UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
11201 RENNER BOULEVARD
LENEXA, KS 66219

DEC 28 2012

OFFICE OF
THE REGIONAL ADMINISTRATOR

Mr. John Mitchell, Director
Division of Environment
Kansas Department of Health and Environment
1000 S.W. Jackson, Suite 310
Topeka, Kansas 66612-1366

Re: Exceptional event requests regarding exceedances of the 8-hour ozone NAAQS at multiple monitors in Kansas during April of 2011

Dear Mr. Mitchell:

This letter responds to the Kansas Department of Health and Environment December 5, 2012, submittal justifying that emissions generated by prescribed burning and wildfires caused exceedances of the 2008 primary and secondary 8-hour ozone National Ambient Air Quality Standards of 0.075 ppm at multiple monitoring locations in Kansas on April 6, 12, 13, and 29, 2011. The U.S. Environmental Protection Agency recognizes and appreciates the effort that KDHE put into the development of the supporting documentation for this request.

The EPA has reviewed the documentation provided by KDHE to demonstrate that exceedances on April 6, 12, and 13, 2011, resulted from smoke transported downwind from numerous prescribed fires in the Flint Hills region of Kansas. The analyses and documentation established that smoke from these fires contributed to ozone formation and caused exceedances at several air quality monitors in Kansas City, Mine Creek, Topeka, and Wichita. The EPA has also reviewed documentation provided by KDHE to demonstrate that exceedances on April 29, 2011, resulted from smoke from several large wildfires in Texas and Mexico that was transported northward into Kansas, contributed to ozone formation, and caused exceedances of the 2008 8-hour ozone NAAQS at air quality monitors in the Wichita area.

The EPA recognizes that the tallgrass prairie ecosystem in the Flint Hills region represents a unique ecosystem whose native plant and animal communities benefit from periodic fire and that the factors that affect the management of fire and the effects of fire are also specific to the region. According to the KDHE analysis, the location and frequency of prescribed fires in the Flint Hills region are dictated largely by strategies developed to achieve both ecological and agricultural goals. Distinct local conditions like proximity to wooded areas, precipitation events, and weather also impact land management decisions and may lead to large, time-compressed fire events. Also unique to this Kansas ecosystem are fire's centrality to the annual renewal of the tallgrass prairie and the quick pace of woody shrub succession when fire is suppressed (especially when compared to other ecosystems like temperate pine or hardwood forests).

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The EPA concurs that KDHE has successfully made the demonstrations referred to in 40 CFR 50.14 (the Exceptional Events Rule) to the EPA's satisfaction for the dates of April 6, 12, 13, and 29, 2011. In addition, KDHE has met the schedule and procedural requirements in 50.14(c) with respect to the same data. Accordingly, Region 7 will enter "concurrence flags" for these data associated with the 2008 8-hour ozone NAAQS into EPA's Air Quality System database. (See the enclosure for more information regarding this decision.)

The EPA appreciates your agency's efforts to work with many of the Flint Hills stakeholders to develop and quickly implement the collaborative smoke management plan. Region 7 will continue to support you and your staff in their ongoing efforts to promote research in this area. The EPA is particularly interested in approaches that might employ alternative tallgrass prairie management techniques (e.g., patch burning), the expansion of time windows for seasonal burning to reduce the magnitude and intensity of burns, and the possibility of developing an infrastructure that could support a system of day-by-day, county or field-specific burn management (e.g. individual burn plans, permits, etc.). The EPA continues to support KDHE's continuing efforts to advance and improve the effectiveness of the Flint Hills SMP along with other efforts to balance the use of managed fires to achieve ecological and agricultural goals against the need for important public health and safety protections.

As always, the EPA staff is available to answer any questions and provide assistance if you have any questions or wish to discuss this matter further.

Sincerely,

Karl Brooks

Enclosure

cc: Rick Brunetti, KDHE

Additional Information on the U.S. Environmental Protection Agency's concurrence with the Kansas Department of Health and Environment demonstrations required by 40 CFR 50.14 for the dates of April 6, 12, 13, and 29, 2011

This additional information pertains to the Kansas Department of Health and Environment December 5, 2012, submittal justifying that emissions generated by prescribed burning and wildfires caused exceedances of the 2008 primary and secondary 8-hour ozone National Ambient Air Quality Standards of 0.075 ppm at multiple monitoring locations in Kansas on April 6, 12, 13, and 29, 2011. The U.S. Environmental Protection Agency concurs (based on the weight of the evidence) that KDHE has successfully made the relevant demonstrations referred to in 40 CFR 50.14 to the EPA's satisfaction for these dates.

Based on this concurrence:

- The EPA Region 7 will enter "concurrence flags" for these data associated with the 2008 8-hour ozone NAAQS into the EPA's Air Quality System database.
- With these flags present, the EPA's AQS will not count these days as exceedances when generating user reports, or include them in design values estimates reported by AQS and in OAQPS postings on its public website, unless the AQS user specifically indicates that they should be included.[1]
- The EPA will accept the exclusion of these data for the purposes of selecting appropriate background concentrations for New Source Review air quality analyses.[2]
- The data will continue to be publically available, but the EPA's publications and public information statements on the status of air quality in the affected area will not reflect these data in any summary statistic of potential regulatory application, unless such inclusion is specifically noted.[3]

Should the EPA pursue a regulatory action (e.g., the development of a proposed designation, classification, attainment demonstration or finding as to whether the affected Kansas City, Mine Creek, Topeka, or Wichita areas have met the 8-hour ozone NAAQS) that relies on calculated values that exclude data meeting the exceptional event weight of evidence requirements, then the EPA will also provide an opportunity for public comment prior to taking a final Agency action. During this comment period, the EPA may receive comments on the exceptional event submission KDHE has made and the determinations conveyed by Regional Administrator Karl Brooks. If so, the EPA must consider and respond to those comments before taking final regulatory action. Accordingly, the determinations conveyed by Regional Administrator Karl Brooks do not constitute final the EPA action regarding any matter on which the EPA is required to provide an opportunity for public comment. Final actions will take place only after the EPA completes notice and comment rulemaking on those determinations.

The EPA notes that the Kansas City, Mine Creek, Topeka, and Wichita areas are currently designated "unclassifiable/attainment" for the 2008 8-hour ozone NAAQS of 0.075 ppm. Further, none of the data that are the subject of the referenced KDHE exceptional events submittal, while exceedances of the 0.075 ppm standard, constitute one of the four highest daily 8-hr averages for 2011, and, therefore, even

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[1]Due to the complexity of the AQS software, inadvertent errors may occur. The EPA asks that KDHE inform us of AQS outputs that seem inconsistent with the EPA's intention to exclude these concurred-upon data.

[2]New source review permits in Kansas and its neighboring states are issued by permitting authorities other than the EPA under approved SIPs. When we are commenting on a permitting authority's proposed action, our comments will be consistent with this concurrence.

[3]These data may be included in statistics intended to describe trends in actual air quality in the area.

if not excluded none of these data would be included in the design value calculations for the 2008 ozone standard for any 3-year period. In addition, the EPA does not anticipate using 2011 data for design value calculations for a future ozone standard that may be promulgated as a result of the EPA's ongoing NAAQS review process. Therefore, although the EPA will exclude the subject data from the calculated values made available to the public through AQS and from the EPA comments on background concentrations for air permitting analyses as described above, the EPA does not anticipate that the inclusion versus exclusion of the subject data will have a regulatory impact. As an additional clarification, should the EPA pursue a regulatory action, the determinations conveyed in this letter would apply only to determinations incorporating the submitted data relative to the 2008 8-hour ozone NAAQS.

The EPA understands that as a result of ozone exceedances in 2009 and historical exceedances, the State of Kansas, local researchers, land managers, and the agricultural community recognized the need to protect public health by assessing and managing smoke resulting from prescribed fires in the Flint Hills region of Kansas. Based on its prior experience, KDHE and the Flint Hills stakeholders identified and included in the Flint Hills Smoke Management Program burn practices, predictive tools, and educational outreach efforts designed to use fire to balance the ecological and agricultural goals in the Flint Hills with public health and safety concerns. Kansas began implementing its SMP in December of 2010 in advance of the 2011 burn season.

Based upon the EPA's review of the Kansas SMP and the referenced exceptional event demonstration, the EPA agrees that Kansas's efforts to control the impact of smoke from the Flint Hills prescribed fires on the public were reasonable for the subject events in 2011, and those events were not reasonably controllable or preventable. The EPA further recognizes that improvements were made to the 2010 SMP by KDHE and the Flint Hills stakeholders after the 2011 burn season.

If, however, similar events/exceedances occur in the future or if the impacts of future fires become more frequent or begin to influence design values associated either with the 2008 ozone NAAQS or with a potential future ozone NAAQS, the EPA would again evaluate the reasonableness of Kansas's efforts to control the smoke impact from such future prescribed fires as part of determining whether such smoke impacts may also qualify as an exceptional events. We would do so on a case-by-case basis, taking into account the information and opportunities available to Kansas as of that future time, including those opportunities and approaches identified during the review and public comment period associated with the events that are the subject of Kansas' demonstration.