



IN REPLY REFER TO:

United States Department of the Interior  
NATIONAL PARK SERVICE  
Air Resources Division  
P.O. Box 25287  
Denver, CO 80225



N3615 (2350)

January 27, 2012

Lynorae Benjamin, Chief  
Regulatory Development Section  
Air Planning Branch  
Air, Pesticides and Toxics Management Division  
U.S. Environmental Protection Agency Region 4  
61 Forsyth Street SW  
Atlanta, Georgia 30303-8960

EPA Docket ID: EPA-R04-OAR-2009-0783

Dear Ms. Benjamin:

The National Park Service (NPS) has reviewed the Environmental Protection Agency's (EPA's) proposed "Approval and Promulgation of Air Quality Implementation Plans; Commonwealth of Kentucky; Regional Haze State Implementation Plan" (SIP).

We previously commented on Kentucky's draft Regional Haze SIP in January 2008. Our enclosed comments address Rio Tinto Alcan's Sebree primary aluminum smelter which was permitted in 2009 to increase production of the potlines after the potlines were exempted from Best Available Retrofit Technology in the SIP submitted in June 2008. We recommend that, as part of Kentucky's 2013 mid-course review, a four-factor analysis consistent with the requirements of 40 CFR 51.308(d)(1)(i)(A) be conducted for the combined BART-eligible and expanded emissions from the facility to determine if controls are reasonable.

We appreciate the opportunity to work closely with the State of Kentucky and EPA Region 4 to make progress toward achieving natural visibility conditions at our National Parks and Wilderness Areas. For further information regarding our comments, please contact Don Shepherd at (303) 969-2075.

Sincerely,

A handwritten signature in black ink, appearing to be 'SJ', with a horizontal line extending to the right.

Susan Johnson  
Acting Chief  
Policy, Planning, and Permit Review Branch

Enclosure

cc:

John Lyons, Director  
Kentucky Division of Air Quality  
Department for Environmental Protection  
Energy and Environment Cabinet  
200 Fair Oaks Ln., 1st Floor  
Frankfort, Kentucky 40601

**National Park Service Comments on Rio Tinto Alcan's Sebree Aluminum Smelter  
January 27, 2012**

Rio Tinto Alcan (RTA) owns and operates the Sebree primary aluminum smelter near Robards, KY, 118 km from Mammoth Cave National Park. The plant consists of three potlines (128 cells each) plus an anode processing operation (with anode bake furnace) and associated operations. Potlines are vented to Alcoa A-398 alumina fluidized bed scrubbers to remove fluorides and PM<sub>10</sub>. Fugitive emission exhaust through uncontrolled roof monitors.

Green anodes are formed from petroleum coke, recycled spent anode material, and coal tar pitch. Emissions from anode paste mixing and forming are vented to a Proceadair dry coke scrubber. The anode bake furnace emissions exhaust to an Alcoa A-446 alumina fluidized bed scrubber.

The Kentucky Division for Air Quality (KYDAQ) determined that RTA was BART eligible and RTA submitted a BART Modeling Protocol on May 26, 2006 and a BART Applicability Protocol on November 20, 2006. KY DAQ reported in June 2008<sup>1</sup> that the 98th percentile impact at Mammoth Cave was 0.467 dv with six days > 0.5 dv. KYDAQ determined that RTA was not subject to BART.

**Major Modification**

In March 2009, RTA proposed to modify the existing potlines to increase production from the current 219,999 tons per year (tpy) to a future 253,531 tpy.

Emission increases from the potlines are described in the table below.

<b>Sebree Potline Emissions</b>	<b>Baseline</b>	<b>Future</b>	<b>Increase</b>
Pollutant	(tpy)	(tpy)	(tpy)
PM10	197	288	91
PM2.5	155	219	64
Fluorides	82	241	159
SO2	3860	<5806	1946
COS	207	312	105
S emitted as CPM	79	118	39

<sup>1</sup> Summary of Kentucky BART Exemption and BART Determination Modeling Results For Kentucky BART-Eligible and BART-Subject Sources submitted as part of Kentucky Regional Haze State Implementation Plan, June 2008

RTA estimates that throughput from the anode bake furnace will increase from 116,695 tpy to 138,668 tpy, and its SO<sub>2</sub> emissions will increase by 56 tpy from 298 tpy to 354 tpy.

Analysis of particulate (PM), sulfur dioxide (SO<sub>2</sub>), fluoride (F), and carbon monoxide (CO) emissions was triggered under Prevention of Significant Deterioration (PSD) requirements.

In our April 17, 2009 letter to KYDAQ regarding the PSD analysis, we stated:

“With regard to AQRVs and the visibility analysis, results show the maximum change in extinction at Mammoth Cave National Park would be 3.71% during the three years modeled. Since there were no days over our 5% change in extinction threshold, we do not anticipate a significant impact on visibility at Mammoth Cave National Park as a result of the proposed project. **However, the State should consider the additional emissions from the RTA facility modification in its future demonstrations of reasonable progress required under the Regional Haze Rule. Also, future visibility modeling analysis should include all visibility–impairing pollutants. For example, it appears that fluoride and carbonyl sulfide (COS) emissions were not included in the RTA modeling analysis.**” (emphasis added)

KYDAQ issued the PSD permit on October 5, 2010.

We believe that it is highly likely that the combined emissions from the BART-eligible facility plus the increased production under the PSD modification would significantly contribute to visibility impairment at Mammoth Cave National Park. Therefore as part of the 2013 “mid-course” review of the Kentucky Regional Haze SIP, we recommend that KYDAQ conduct a four-factor analysis consistent with the requirements of 40 CFR 51.308(d)(1)(i)(A) for the combined emissions from the modified facility to determine if controls are reasonable.