, 2011. If a request is received, a public hearing is tentatively scheduled by the Kansas Department of Health and Environment (KDHE), on Tuesday, September 13, 2011, from 5:00 p.m. until 8:00 p.m., at the Stevens County Memorial Hall located at 200 E 6<sup>th</sup> Street, Hugoton, Kansas 67951. **If no requests to hold the public hearing are received by noon September 12, 2011, the public hearing will be cancelled. A notice of the cancellation will be posted at the KDHE website at [http://www.kdheks.gov/bar/public\\_notice.html](http://www.kdheks.gov/bar/public_notice.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 request that each participant 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 Friday, August 26, 2011 by contacting Sharon Burrell at (785) 296-0297.

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 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. A copy of the proposed permit and all supporting documentation can also be reviewed at the KDHE Southwest District Office, 302 West McArtor Road, Dodge City, KS 67801-6014. To obtain or review the proposed permit and supporting documentation, contact Terry Tavener, (785) 296-1581, at the KDHE central office, or the KDHE Southwest District Office, (620) 225-0596. 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