Kentucky Energy and Environment Cabinet

Kentucky Division for Air Quality

Appendix B
Interagency Consultation

Federal Land Managers (FLMs) Comments Regarding Kentucky's Pre-Hearing Draft Regional Haze State Implementation Plan

United States Department of the Interior

NATIONAL PARK SERVICE
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N3615 (2350)

August 29, 2013

Memorandum

To: John Lyons, Director, Kentucky Division of Air Quality, Department of Environmental Protection

From: Pat Brewer, NPS Air Resources Division

Subject: NPS Comments on Kentucky Draft Regional Haze Five-Year Report

The National Park Service in consultation with the Fish and Wildlife Service has reviewed the Kentucky Division of Air Quality (KYDAQ)'s draft regional haze five-year review. KYDAQ has demonstrated that sulfate is the major pollutant contributing to visibility impairment at Mammoth Cave National Park and that the priority to improve visibility is to reduce sulfur dioxide (SO_2) emissions. KYDAQ identified that coal-fired electric generating units (EGU) and industrial boilers are the most important source categories to consider for emissions reductions and reported details of current and planned SO_2 controls for EGU. KYDAQ reported on EGU retirements and control installations that were not included in the 2018 reasonable progress goals and will further improve visibility.

In the 2008 Regional Haze Plan KYDAQ determined that Rio Tinto Alcan (RTA)'s Sebree Aluminum Smelter (now Century Aluminum) was not subject to BART because its impacts at Mammoth Cave (0.467 deciview, dv) were just below the contribution threshold of 0.5 dv. In 2010 KYDAQ approved a permit modification that allows RTA (Century) to increase SO_2 emissions by 15%. Current emissions likely exceed KYDAQ's BART contribution threshold. In its 2008 Plan, KYDAQ determined that RTA SO_2 emissions exceeded its 1% contribution threshold for reasonable progress, but determined that a sulfuric acid plant at RTA would not be a cost-effective control. EPA's cost analysis for Alcoa's Intalco Aluminum Smelter in Washington determined that limestone wet scrubbing with forced oxidation was cost-effective for BART in the range of $3875 - $4373 per ton[1]. We recommend that KYDAQ consider additional control options for Century Aluminum in the 2018 Regional Haze Plan.

[1] EPA–R10–OAR–2010–1071

In Section 1.1 KYDAQ discussed the Cross State Air Pollution Rule (CSAPR) and the Maximum Achievable Control Technology (MACT) requirements for boilers. These discussions could be updated to include the most recent developments: the Supreme Court will hear EPA's appeal on the CSAPR and the MACT rule was finalized in December 2012.

Under Section 2, emission requirements not included in the 2008 plan, please update the discussion of the SO_2 one hour standard to indicate that no areas in Kentucky were designated as nonattainment by EPA in June 2013, so no additional sulfur dioxide controls are expected in Kentucky under this standard. Under Section 2.6, please include the 2010 consent decree for the Tennessee Valley Authority as these controls will also benefit Mammoth Cave.

In Section 3.4 and Table 15 KYDAQ describes the controls for EGU identified in the "MANE-VU Ask". In Table 15 it would be helpful to explain why the changes in emissions between 2002 and 2011 in some cases are not consistent with the reported percentage control efficiency. It is not clear that EGU reductions will meet both EGU and non-EGU reductions requested by MANE-VU. It would be helpful to identify total non-EGU point emissions trends in Section 5 and any changes in operating status for non-EGU industrial sources. Also note that area source SO_2 emissions reductions contribute towards MANE-VU's non-EGU Ask.

KYDAQ has demonstrated that emission reductions to date are on track to meet the 2018 reasonable progress goals for Mammoth Cave. Kentucky SO_2 reductions are consistent with, and will exceed, the reductions used by neighboring states to set reasonable progress goals for their Class I areas. No Kentucky sources exceeded the 1% contribution threshold at neighboring Class I areas. We note that other VISTAS states used a 0.5 % contribution threshold to consider sources impacting in-state and neighboring Class I areas.

We conclude that KYDAQ has met the requirements for the periodic progress report as outlined in 40 CFR 41.508 (g). We appreciate the opportunity to work closely with KYDAQ to improve visibility in our Class I national park and wilderness areas. If you have questions, you may contact me at 303-969-2153 or patricia_f_brewer@nps.gov.

Kentucky Energy and Environment Cabinet's Division for Air Quality Response to Federal Land Managers (FLMs) Comments Regarding Kentucky's Pre-Hearing Draft Regional Haze State Implementation Plan

The Kentucky Energy and Environment Cabinet's Division for Air Quality Response to Federal Land Managers (FLMs) Comments on Kentucky's Pre-Hearing Draft Regional Haze State Implementation Plan (SIP)

National Park Service (NPS) and the U.S. Fish and Wildlife Service (FWS) Comments provided by Pat Brewer, NPS

General Comments

The National Park Service in consultation with the Fish and Wildlife Service has reviewed the Kentucky Division of Air Quality (KYDAQ)'s draft regional haze five-year review. KYDAQ has demonstrated that sulfate is the major pollutant contributing to visibility impairment at Mammoth Cave National Park and that the priority to improve visibility is to reduce sulfur dioxide (SO_2) emissions. KYDAQ identified that coal-fired electric generating units (EGU) and industrial boilers are the most important source categories to consider for emissions reductions and reported details of current and planned SO_2 controls for EGU. KYDAQ reported on EGU retirements and control installations that were not included in the 2018 reasonable progress goals and will further improve visibility.

KYDAQ has demonstrated that emission reductions to date are on track to meet the 2018 reasonable progress goals for Mammoth Cave. Kentucky SO_2 reductions are consistent with, and will exceed, the reductions used by neighboring states to set reasonable progress goals for their Class I areas. No Kentucky sources exceeded the 1% contribution threshold at neighboring Class I areas. We note that other VISTAS states used a 0.5 % contribution threshold to consider sources impacting in-state and neighboring Class I areas.

We conclude that KYDAQ has met the requirements for the periodic progress report as outlined in 40 CFR 41.508 (g). We appreciate the opportunity to work closely with KYDAQ to improve visibility in our Class I national park and wilderness areas.

- The Cabinet acknowledges these comments and the consultation with the FLMs for the continued visibility improvements in Class I areas.

Specific Comments

In the 2008 Regional Haze Plan KYDAQ determined that Rio Tinto Alcan (RTA)'s Sebree Aluminum Smelter (now Century Aluminum) was not subject to BART because its impacts at Mammoth Cave (0.467 deciview, dv) were just below the contribution threshold of 0.5 dv. In 2010 KYDAQ approved a permit modification that allows RTA (Century) to increase SO_2 emissions by 15%. Current emissions likely exceed KYDAQ's BART contribution threshold. In its 2008 Plan, KYDAQ determined that RTA SO_2 emissions exceeded its 1% contribution threshold for reasonable progress, but determined that a sulfuric acid plant at RTA would not be a cost-effective control. EPA's cost analysis for Alcoa's Intalco Aluminum Smelter in Washington determined that limestone wet scrubbing with forced oxidation was cost-effective

for BART in the range of $3875 - $4373 per ton[1]. We recommend that KYDAQ consider additional control options for Century Aluminum in the 2018 Regional Haze Plan.

- The Cabinet acknowledges these comments and has added language to the SIP narrative that indicates that the Cabinet will consider additional control options for Century Aluminum in the 2018 Regional Haze SIP.

In Section 1.1 KYDAQ discussed the Cross State Air Pollution Rule (CSAPR) and the Maximum Achievable Control Technology (MACT) requirements for boilers. These discussions could be updated to include the most recent developments: the Supreme Court will hear EPA's appeal on the CSAPR and the MACT rule was finalized in December 2012.

- The Cabinet acknowledges these comments and has made SIP narrative changes to address these comments.

Under Section 2, emission requirements not included in the 2008 plan, please update the discussion of the SO_2 one hour standard to indicate that no areas in Kentucky were designated as nonattainment by EPA in June 2013, so no additional sulfur dioxide controls are expected in Kentucky under this standard. Under Section 2.6, please include the 2010 consent decree for the Tennessee Valley Authority as these controls will also benefit Mammoth Cave.

- The Cabinet acknowledges these comments and has made SIP narrative changes to address these comments and which indicate two areas in Kentucky that were designated nonattainment for the 2010 SO_2 one-hour standard.

In Section 3.4 and Table 15 KYDAQ describes the controls for EGU identified in the "MANE-VU Ask". In Table 15 it would be helpful to explain why the changes in emissions between 2002 and 2011 in some cases are not consistent with the reported percentage control efficiency. It is not clear that EGU reductions will meet both EGU and non-EGU reductions requested by MANE-VU. It would be helpful to identify total non-EGU point emissions trends in Section 5 and any changes in operating status for non-EGU industrial sources. Also note that area source SO_2 emissions reductions contribute towards MANE-VU's non-EGU Ask.

- The Cabinet acknowledges these comments and has made SIP narrative changes to address these comments.

[1] EPA–R10–OAR–2010–1071