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Robert Moser, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

December 13, 2013

Karl Brooks, Regional Administrator  
USEPA, Region VII  
11201 Renner Boulevard  
Lenexa, KS 66219

Dear Mr. Brooks:

On December 14, 2012, the Environmental Protection Agency (EPA) promulgated a revised primary annual PM<sub>2.5</sub> national ambient air quality standard (NAAQS) [78 FR 3086]. The process for designations following promulgation of new or revised NAAQS is contained in Section 107(d) of the Clean Air Act (Act). This section of the Act provides a process for the Governor to submit area designation recommendations of attainment, nonattainment, or unclassifiable, with appropriate boundaries, to EPA within one year of promulgation of a new or revised NAAQS. Kansas has until December 13, 2013, to submit designation recommendations for the 2012 Annual PM<sub>2.5</sub> NAAQS to EPA. This letter and enclosure are intended to fulfill this obligation for the State of Kansas.

Based on 2010-2012 quality assured ambient air quality data for all Kansas and nearby PM<sub>2.5</sub> monitors, it was determined that there are no areas in Kansas or within fifty kilometers of the state border that are in violation of the 2012 Annual PM<sub>2.5</sub> National Ambient Air Quality Standard. Therefore, the State of Kansas recommends that all 105 counties in Kansas be designated individually as "unclassifiable/attainment" for the 2012 Annual PM<sub>2.5</sub> NAAQS. Please see enclosure for details supporting these designation recommendations.

These designation recommendations do not include any of the following Indian Country within Kansas: the Kickapoo Tribe in Kansas, the Sac and Fox Nation of Missouri in Kansas and Nebraska, the Prairie Band Potawatomi Nation and the Iowa Tribe in Kansas and Nebraska.

Please feel free to contact John Mitchell, Director of the Division of Environment, at 785-296-1535 or [jmitchell@kdheks.gov](mailto:jmitchell@kdheks.gov) if you have any questions regarding these designation recommendations.

Sincerely,

Robert Moser, M.D., Secretary  
Kansas Department of Health and Environment

Enclosure

c: Governor Sam Brownback  
Josh Tapp, USEPA, Region VII  
John Mitchell, Director, Division of Environment  
Rick Brunetti, Director, Bureau of Air



**2012 Annual Fine Particulate Matter (PM<sub>2.5</sub>) National  
Ambient Air Quality Standard Designation  
Recommendations for Kansas**

November 25, 2013

Kansas Department of Health and Environment  
Division of Environment  
Bureau of Air  
1000 SW Jackson, Suite 310  
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## **Overview**

On December 14, 2012, the Environmental Protection Agency (EPA) promulgated a revised primary annual PM<sub>2.5</sub> national ambient air quality standard (NAAQS). The PM<sub>2.5</sub> NAAQS was published in the Federal Register on January 15, 2013 [78 FR 3086]<sup>1</sup>. In that action, the EPA revised the primary annual PM<sub>2.5</sub> standard, strengthening it from 15.0 micrograms per cubic meter (µg/m<sup>3</sup>) to 12.0 µg/m<sup>3</sup>. In that same action, EPA retained the existing secondary annual standard for PM<sub>2.5</sub>, the existing primary and secondary 24-hour standards for PM<sub>2.5</sub>, and the existing primary and secondary standards for particulate matter with aerodynamic diameters of 10 microns or less (PM<sub>10</sub>).

Section 107(d) of the Clean Air Act requires each state to submit area designation recommendations of attainment, nonattainment, or unclassifiable, with appropriate boundaries, to EPA within one year of promulgation of a new or revised NAAQS. EPA can either accept the recommendations or make modifications, as necessary. Section 107(d)(1)(A) of the Clean Air Act defines a nonattainment area as any area that does not meet or that contributes to nearby areas not meeting the NAAQS.

Kansas has until December 13, 2013 to submit designation recommendations for the 2012 Annual PM<sub>2.5</sub> NAAQS to EPA. EPA will then notify Kansas concerning any modifications to the recommendations and allow for comments to their changes by August 14, 2014. Kansas then has until October 29, 2014 to comment on the EPA modified recommendations, which will be finalized by December 12, 2014.

The purpose of this document is to summarize the analysis prepared to support the Kansas 2012 Annual PM<sub>2.5</sub> designation recommendations to EPA. This analysis is based on information and data collected for calendar years: 2010 – 2012, and the April 16, 2013 USEPA Memorandum – *Initial Area Designations for the 2012 Revised Primary Annual Fine Particle National Ambient Air Quality Standard*.<sup>2</sup>

## **Summary of Recommendation**

Based on 2010-2012 quality assured ambient air quality data for all Kansas and Nearby PM<sub>2.5</sub> Monitors it was determined that there are no areas in or nearby Kansas that are violating the 2012 Annual PM<sub>2.5</sub> National Ambient Air Quality Standard. The State of Kansas recommends that all 105 counties in Kansas (as listed in Table 1) be designated individually as “unclassifiable/attainment” for the 2012 Annual PM<sub>2.5</sub> NAAQS.

These designation recommendations do not include any of the following Indian Country within Kansas: the Kickapoo Tribe in Kansas, the Sac and Fox Nation of Missouri in Kansas and Nebraska, the Prairie Band Potawatomi Nation and the Iowa Tribe in Kansas and Nebraska.

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<sup>1</sup> <http://www.gpo.gov/fdsys/pkg/FR-2013-01-15/pdf/2012-30946.pdf>

<sup>2</sup> <http://www.epa.gov/pmdesignations/2012standards/docs/april2013guidance.pdf>

<b>Table 1. Kansas Classification Recommendations for the 2012 Annual PM<sub>2.5</sub> NAAQS</b>	
County	Classification Recommendation
Allen	unclassifiable/attainment
Anderson	unclassifiable/attainment
Atchison	unclassifiable/attainment
Barber	unclassifiable/attainment
Barton	unclassifiable/attainment
Bourbon	unclassifiable/attainment
Brown	unclassifiable/attainment
Butler	unclassifiable/attainment
Chase	unclassifiable/attainment
Chautauqua	unclassifiable/attainment
Cherokee	unclassifiable/attainment
Cheyenne	unclassifiable/attainment
Clark	unclassifiable/attainment
Clay	unclassifiable/attainment
Cloud	unclassifiable/attainment
Coffey	unclassifiable/attainment
Comanche	unclassifiable/attainment
Cowley	unclassifiable/attainment
Crawford	unclassifiable/attainment
Decatur	unclassifiable/attainment
Dickinson	unclassifiable/attainment
Doniphan	unclassifiable/attainment
Douglas	unclassifiable/attainment
Edwards	unclassifiable/attainment
Elk	unclassifiable/attainment
Ellis	unclassifiable/attainment
Ellsworth	unclassifiable/attainment
Finney	unclassifiable/attainment
Ford	unclassifiable/attainment
Franklin	unclassifiable/attainment
Geary	unclassifiable/attainment
Gove	unclassifiable/attainment
Graham	unclassifiable/attainment
Grant	unclassifiable/attainment
Gray	unclassifiable/attainment
Greeley	unclassifiable/attainment
Greenwood	unclassifiable/attainment
Hamilton	unclassifiable/attainment
Harper	unclassifiable/attainment
Harvey	unclassifiable/attainment

County	Classification Recommendation
Haskell	unclassifiable/attainment
Hodgeman	unclassifiable/attainment
Jackson	unclassifiable/attainment
Jefferson	unclassifiable/attainment
Jewell	unclassifiable/attainment
Johnson	unclassifiable/attainment
Kearny	unclassifiable/attainment
Kingman	unclassifiable/attainment
Kiowa	unclassifiable/attainment
Labette	unclassifiable/attainment
Lane	unclassifiable/attainment
Leavenworth	unclassifiable/attainment
Lincoln	unclassifiable/attainment
Linn	unclassifiable/attainment
Logan	unclassifiable/attainment
Lyon	unclassifiable/attainment
Marion	unclassifiable/attainment
Marshall	unclassifiable/attainment
McPherson	unclassifiable/attainment
Meade	unclassifiable/attainment
Miami	unclassifiable/attainment
Mitchell	unclassifiable/attainment
Montgomery	unclassifiable/attainment
Morris	unclassifiable/attainment
Morton	unclassifiable/attainment
Nemaha	unclassifiable/attainment
Neosho	unclassifiable/attainment
Ness	unclassifiable/attainment
Norton	unclassifiable/attainment
Osage	unclassifiable/attainment
Osborne	unclassifiable/attainment
Ottawa	unclassifiable/attainment
Pawnee	unclassifiable/attainment
Phillips	unclassifiable/attainment
Pottawatomie	unclassifiable/attainment
Pratt	unclassifiable/attainment
Rawlins	unclassifiable/attainment
Reno	unclassifiable/attainment
Republic	unclassifiable/attainment
Rice	unclassifiable/attainment
Riley	unclassifiable/attainment

County	Classification Recommendation
Rooks	unclassifiable/attainment
Rush	unclassifiable/attainment
Russell	unclassifiable/attainment
Saline	unclassifiable/attainment
Scott	unclassifiable/attainment
Sedgwick	unclassifiable/attainment
Seward	unclassifiable/attainment
Shawnee	unclassifiable/attainment
Sheridan	unclassifiable/attainment
Sherman	unclassifiable/attainment
Smith	unclassifiable/attainment
Stafford	unclassifiable/attainment
Stanton	unclassifiable/attainment
Stevens	unclassifiable/attainment
Sumner	unclassifiable/attainment
Thomas	unclassifiable/attainment
Trego	unclassifiable/attainment
Wabaunsee	unclassifiable/attainment
Wallace	unclassifiable/attainment
Washington	unclassifiable/attainment
Wichita	unclassifiable/attainment
Wilson	unclassifiable/attainment
Woodson	unclassifiable/attainment
Wyandotte	unclassifiable/attainment

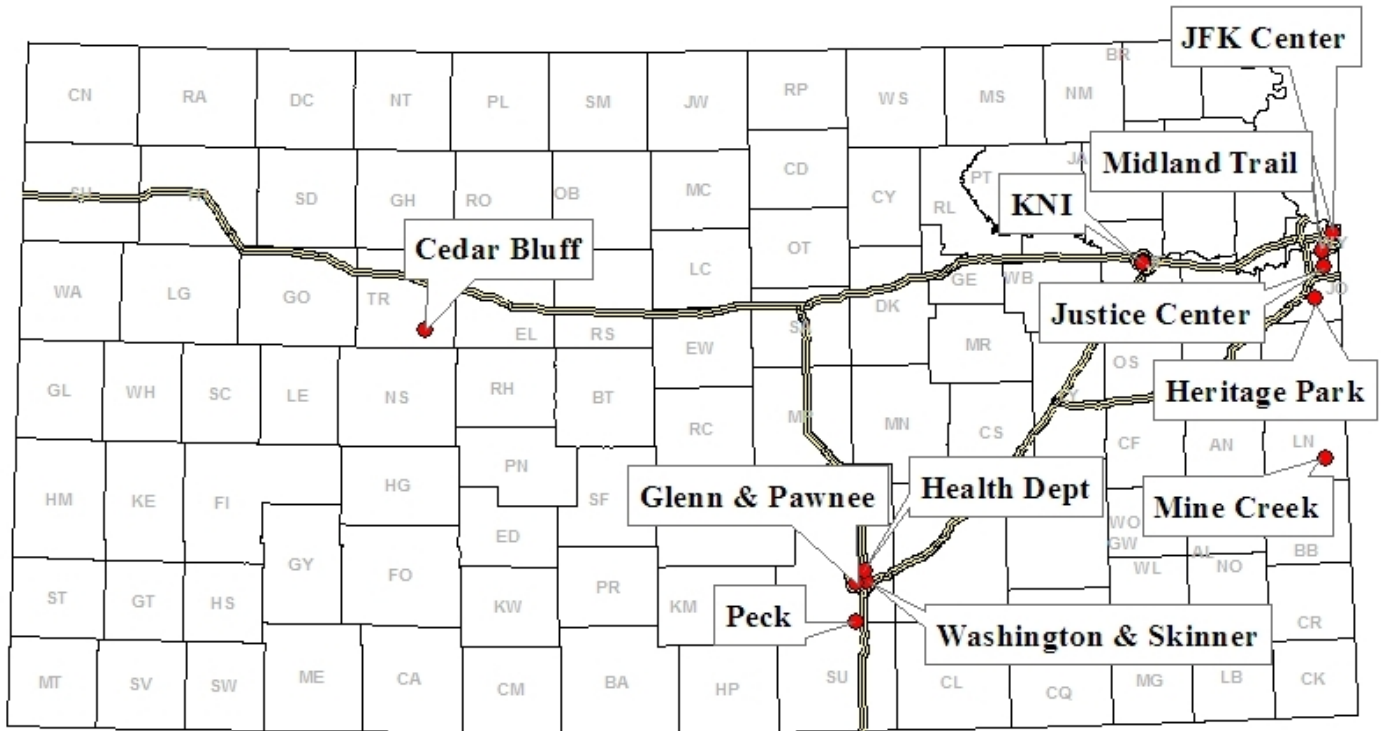
### **Technical Considerations**

These recommendations have been developed based on a review of the technical information as suggested by the April 16, 2013 USEPA guidance. The following is a summary of the ambient air quality monitoring data in all relevant Kansas counties and in all relevant counties in nearby states.

Figure 1 displays the Kansas PM<sub>2.5</sub> ambient air monitoring network. Table 2 lists the 2010 – 2012 design values for all equivalent method ambient PM<sub>2.5</sub> monitors, confirming attainment with the 2012 Annual PM<sub>2.5</sub> NAAQS.

Figure 2 displays the annual PM<sub>2.5</sub> design values in three year intervals from 2003 – 2012 for all monitors in Kansas for comparison to the annual PM<sub>2.5</sub> NAAQS. As seen in the figure, there is an evident decline in annual PM<sub>2.5</sub> concentrations over the past ten years in Kansas. The continued improvement in air quality, as it pertains to PM<sub>2.5</sub> concentrations, over the past decade is a valid indication for the continued designation of unclassifiable/attainment for all counties in the state.

**Figure 1. Kansas PM<sub>2.5</sub> Monitoring Network (2010 – 2012)**

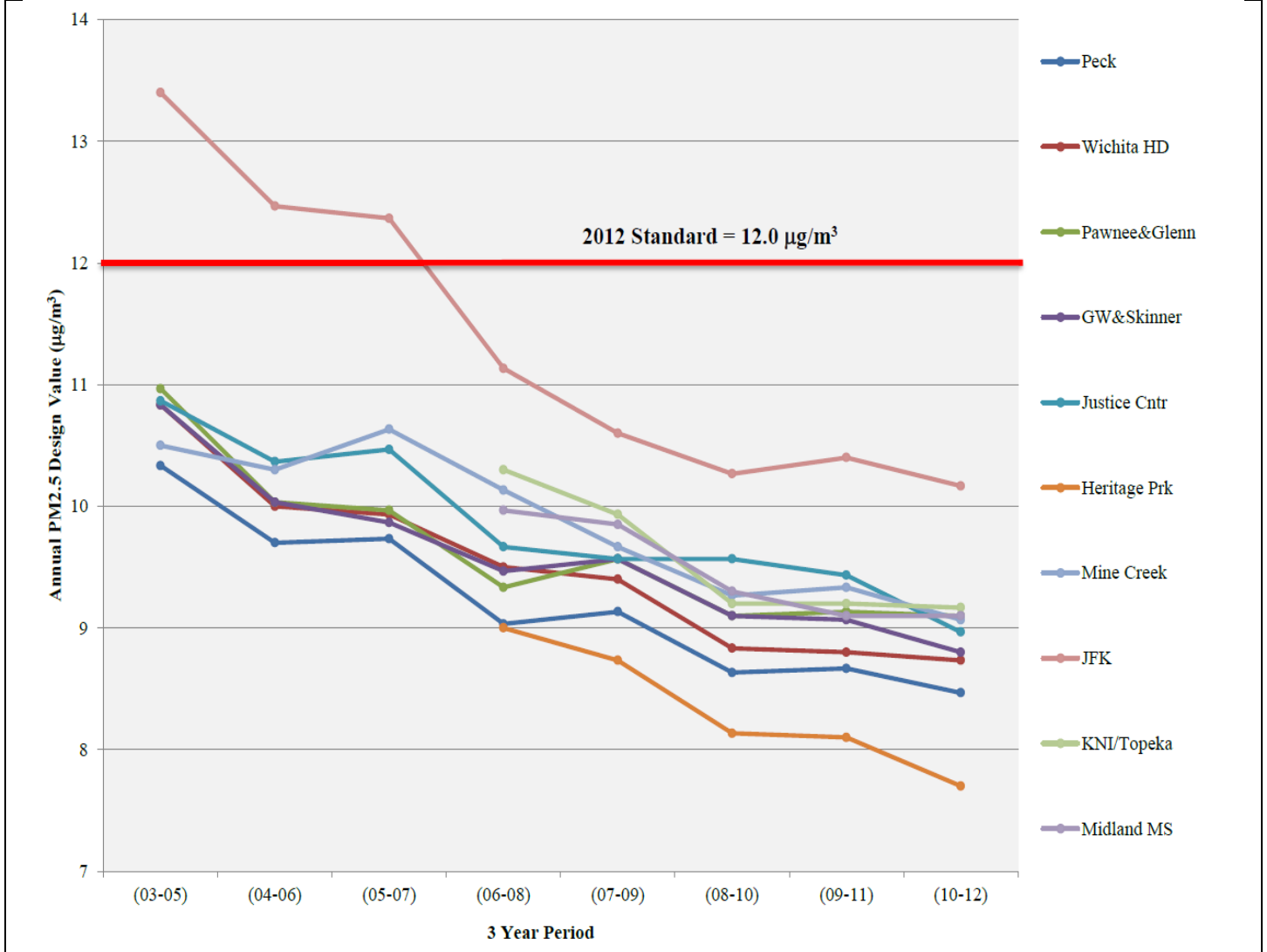


Note: Cedar Bluff continuous PM<sub>2.5</sub> analyzer is not an equivalent method.

**Table 2. Kansas Ambient PM<sub>2.5</sub> Monitor Design Values (2010 – 2012)**

Site Name	AQS Site ID	County	2010 – 2012 Annual PM <sub>2.5</sub> Design Value (µg/m <sup>3</sup> )
Justice Center	20-091-0007	Johnson	9.0
Heritage Park	20-09-10010	Johnson	7.7
Mine Creek	20-10-70002	Linn	9.1
Wash & Skinner	20-173-0008	Sedgwick	8.9
Pawnee & Glenn	20-173-0009	Sedgwick	9.2
Wichita Health Department	20-173-0010	Sedgwick	8.9
KNI	20-177-0013	Shawnee	9.2
Peck	20-191-0002	Sumner	8.6
JFK	20-209-0021	Wyandotte	10.2
Midland Trail Elementary School	20-209-0022	Wyandotte	8.8

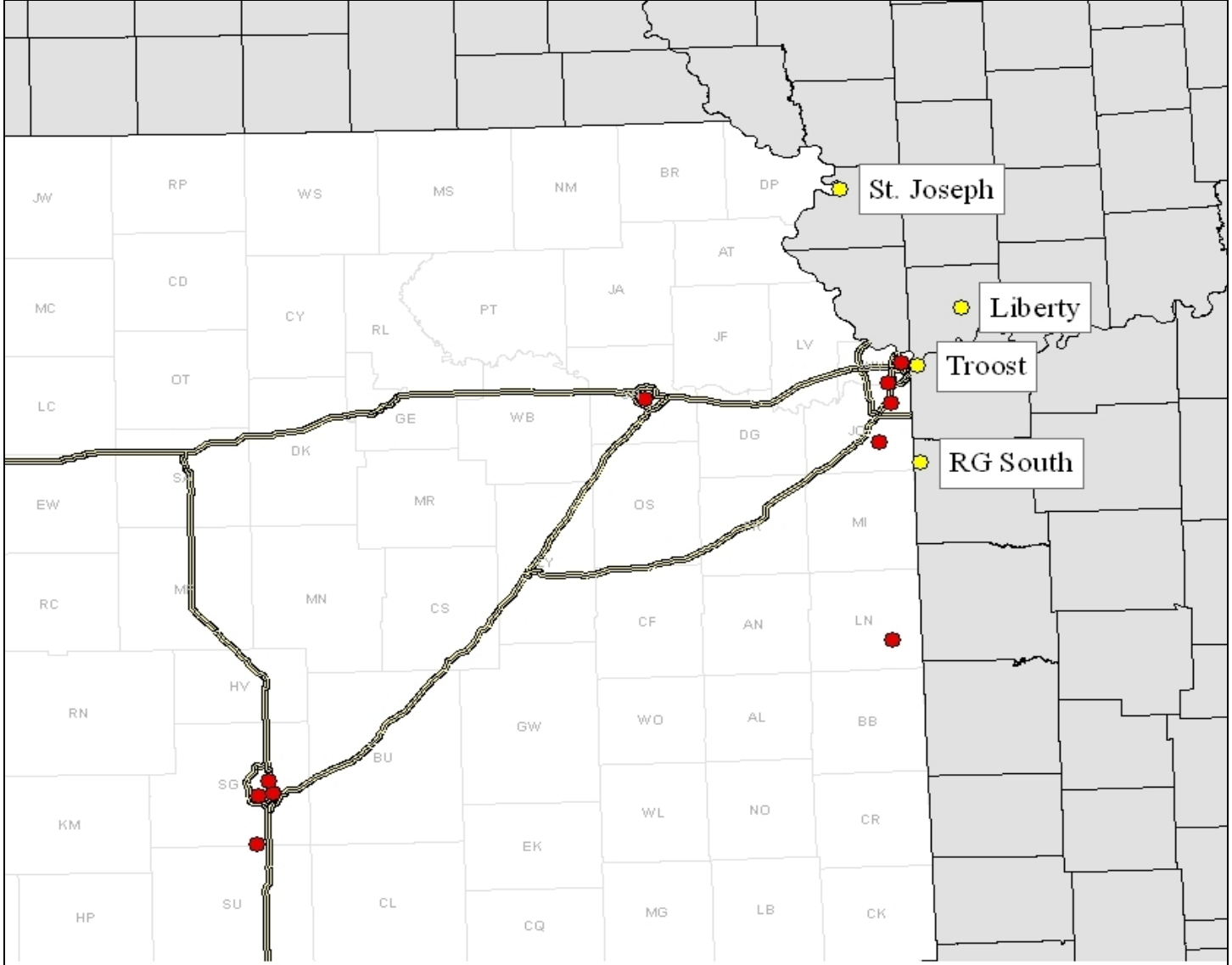
**Figure 2. Annual PM<sub>2.5</sub> Design Values for Kansas PM<sub>2.5</sub> Monitors (2003-2012)**



Per Section 107 of the Clean Air Act, areas should also be designated nonattainment if they contribute to ambient air quality in a nearby area that does not meet the national ambient air quality standard. To determine if sources in Kansas contribute to violations in nearby areas outside of the state, data from PM<sub>2.5</sub> monitors located within 50 km of the Kansas border were also evaluated. Four monitors located in Missouri fall within the 50 km range (see Figure 3). None of these monitors have design values in violation of the 2012 Annual PM<sub>2.5</sub> NAAQS (see Table 3); and therefore no further evaluation was conducted.



**Figure 3. Nearby PM<sub>2.5</sub> Monitors Outside Kansas (2010 – 2012)**



**Table 3. Nearby PM<sub>2.5</sub> Monitor Design Values (2010 – 2012)**

Site Name	AQS Site ID	County	2010 – 2012 Annual PM <sub>2.5</sub> Design Value (µg/m <sup>3</sup> )
St. Joseph Pump Station	29-021-0005	Buchanan	11.3
Liberty	29-047-0005	Clay	9.4
Troost	29-095-0034	Jackson	10.3
RG-South	29-037-0003	Cass	11.1

**Conclusion:**

As discussed in the Summary of Recommendations, all PM<sub>2.5</sub> monitors in the state have 2010 – 2012 design values demonstrating attainment with the 2012 Annual PM<sub>2.5</sub> NAAQS. All monitors located outside of Kansas but within 50 km of the state border also have 2010 – 2012 design values demonstrating attainment with the 2012 Annual PM<sub>2.5</sub> NAAQS. In addition, there is a continuing trend of declining PM<sub>2.5</sub> concentrations at all PM<sub>2.5</sub> monitors in Kansas. Therefore it is recommended that all counties in the state be designated “unclassifiable/attainment” for the purposes of the 2012 Annual PM<sub>2.5</sub> NAAQS.